

TO: The College Community

FROM: Dr. James M. Keane, Vice President of Academic Affairs

SUBJECT: Academic Matters – February 14, 2023

DATE: March 7, 2023

Final approval was given to the academic matters reviewed at the February 14, 2023 meeting of the Learning Council as follows:

School of Business, Engineering & Technology

- 1. Program Revision: Business Administration Transfer (BT)
 - a. Effective date: FA 2023
 - b. Remove one Program Elective in Semester 3
 - c. Add MGT 211 in Semester 3
 - d. See grid on page: <u>18</u>
- 2. Program Closure: Manufacturing Technology Applied Manufacturing Option (MPA) and Applied Manufacturing Certificate (AMC)
 - a. Effective date: FA 2023
- 3. Course Revision: ERG 101 Engineering Graphics
 - a. Effective date: FA 2023
 - b. Change in name
 - c. See grid on page: 28
 - d. Course description (as it will appear in catalog):

ERG 101 Engineering Design and Graphics Using CAD

This course focuses on engineering drawing utilizing computer-assisted drawing (CAD) techniques. It introduces descriptive geometry and the basic theory of orthographic projections. Students create orthographic, isometric, sectional views and assembly drawings and dimensioning using CAD software.

Credits: 3 Prereguisite: MAT 124

Semester Offered: F/S/SU

- 4. Program Revision: Engineering (ERG)
 - a. Effective date: FA 2023
 - b. Incorporate course name change for ERG 101
 - c. Incorporate course name and prerequisite change for BIO 107
 - d. Friendly Amendment: Incorporate prerequisite and corequisite change for ERG 221
 - e. Friendly Amendment: Incorporate prerequisite change for ERG 223
 - f. See grid on page: <u>35</u>

- 5. Program Revision: Engineering Biomedical Engineering Option (ERBM)
 - a. Effective date: FA 2023
 - b. Incorporate course name and prerequisite change for BIO 107
 - c. Move BIO 107 from Semester 1 to Semester 2
 - d. Incorporate prerequisite change for BIO 259
 - e. Move BIO 259 from Semester 2 to Semester 4
 - f. Friendly Amendment: Incorporate prerequisite and corequisite change for ERG 221
 - g. Friendly Amendment: Incorporate prerequisite change for ERG 223
 - h. See grid on page: <u>41</u>

School of Healthcare

- 6. Course Revision: DHY 212 Dental Hygiene Process IV
 - a. Friendly Amendment: Effective date: SP 2024
 - b. Change in description
 - c. Course description (as it will appear in catalog):

DHY 212 Dental Hygiene Process IV

This clinical theory course emphasizes the role of the dental hygienist in various dental specialties, including, but not limited to: General, Orthodontics, Pediatric Dentistry, Endodontics, Periodontics and Oral surgery practice. The clinical component emphasizes continued development in the delivery of the dental hygiene process of care while demonstrating independent decision-making, critical thinking and problem-solving skills focusing on the periodontally involved patients requiring advanced instrumentation skills. Service-learning externships include oral health promotion and provision of services to specific target populations in the community.

Credits: 6

Prerequisite: DHY 201 with a grade of "C" or higher, DHY 211 with a grade of "C" or higher, DHY 231 with a grade of "C" or higher, DHY 241 with a grade of "C" or higher Semester Offered: S

7. Course Revision: NUR 100 Paramedic to ADN Bridge

- a. Effective date: FA 2023
- b. Change in description, prerequisite, and restriction wording
- c. Course description (as it will appear in catalog):

NUR 100 Paramedic to ADN Bridge

This course focuses on curriculum topics that are essential for those students who hold a Paramedic certification and who are seeking enrollment into the Nurse Education - Advanced Placement Paramedic Program (NUP). Topics include foundations of nursing practice, nursing theory, evidenced based practice, legal, ethical and advocacy issues, nursing care, role transition, nursing process, and promoting healthy psychosocial responses. Lab content includes basic nursing skills practice and competency. This course also includes clinical practice of basic skills in the long-term care setting. Successful completion of this one-credit course with a "C+" or higher enables students to enter the NUR 101 course.

Credits: 1

Prerequisite: BIO 111 with a grade of "C" or higher, BIO 112 with a grade of "C" or higher, ENG 101, PSY 101

Semester Offered: F

Restriction: Restricted to those students who have met admissions requirements for the Associate in Science in Nurse Education Program and hold a current certification in Massachusetts as a Paramedic or current certification from the National Registry of Emergency Medical Technicians (NREMT) in good standing

- 8. Course Revision: NUR 101 Advanced Placement Nursing I
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, and restriction wording
 - c. Course description (as it will appear in catalog):

NUR 101 Advanced Placement Nursing I

This course is designed for eligible Licensed Practical Nurses and Paramedics who are seeking enrollment into the Nurse Education - Advanced Placement LPN (NUL) or Advanced Placement Paramedic (NUP) Program. The course focuses on curriculum topics that are essential for the first semester Associate Degree nursing student. Topics include nursing philosophy of the profession and of the QCC Associate in Science degree Nurse Education Program, nursing process application, decision-making, critical thinking and priority setting, Nursing Theory, Maslow's Hierarchy of Needs, and Erikson's Stages of Psychosocial Development. The course also reinforces foundations of basic nursing care, health promotion, complementary alternative medicine, physical assessment, and fluid and electrolytes. The lab component includes practice and competency demonstration of lab skills including asepsis, wound care, and other assigned modules. Successful completion of this one-credit course with a "C+" or higher is required.

Credits: 1

Prerequisite: BIO 112 with a grade of "C" or higher, NUR 100 with a grade of "C+" or higher or Admission to Nurse Education - Advanced Placement LPN (NUL) Program, PSY 101 Semester Offered: F

Restriction: Restricted to those students who have met admissions requirements for the Associate Degree in the Nursing Program and hold a current license to practice as a Licensed Practical Nurse (LPN) in good standing or to those students who have met admissions requirements for the Associate in Science in Nurse Education Program and hold a current certification in Massachusetts as a Paramedic or current certification from the National Registry of Emergency Medical Technicians (NREMT) in good standing.

- 9. Course Revision: NUR 103 Current Concepts in Nursing & Health Care I
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, corequisite, number, and name
 - c. Course description (as it will appear in catalog):

NUR 106 Introduction to Nursing Concepts & Health Care

This course is the study of contemporary nursing in relation to historical development, nursing theory, social trends, and healthcare changes. The student explores influences of the past on present day nursing, health care settings, trends and legislation, challenges and issues for today's nurse and future predictions for nursing. Students will integrate concepts of diversity, equity and inclusion in discussion of patient-centered care. Successful completion of this one-credit course with a "C+" or higher is required.

Credits: 1 Prerequisite: BIO 111 with a grade of "C" or higher, ENG 101 Corequisite: BIO 112, NUR 107, PSY 101 Semester Offered: F/S

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- 10. Course Revision: NUR 104 Fundamentals in Nursing
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, corequisite, number, and credits
 - c. Course description (as it will appear in catalog):

NUR 107 Fundamentals of Nursing

This course provides an introduction to the role of the nurse in the health care system. Nursing Theory, Maslow's Hierarchy of Needs, and Erikson's Stages of Psychosocial Development are introduced and utilized as organizing frameworks. Additional integration of professional standards and competencies from National League for Nursing and other professional organizations is included. Students develop an understanding of and ability to use the nursing process as a method for assisting patients to meet healthcare needs. Students develop basic communication skills in order to promote effective relationships with patients, families and members of the health team. Content includes, but is not limited to, oxygenation, health assessment, elimination, medication administration, and basic comfort and care. Students participate in laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment. Successful completion of this eight-credit course with a "C+" or higher is required. **Credits: 8**

Prerequisite: BIO 111 with a grade of "C" or higher, ENG 101 Corequisite: BIO 112, NUR 106, PSY 101 Semester Offered: F/S

- 11. Course Revision: NUR 105 Medical Surgical Nursing I/Maternal Newborn
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, number, and credits
 - c. Course description (as it will appear in catalog):

NUR 108 Medical Surgical Nursing I/Maternal Newborn

This course focuses on caring for maternal newborn patients and adults who have health care deviations that require specific nursing interventions. Content includes, but is not limited to, the perioperative experience, cellular proliferation, nutrition, metabolic activity, cardiovascular disorders, substance abuse, reproductive issues, domestic violence and maternal-newborn health. Students will use a developmental focus and a life span approach to concepts of health promotion and deviations. The course is based on Nursing Theory, Maslow's Hierarchy of Needs, Erikson's Stages of Psychosocial Development, and the Nursing Process. Students participate in the laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment in the care of maternal newborn patients and adult patients in the acute care, rehabilitation and/or community settings. Successful completion of this nine-credit course with a "C+" or higher is required.

Credits: 9

Prerequisite: BIO 112 with a grade of "C" or higher, NUR 101 with a grade of "C+" or higher or NUR 106 with a grade of "C+" or higher and NUR 107 with a grade of "C+" or higher Corequisite: BIO 232, PSY 121 Semester Offered: F/S

- 12. Course Revision: NUR 201 Medical Surgical Nursing II/Pediatric
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, number, and credits
 - c. Course description (as it will appear in catalog):

NUR 204 Medical Surgical Nursing II/Pediatric

This course focuses on content related to caring for children and adult patients who have health care deviations that require specific nursing system interventions. Content includes, but is not limited to, growth and development, and deviations in respiratory, cardiac, dermatologic conditions, burns, gastrointestinal, genitourinary, musculoskeletal, neurological, hematologic and immunologic systems. The course is based on Nursing Theory, Maslow's Hierarchy of Needs, Erikson's Stages of Psychosocial Development, and the Nursing Process. Students participate in the laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment in the care of pediatric and adult patients in the acute care, rehabilitation and/or community settings. Successful completion of this nine-credit course with a "C+" or higher is required.

Credits: 9

Prerequisite: BIO 232 with a grade of "C" or higher, NUR 108 with a grade of "C+" or higher, PSY 121

Corequisite: ENG 102, any HST, SOC 101 or SOC 111 Semester Offered: F/S/SU

- 13. Course Revision: NUR 202 Advanced Medical Surgical Nursing III/Mental Health
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, corequisite, number, and credits
 - c. Course description (as it will appear in catalog):

NUR 205 Advanced Medical Surgical Nursing III/Mental Health

This course focuses on content related to mental health issues and the care of patients who experience health care deviations that require complex nursing interventions. Content includes, but is not limited to, deviations in respiratory, cardiac, gastrointestinal, renal, neurological; and emergency and disaster management. The course is based on Nursing Theory, Maslow's Hierarchy of Needs, Erikson's Stages of Psychosocial Development, and the Nursing Process. Students participate in the laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment in the care of patients in acute, community, and mental health care settings. The clinical experience emphasizes application of nursing process, leadership, and management of complex patients. Successful completion of this nine-credit course with a "C+" or higher is required.

Credits: 9

Prerequisite: ENG 102, any HST, NUR 204 with a grade of "C+" or higher, SOC 101 or SOC 111 Corequisite: NUR 206, Humanities Elective Semester Offered: F/S

- 14. Course Revision: NUR 203 Current Concepts in Nursing & Health Care II
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, corequisite, number, and name
 - c. Course description (as it will appear in catalog):

NUR 206 Advanced Nursing Concepts & Transition to Practice

This course is the study of contemporary nursing in relation to social trends, health care changes, ethical issues, and transition to practice. The student will discuss influences of the past on present day nursing, health care trends and legislation, and challenges and issues for today's nurse. Management and delegation responsibilities of the professional practitioner will be included with theoretical content and application. The student will describe the role and responsibilities of the Registered Nurse, assess career potential, and future employment opportunities. Successful completion of this two-credit course with a "C+" or higher is required.

Credits: 2 Prerequisite: NUR 204 with a grade of "C+" or higher Corequisite: NUR 205 Semester Offered: F/S

- 15. Program Revision: Healthcare Practical Nursing (HCPN)
 - a. Effective date: FA 2023
 - b. Increase Credentialed Credits, from 17 to 18 total, and remove PNP 210 and PNP 233 from list of Transfer Courses and add PNP 240
 - c. Remove FYE 102 from Semester 2
 - d. Remove Semester 2, and re-number remaining Semesters
 - e. Move ENG 101 and PSY 101 to new Semester 2
 - f. Move ENG 102 to new Semester 3
 - g. Adjust Milestones and Semester Credit Totals, accordingly
 - h. Decrease Total Credits Required for program, from 62 to 60 total
 - i. See grid on page: <u>77</u>
- 16. Program Revision: Fire Science Certificate (FSC)
 - a. Effective date: FA 2023
 - b. Add Fire Science Elective as an alternative option to FSC 151 in Semester 1
 - c. See grid on page: <u>80</u>
- 17. Course Revision: OTA 101 Introduction to Occupational Therapy: Concepts & Interventions
 - a. Effective date: FA 2023
 - b. Change in description
 - c. Course description (as it will appear in catalog):

OTA 101 Introduction to Occupational Therapy: Concepts & Interventions

This course introduces the basic tenets of the occupational therapy profession. Students will examine the history and philosophy of occupational therapy, current issues, future trends in the profession and OT practice globally. Educational requirements to practice, roles and responsibilities of the occupational therapist (OT) and occupational therapy assistant (OTA), ethical and legal aspects of practice, and professional organizations will be introduced. Practice settings, models of healthcare delivery and service management functions are explored.

Credits: 3

Semester Offered: F

- 18. Course Revision: OTA 131 Occupational Therapy: Methods and Modalities I
 - a. Effective date: FA 2023
 - b. Change in description
 - c. Course description (as it will appear in catalog):

OTA 131 Occupational Therapy: Methods and Modalities I

This course provides in-depth study of occupations and begins to introduce students to how therapeutic occupations are used in occupational therapy practice. Students will learn to analyze occupational tasks and functional activities utilizing the Occupational Therapy Practice Framework as a guide, grade and adapt activities, and build the basic skills necessary for teaching therapeutic activities to meet the needs of occupational therapy consumers, either individually or in groups. **Credits: 3**

Corequisite: OTA 101 Semester Offered: F

School of Math & Science

19. Course Revision: BIO 107 Principles of Biology I

- a. Effective date: FA 2023
- b. Change in description, prerequisite, corequisite, and name
- c. Revised course student learning outcomes
 - Upon successful completion of this course, students will be able to:
 - Explain the mechanism of natural selection and its role in evolution.
 - Apply basic chemical principles of bond formation, including the properties of water and carbon compounds, to biological systems.
 - Describe the structures and properties of the major classes of biological macromolecules and give examples of their functions in the cell.
 - Describe the generalized structures and functions of bacteria, animal and plant cells.
 - Describe energy flow and transformations in cells and organisms through metabolism and metabolic pathways.
 - Describe the processes by which heritable material is passed on to the next generation.
 - Discuss the structure and function of the genetic material and its role in inheritance and gene expression.
 - Demonstrate competency with the scientific techniques used in biology including measurements of volume and mass, microscopy, and graphing.
 - Apply the scientific method in the laboratory setting to design controlled experiments, collect and interpret data, and clearly communicate experimental results.
- d. Course description (as it will appear in catalog):

BIO 107 Biology II: Introduction to Cells and Molecules

This course examines principles of molecular, cellular and physiological levels of living organisms. Topics include structure and function of biomolecules and cells, cellular energetics, heredity, gene expression, and evolution. The laboratory component focuses on scientific methodology, acquiring and interpreting data, and experimental design. This course is designed for students majoring in science and engineering.

Credits: 4

Prerequisite: CHM 105 or CHM 123, ENG 101 Semester Offered: F/S/SU

- 20. Course Revision: BIO 108 Principles of Biology II
 - a. Effective date: FA 2023
 - b. Change in description, prerequisite, corequisite, number, and name
 - c. Revised course student learning outcomes
 - Upon successful completion of this course, students will be able to:
 - Describe the characteristics of the domains and kingdoms of organisms including differentiating between prokaryotic and eukaryotic species.
 - Compare and contrast the kingdoms of life with regard to cellular structure, metabolism, homeostatic and reproductive strategies.
 - Recognize and explain the causes of large evolutionary trends in biodiversity, and how cladistics inform phylogeny.
 - Explain the processes and outcomes of macroevolution and microevolution.
 - Explain organismal interactions at the levels of populations, communities, ecosystems, and biosphere.
 - Demonstrate competency with the scientific techniques used in biology including observation, sketching, microscopy, and dissections.
 - Apply the scientific method in the laboratory setting to design controlled experiments, collect and interpret data, and clearly communicate experimental results.
 - d. Course description (as it will appear in catalog):

BIO 106 Biology I: Introduction to Organismal Diversity

This course examines the principles of organismal biology. Topics include evolution, comparative anatomy and physiology, diversity of biological organisms, phylogeny, and interactions at different levels of biological hierarchy. The laboratory component focuses on observing, sketching and dissecting specimens, designing experiments, as well as acquiring and interpreting data. The course is designed for students majoring in the sciences.

Credits: 4 Corequisite: ENG 101 Semester Offered: F/S

21. Course Revision: BIO 231 General Microbiology

- a. Effective date: FA 2023
- b. Change in description and prerequisite
- c. Revised course student learning outcomes

Upon successful completion of this course, students will be able to:

- Compare the structures, physiology and metabolism of prokaryotic and eukaryotic microbes, and viruses.
- Explain microbial growth patterns, nutritional requirements, and mechanisms to control growth.
- Examine the processes of gene transfer, and the role of microbes in biotechnology.
- Examine the role of microbes in the environment and their interactions with other organisms.
- Describe the role of host defense mechanisms in the process of disease.
- Demonstrate laboratory proficiency in microscopy, aseptic transfer, cultivation of microbes, microbial identification, and laboratory safety.
- Employ the scientific method to collect, analyze, and interpret data; effectively communicate experimental results.
- d. Course description (as it will appear in catalog):

BIO 231 General Microbiology

This course explores the morphology, growth, metabolism, and genetics of microorganisms including bacteria, fungi, and viruses. Topics include microbial growth and control, genetic transmission and expression, microbial pathogenicity, infectious disease transmission, immunology, and the role of microbes in biotechnology. Students also focus on microscopy, aseptic transfer, and safe cultivation of microorganisms with an additional emphasis on documentation, data analysis, and experimental design.

Credits: 4 Prerequisite: BIO 107 Semester Offered: F/S

- 22. Course Revision: BIO 259 Cell Biology
 - a. Effective date: FA 2023
 - b. Change in description and prerequisite
 - c. Course description (as it will appear in catalog):

BIO 259 Cell Biology

This course focuses on the structure and function of cells. Topics include organelles, membrane structure and function, protein structure, function and trafficking, metabolism, signal transduction, cytoskeletal dynamics and regulation of growth as well as data collection, analysis, and documentation methods. Students learn laboratory instrumentation, microscopy, cellular techniques, and protein analysis methods employed in biomedical research and the biotechnology industry. **Credits: 4**

Prerequisite: BIO 107 Semester Offered: F/S

- 23. Course Revision: BIO 262 Principles of Genetics
 - a. Effective date: FA 2023
 - b. Change in description and prerequisite
 - c. Revised course student learning outcomes
 - Upon successful completion of this course, students will be able to:
 - Compare and contrast the mechanisms of transmission of genetic material in prokaryotes and eukaryotes.
 - Apply genetic mapping strategies to determine the position of genes in prokaryotic and eukaryotic genomes.
 - Describe the genomic content, organization, and packaging of genetic material.
 - Explain the mechanisms of DNA replication, transcription and translation.
 - Compare and contrast the regulation of gene expression in prokaryotes and eukaryotes.
 - Explain the mechanisms responsible for genetic mutation and DNA repair.
 - Explain evolution in the context of population dynamics and genetic processes such as mutation, migration, natural selection, and random genetic drift.
 - Utilize experimental methods in model organisms to characterize transmission, interaction, expression and function of genes.
 - Apply the scientific method in the laboratory setting to design controlled experiments, collect and interpret data, and document and clearly communicate experimental results.
 - Integrate genetic concepts with societal issues such as genetic counseling, ethics of eugenics, ownership of personal genetic information.
 - d. Course description (as it will appear in catalog):

BIO 262 Principles of Genetics

This course covers the principles of classical, molecular and population genetics in both model organisms and humans. Students explore inheritance, gene expression, population genetics and evolution, and genetic mutation and repair. The material emphasizes experimental evidence for genetic principles along with application of these principles to solve problems. Students perform investigative laboratory exercises in genetic mapping, recombinant DNA techniques, gene regulation, and bioinformatics.

Credits: 4 Prerequisite: BIO 106, BIO 107, MAT 122 Semester Offered: F/S

24. Program Revision: Liberal Arts - Biology Option (LABI)

- a. Effective date: FA 2023
- b. Incorporate course name and prerequisite change for BIO 107
- c. Incorporate course name, course number, and prerequisite change for BIO 108 (now BIO 106)

- d. Incorporate prerequisite change for BIO 231
- e. Incorporate prerequisite change for BIO 259
- f. Incorporate prerequisite change for BIO 262
- g. Incorporate prerequisite change for MAT 122
- h. Move BIO 107 from Semester 1 to Semester 2
- i. Move BIO 106 from Semester 2 to Semester 1
- j. Adjust Milestones, accordingly
- k. See grid on page: <u>132</u>

25. Program Revision: Liberal Arts - Chemistry Option (LACH)

- a. Effective date: FA 2023
- b. Incorporate course name and prerequisite change for BIO 107
- c. Incorporate course name, course number, and prerequisite change for BIO 108 (now BIO 106)
- d. Move BIO 107 from Semester 1 to Semester 2
- e. Move BIO 106 from Semester 2 to Semester 1
- f. See grid on page: <u>134</u>
- 26. Program Revision: Liberal Arts Environmental Science Option (LAES)
 - a. Effective date: FA 2023
 - b. Incorporate course name and prerequisite change for BIO 107
 - c. Incorporate course name, course number, and prerequisite change for BIO 108 (now BIO 106)
 - d. Incorporate prerequisite change for MAT 122
 - e. Move BIO 107 from Semester 1 to Semester 2
 - f. Move BIO 106 from Semester 2 to Semester 1
 - g. See grid on page: <u>136</u>
- 27. Program Revision: General Studies Pre-Pharmacy Option (GSPH)
 - a. Effective date: FA 2023
 - b. Incorporate course name and prerequisite change for BIO 107
 - c. Incorporate course name, course number, and prerequisite change for BIO 108 (now BIO 106)
 - d. Incorporate prerequisite change for BIO 231
 - e. Incorporate prerequisite change for MAT 122
 - f. Move BIO 107 from Semester 1 to Semester 2
 - g. Move BIO 106 from Semester 2 to Semester 1
 - h. See grid on page: 138
- 28. Program Revision: General Studies Biotechnology Option (GSBT)
 - a. Effective date: FA 2023
 - b. Incorporate course name and prerequisite change for BIO 107
 - c. Incorporate prerequisite change for BIO 231
 - d. Incorporate prerequisite change for BIO 259
 - e. Incorporate prerequisite change for MAT 122
 - f. Move BIO 107 from Semester 1 to Semester 2
 - g. Move BIO 259 from Semester 2 to Semester 4
 - h. Move MAT 122 from Semester 2 to Semester 1
 - i. Move MAT 123 from Semester 3 to Semester 2
 - j. Move MAT 124 from Semester 4 to Semester 3
 - k. Adjust Milestones and Semester Credit Totals, accordingly
 - I. See grid on page: <u>140</u>
- 29. Program Revision: Biotechnology Technician Certificate (BI)
 - a. Effective date: FA 2023
 - b. Incorporate course name and prerequisite change for BIO 107
 - c. Incorporate prerequisite change for BIO 231
 - d. Incorporate prerequisite change for BIO 259
 - e. Remove CHM 105 from Semester 1

- f. Adjust Milestones and Semester Credit Totals, accordingly
- g. Decrease Total Credits Required for program, from 29 to 25 total
- h. See grid on page: <u>141</u>
- 30. Course Revision: BIO 101 General Biology: Core Concepts
 - a. Effective date: FA 2023
 - b. Change in prerequisite
 - c. Course description (as it will appear in catalog):

BIO 101 General Biology: Core Concepts

Students intending to major in the health sciences learn scientific method, basic chemistry (for the understanding of biologic concepts), structure and function of basic cells and tissues, mitosis and meiosis, genetics, and the basic principles of evolution. The laboratory component covers basic techniques in observation, analysis, and interpretation of data relating to the topics discussed in lecture. The lab activities are investigative in nature with the students devising hypotheses, predictions, and identifying independent and dependent variables.

Credits: 4

Prerequisite: Placement into college level English, MAT 095 with a grade of "C" or higher or appropriate placement Semester Offered: F/S/SU

31. Course Revision: BIO 232 Medical Microbiology

- a. Effective date: FA 2023
- b. Change in description
- c. Revised course student learning outcomes
 - Upon successful completion of this course, students will be able to:
 - Demonstrate competency in microbiology laboratory safety.
 - Apply proper laboratory techniques to isolate, identify, and classify microbes.
 - Differentiate the nutritional and environmental requirements for microbial growth.
 - Compare physical and chemical methods of microbial control.
 - Identify the reservoirs, modes of transmission, and virulence factors of medically significant pathogens.
 - Describe the pathogenesis and manifestations of infectious diseases.
 - Explain host defense mechanisms and the types of immunity.
- d. Course description (as it will appear in catalog):

BIO 232 Medical Microbiology

This course examines the structure, growth, and control of medically significant bacteria, viruses, fungi, protozoa, and helminths. Students learn about the transmission, pathogenesis, and clinical manifestations of disease. The course includes host defense mechanisms and types of immunity. Students also focus on the cultivation, isolation, identification, and control of bacteria. **Credits: 4**

Prerequisite: BIO 112 or CHM 105 or CHM 123 Semester Offered: F/S/SU

- 32. New Course: MAT 051 Topics in Mathematics Corequisite
 - a. Effective date: FA 2023
 - b. Course description (as it will appear in catalog):

MAT 051 Topics in Mathematics Corequisite

This course covers various topics in developmental mathematics to support students enrolled in MAT 121. Students apply remedial mathematics topics such as fractions, decimals, percent, order of operations, scientific notation, exponential notation, and solving equations to strengthen comprehension of college level topics in MAT 121. This course requires co-enrollment with MAT 121. **Credits: 2**

Corequisite: MAT 121 Semester Offered: F/S/SU

- 33. New Course: MAT 052 Statistics Corequisite
 - a. Effective date: FA 2023
 - b. Course description (as it will appear in catalog):

MAT 052 Statistics Corequisite

This course covers various topics in developmental mathematics to support students enrolled in MAT 122. Students apply remedial mathematics topics such as fractions, decimals, percent, proportion, scientific notation, coordinates, slope, graphing of linear equations, and mathematical phrasing justin-time to strengthen comprehension of statistics concepts. This course requires co-enrollment with MAT 122.

Credits: 2 Corequisite: MAT 122 Semester Offered: F/S/SU

- 34. Course Revision: MAT 121 Topics in Mathematics
 - a. Effective date: FA 2023
 - b. Change in prerequisite and corequisite

c. Course description (as it will appear in catalog):

MAT 121 Topics in Mathematics

This course explores a variety of topics in contemporary mathematics. These topics include problem solving and critical thinking, personal finance, numeration systems, set theory, counting principles and probability theory, and voting methods.

Credits: 3

Prerequisite: College level mathematics course or QMAT placement score > 21 or appropriate multiple measures placement or Corequisite: MAT 051 Semester Offered: F/S/SU

35. Course Revision: MAT 122 Statistics

- a. Effective date: FA 2023
- b. Change in description, prerequisite, and corequisite
- c. Course description (as it will appear in catalog):

MAT 122 Statistics

This introductory statistics course covers descriptive statistics, probability, and inferential statistics. Statistical content includes sampling, graphical summaries of data, measures of center and variability, probability theory and distributions, standard and non-standard normal distributions, the Central Limit Theorem, confidence intervals, one-sample hypothesis tests, linear correlation and regression. Statistical technology is used.

Credits: 3

Prerequisite: College level mathematics course or QMAT placement score > 21 or Corequisite: MAT 052

Semester Offered: F/S/SU

School of Public Service, Education & Social Sciences

- 36. Program Closure: Technician in Applied Behavior Analysis (TABC)
 - a. Effective date: FA 2023

37. Course Revision: ECE 101 Introduction to Early Childhood Education

- a. Effective date: FA 2023
- b. Change in description
- c. Course description (as it will appear in catalog):

ECE 101 Introduction to Early Childhood Education

This course is an introduction to early childhood education. Students study the history and contributing theories of the field and the basic aspects important to quality programs for young children. Course content includes studies of child development, the types of programs available; qualifications for teachers and staff; state regulations monitoring programs, state Guidance Policy, the Massachusetts Early Childhood Standards; career opportunities; special education considerations, and current issues in early childhood education. During a 10-hour field experience, students make

observations in the Children's School: QCC's Early Childhood Education Lab School, or local licensed Child Care program, or public school that focuses on guidance practices; children's play; integrated curriculum practices; transitions and routines; and appropriate methods for addressing students of differing abilities.

Credits: 3 Prerequisite: Placement into college level English Semester Offered: F/S/SU

- 38. Course Revision: ECE 202 Fieldwork with Young Children I
 - a. Effective date: FA 2023
 - b. Change in prerequisite
 - c. Course description (as it will appear in catalog):

ECE 202 Fieldwork with Young Children I

This course provides onsite supervision and consultation for students who are developing skills and competencies as they work directly with young children in a school setting (ages 2.9-under seven years old and not yet enrolled in first grade). Early Childhood Education faculty observe and consult with students during this process. Students demonstrate and document competence in the following areas: setting up and maintaining a safe, healthy learning environment for children; providing positive guidance for children; implementing an age appropriate, culturally sensitive curricula; providing appropriate social experiences for young children; communicating and cooperating with team members appropriately; documenting self-growth over time; and demonstrating awareness of the total classroom at all times.

Credits: 3 Prerequisite: ECE 102 Semester Offered: S

School of English & Humanities

- 39. New Course: ENG 101L Composition I with Lab
 - a. Effective date: FA 2023

ENG 101L Composition I with Lab

The course focuses on theme-based argument. Students practice and develop critical reading, thinking, and writing skills necessary for college. Students read, analyze, and summarize college level analytic arguments from various genres (popular, academic, etc.) and compose research-based analytic arguments based on the course's theme. Students become aware of writing decisions made for different audiences, purposes, and genres, with a focus on academic writing conventions. Students also learn beginning research skills, including appropriate quotation, summary, paraphrase, and documentation skills. At the end of the semester, students compile a portfolio of 15-25 pages, to include their summary, synthesis, and analysis projects. This section of the course includes a two-hour lab component where an academic coach will support students with planning, organizing, and revising assignments, focusing on sentence and paragraph-level revision as well as the rhetorical content of the ENG 101 course.

Credits: 3

Prerequisite: Appropriate Placement based on GPA (2.4-2.89) and Self-Placement Test and/or Conference with Advisor

Semester Offered: F/S/SU

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and Code: Business Administ (Program Code: BT) (from current AY 22/23 catalog)	ration Transfer - Associate in Science
2.	Originator: Jean McLean	Date: 12/9/2022
3.	School Dean: Betty Lauer	Date: 12/9/2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date:
6.	Recommended by the School of <u>Bus., Eng., & Tech.</u>	Date: <u>12/15/2022</u>
	Comments: Unanimous approval	
7.	Kevin Li AA Leadership Team:	Date: 01/23/23
	Recommended: X Not Recommended:	
	Comments:	
8.	VP/Academic Affairs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: Not Recommended: X X	
	Comments:	
9.	John Stazinski	Date:
	Recommended: Not Recommended:	
	Comments:	
10.	VP/Academic Affairs:Dr. James M. Keane	Date:02/14/23
	Approved: Not Approved:	
	Comments:	

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Business Administration Transfer - Associate in Science (Program Code: BT)
Provide a detailed list of the proposed changes to the degree or certificate.
In Semester 3: 1. Remove one Program Elective 2. Add MGT 211 3.
4. 5.
Attachments: Current academic map Proposed academic map with changes in bold
Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted.
MGT 211 is not a new or revised course.
Provide a rationale for the proposed changes.
Principles of Management is the prerequisite for some third-year courses at WSU. Recommended by Transfer coordinator.
Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.
No
Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.
No Department(s) Affected: None
Do any of the proposed changes affect articulation agreements? No. Consult with the Transfer Coordinator.
Consulted with Transfer. Transfer approved the change.
For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?
No
If yes please provide a rationale.
Will any of the following be required:
No
Additional staffAdditional spaceAdditional equipmentAdditional library resources
Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the Academic Matters (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

 \mathbf{M} – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING OUTCOMES FOR (insert the name of Supporting I, M, E						
the course(s)						
· ·	am) Business Transfer BT		-			
1	Demonstrate an understanding of the practice of business, including	ACC 101, ACC	E			
	management, marketing, and accounting; demonstrate the application	102, ACC 222,				
	of this knowledge in a business setting.	Bus prog				
		electives				
2	Transfer to a business administration bachelor's degree program.					
3	Communicate effectively using written, oral, and nonverbal	ENG 101, ENG	E, M			
	techniques, including the use of technology in gathering and	102, CIS 111,				
	presenting information.	HUM electives				
4	Use critical thinking skills to appraise and evaluate business	MAT 122, ACC	Е,			
	practices, including the use of quantitative and qualitative	101,102, 222				
	techniques.					
5	Recognize the presence of various cultures in the business world, and	HUM, SSE	М			
	comprehend the need to have a global perspective when analyzing and	electives, program				
	planning in a business environment.	electives. ECO				
		115, 116				
6	Demonstrate knowledge of the concept of ethics and how businesses	ACC	Е			
	integrate social responsibility into their ongoing operations.	101,102,222,				
		Hum electives,				
		prog. electives				
7	Comprehend the rapid change taking place in the business	Prog electives,	Е			
	environment, and demonstrate an ability to engage in ongoing	ECO, CIS 111,				
	professional development.	ACC				

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes (Gen. Ed. Goals adopted 2022).

CENERAL EDUCATION COUDENTLE ADVINC OUTCOMES FOR (C	a c	
GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR (insert the	Supporting	I, M, E
name of the program)	course(s)	
Civic Learning & Engagement: Students will develop civic knowledge, skills	ACC 101, 102,	E, M
and dispositions through learning and practice.	222, electives	
Communication Skills: Students will read, write and speak effectively to build	ENG 101, 102	E
knowledge and convey meaning.		
Information and Digital Literacy: Students will engage in a reflective process of	CIS 111	Е
information discovery, use information responsibly and employ digital		
technologies to learn, communicate and collaborate.		
Intercultural Knowledge and Competence: Students will demonstrate	HUM, SSE	I, M
intercultural knowledge within a variety of cultural contexts and with culturally		
different ideas and individuals		
Quantitative and Scientific Reasoning: Students will apply concepts and	MAT 122, 123,	Е
methods of mathematics and science to acquire knowledge and solve problems.	Sci electives	

Business. Financial & Hospitality Management Business Administration Transfer - Associate in Science (Program Code: BT)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	er 1	•	Apply and get accepted to this
Financial Accounting I	ACC 101	F/S/SU	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	program (Program Code: BT). Register for and successfully
Introduction to Microcomputer Applications OR	CIS 111				complete all courses to graduate in four semesters.
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Attend Transfer Services events. For information see
Principles of Macroeconomics	ECO 215	F/S/SU	3	Coreq: ENG 101	www.QCC.edu/transfer.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete ENG 101 and MAT 123 or
College Mathematics I: Pre- Calculus OR	MAT 123	F/S/SU	3	MAT 100 or approp place score	MAT 231.
Applied Calculus	MAT 231	S		MAT 123 or approp place score	
		Total	15		
		Semeste			Meet with Academic Advisor to
Financial Accounting II	ACC 102	F/S/SU	3	ACC 101, CIS 111	choose Program Electives
Principles of Microeconomics	ECO 216	F/S/SU	3	Coreq: ENG 101	(Semesters 3 and 4); must be
Composition II	ENG 102	F/S/SU	3	ENG 101	selected from ACC, BSL, FIN, MGT,
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher or approp place	or MRK course designations. Meet with a Transfer Services
Humanities Elective		F/S/SU	3		Advisor. See www.QCC.edu/transfer.
		Total	15		Attend Transfer Services events.
		Semeste	er 3	·	Meet with representatives of four-
Managerial Accounting	ACC 222	F/S/SU	3	ACC 102	year schools to discuss/begin the transfer application process.
Humanities Elective		F/S/SU	3		Students planning to transfer to WSU should choose MGT 211 as one of
Lab Science Elective		F/S/SU	4		the Program Electives.
Program Elective		F/S/SU	<mark>3</mark>		Students in the Commonwealth
Program Elective		F/S/SU	3		Commitment program should choose MRK 201 as one of the Program
		Total	16		Electives.
Semester 4					Continue with/complete the transfer
Elective		F/S/SU	3		application process.
Humanities Elective		F/S/SU	3		
Program Elective		F/S/SU	3		Submit an Intent to Graduate Form,
Science Elective or Lab Science Elective		F/S/SU	3-4		located on The Q.
Social Science Elective		F/S/SU	3		
		Total	15-16		
Total Credits F	Required		61-62		

Business. Financial & Hospitality Management Business Administration Transfer - Associate in Science (Program Code: BT)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones	
		Semest	er 1	-	Apply and get accepted to this	
Financial Accounting I	ACC 101	F/S/SU	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	program (Program Code: BT). Register for and successfully	
Introduction to Microcomputer Applications OR	CIS 111				complete all courses to graduate in four semesters.	
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Attend Transfer Services events. For information see	
Principles of Macroeconomics	ECO 215	F/S/SU	3	Coreq: ENG 101	www.QCC.edu/transfer.	
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete ENG 101 and MAT 123 or	
College Mathematics I: Pre- Calculus OR	MAT 123	F/S/SU	3	MAT 100 or approp place score	MAT 231.	
Applied Calculus	MAT 231	S		MAT 123 or approp place score]	
		Total	15			
		Semest			Meet with Academic Advisor to	
Financial Accounting II	ACC 102	F/S/SU	3	ACC 101, CIS 111	choose Program Electives	
Principles of Microeconomics	ECO 216	F/S/SU	3	Coreq: ENG 101	(Semesters 3 and 4); must be	
Composition II	ENG 102	F/S/SU	3	ENG 101	selected from ACC, BSL, FIN, MGT,	
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher or approp place	or MRK course designations. Meet with a Transfer Services	
Humanities Elective		F/S/SU	3		Advisor. See www.QCC.edu/transfer.	
		Total	15		Attend Transfer Services events.	
		Semest	er 3		Meet with representatives of four-	
Managerial Accounting	ACC 222	F/S/SU	3	ACC 102	year schools to discuss/begin the	
Principles of Management	MGT 211	F/S/SU	<mark>3</mark>	Placement into college level English	transfer application process.	
Humanities Elective		F/S/SU	3]	
Lab Science Elective		F/S/SU	4		Students in the Commonwealth	
Program Elective		F/S/SU	3		Commitment program should choose	
		Total	16		MRK 201 as the Program Elective.	
		Semest	er 4		Continue with/complete the transfer	
Elective		F/S/SU	3		application process.	
Humanities Elective		F/S/SU	3			
Program Elective		F/S/SU	3		Submit an Intent to Graduate Form,	
Science Elective or Lab Science Elective		F/S/SU	3-4		located on The Q.	
Social Science Elective		F/S/SU	3			
		Total	15-16 61-62		<u> </u>	

DEGREE PROGRAM OR CERTIFICATE PROPOSAL FOR CLOSURE

1. Degree or Certificate Name and Code to be closed: Manufacturing Technology - Applied Manufacturing Option (Program Code: MPA)

2.	Originator:	Lee Duerden	Date: 11/7/2022			
3.	School Dean:	Betty Lauer	Date: 11/7/2022			
4. Rationale for the proposed program or certificate closure: Program no longer has feeder credentials to support it. The program was built to support M apprentice programming, however the graduates from this apprentice program did not grow The MACWIC program while still being offered is no longer supporting apprentice type pro through MassMEP. As such this program should be retired.						
5.	Effective Date: Fa	ll 2023				
6.	Reviewed by Prog	ram and Process (if applicable) ${ m N/A}$	Date:			
7.	. Recommended by the <u>School of Business. Engineering & Technology</u> Date: 12/15/2022 Comments: unanimous approval					
8	AA Leadership Te	Kevin Li cam:	Date: 01/23/23			
	Recommended:	X Not Recommended:				
	Comments:					
9.	VP/Academic Affa	airs: Mr. James M. Keane	Date: 01/23/23			
		Not Recommended:	_			
	X Comments:					
10.	Learning Council:	John Stazinski	Date:02/14/23			
	Recommended:	X Not Recommended:	_			

D.

Comments:

11. VP/Academic Affairs:	Dr. James M. Keane	Date: 02/14/23	
Approved: X	Not Approved:	_	

FOR PROGRAM/CERTIFICATE CLOSURE

President:		Date:	
Approved:	Not Approved:		
Board of Trustees:		Date:	
Approved:	Not Approved:		

DEGREE PROGRAM OR CERTIFICATE PROPOSAL FOR CLOSURE

1.		rtificate Name and Code to be closed: Manufacturing Technology - Applied ng Certificate (Program Code: AMC)				
2.	Originator: I	Lee Duerden	Date: 11/7/2022			
3.	School Dean:	Betty Lauer	Date: 11/7/2022			
4.	This program exists	oposed program or certificate closure: as a pre-requisite to MPA program. The N n should also follow and be closed.	MPA program is being closed down and			
5.	Effective Date: Fall	2023				
6.	Reviewed by Progra	am and Process (if applicable)	Date:			
7.	Recommended by th Comments: unanim	ne <u>School of Business, Engineering & Tech</u> ous approval	<u>nology</u> Date: 12/15/2022			
8	AA Leadership Tea	Kevin Li m:	Date: 01/23/23			
	Recommended: X	Not Recommended:				
	Comments:					
9.	VP/Academic Affai	rs: Mr. James M. Keane	Date: <u>01/23/23</u>			
	Recommended: X Comments:	Not Recommended:				
10	.Learning Council: _	John Stazinski	Date:02/14/23			
	Recommended: X	Not Recommended:				
	Comments:					
11.	. VP/Academic Affair	Dr. James M. Keane	Date:02/14/23			
	Approved: X	Not Approved:				
	Comments:	—				

FOR PROGRAM/CERTIFICATE CLOSURE

President:		Date:	
Approved:	Not Approved:		
Board of Trustees:		Date:	
Approved:	Not Approved:		

COURSE REVISION PROPOSAL

1.	Course Number and Name: ERG 101 <i>Engineering Graphics</i> (from current AY22/23 catalog)				
2.	Originator:	Dadbeh Bigonahy	Date: 01-19-2023		
3.	School Dean:	Betty Lauer	Date: 01-19-2023		
4.	Effective Date: Fa	11 2023			
5.	Reviewed by Prog	ram and Process (if applicable)	Date:		
6.	Recommended by Date: 1/19/2023 Comments: Unani	the School of Business, Engineering & mous vote	z Technology		
8	AA Leadership Te	Kevin Li am:	Date: <u>01/23/23</u>		
	Recommended:	X Not Recommended:			
	Comments:				
9.	VP/Academic Affa	nirs: Mr. James M. Keane	Date: <u>01/23/23</u>		
	Recommended:	Not Recommended:			
	Comments:				
10.	Learning Council:	John Stazinski	Date:02/14/23		
	Recommended:	X Not Recommended:			
	Comments:				
11.	VP/Academic Affa	irs:Dr. James M. Keane	Date:02/14/23		
	Approved: X	Not Approved:			
	Comments:				

COURSE REVISION PROPOSAL

Type of Revision:						
Course Discipline or Department: Engineering School: Business, Engineering and Technology						
Current Course Number: ERG 101						
Current Course Name: Engineering Graphics						
Current Course Description (as it appears in the college catalog including course three letter designation and number, title, credits, semesters offered and prerequisites/corequisites):						
ERG 101 Engineering Graphics This course focuses on engineering drawing utilizing computer-assisted drawing (CAD) techniques. It introduces descriptive geometry and the basic theory of orthographic projections. Students create orthographic, isometric, sectional views and assembly drawings and dimensioning using CAD software.						
Credits: 3 Semester Offered: F/S/SU Prerequisites: MAT 124						
Proposed Description (include all proposed changes):						
ERG 101 Engineering Design and Graphics Using CAD This course focuses on engineering drawing utilizing computer-assisted drawing (CAD) techniques. It introduces descriptive geometry and the basic theory of orthographic projections. Students create orthographic, isometric, sectional views and assembly drawings and dimensioning using CAD software.						
Credits: 3 Semester Offered: F/S/SU Prerequisites: MAT 124						
Rationale for the change:						
Modernization						
Provide a description of any change in course content.						
NA						

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

ERG : Engineering – Associate in Science

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

Engineering & Engineering Technology

Engineering - Associate in Science (Program Code: ERG)

Current

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester	1 (Fall)		Apply and get accepted to this program (Program Code: ERG).
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in
Engineering Graphics	ERG 101	F/S/SU	3	MAT 124	five semesters.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Meet with Program Coordinator.
Social Science Elective		F/S/SU	3		
		Total	17		Attend Transfer Services events. For information see <u>www.QCC.edu/transfer</u> .
					Complete ENG 101 and MAT 233.
	S	emester 2	(Spring)		Meet with a Transfer Services Advisor. See
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	www.QCC.edu/transfer. Attend Transfer Services events.
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	
Calculus II	MAT 234	F/S/SU	4	MAT 233	-
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	15		
	Se	mester 3 (Summer)		
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	
Composition II	ENG 102	F/S/SU	3	ENG 101	-
		Total	7		
		Semester	4 (Fall)		Meet with representatives of four- year schools to discuss/begin the
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
	1		1	1	

Calculus III	MAT 235	F/S/SU	4	MAT 234	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	-
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
		Total	17		-
	S	emester 5 ((Spring)	1	Continue with/complete the transfer application process.
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Differential Equations	MAT 238	F/S/SU	3	MAT 235	-
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	-
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	
		Total	16		
Total Credits Required		72			

Engineering & Engineering Technology

Engineering - Associate in Science (Program Code: ERG)

Proposed

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester	l 1 (Fall)		Apply and get accepted to this program (Program Code: ERG).
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in
Engineering Design and Graphics Using CAD	ERG 101	F/S/SU	3	MAT 124	five semesters.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Meet with Program Coordinator.
Social Science Elective		F/S/SU	3		-
		Total	17		Attend Transfer Services events. For information see <u>www.QCC.edu/transfer</u> .
					Complete ENG 101 and MAT 233.
	S	emester 2	(Spring)		Meet with a Transfer Services Advisor. See
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	www.QCC.edu/transfer. Attend Transfer Services events.
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	-
Calculus II	MAT 234	F/S/SU	4	MAT 233	-
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	15		-
	Se	mester 3 (Summer)		
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	
Composition II	ENG 102	F/S/SU	3	ENG 101	
		Total	7		-
		Semester 4	4 (Fall)		Meet with representatives of four- year schools to discuss/begin the
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
	1	1		1	

Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	_
		Total	17		-
	S	emester 5 ((Spring)	I	Continue with/complete the transfer application process.
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Differential Equations	MAT 238	F/S/SU	3	MAT 235	-
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	-
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	_
		Total	16		
Total Credits Required			72		

DEGREE OR CERTIFICATE REVISION PROPOSAL

1. Degree or Certificate Name and Code: Engineering - Associate in Science (Program Code: ERG)

	(from current AY 22/2	23 catalog)			,		
2.	Originator: Dadbeh B	gonahy	Date: 1/19/20	Date: 1/19/2023			
3.	School Dean: Betty La	uer	Date: 1/19/20	Date: 1/19/2023			
4.	Effective Date: Fall 20	23					
5.	Reviewed by Program	and Process (if applicable)	Date:				
6.	Recommended by the Comments: Unanimou	School of Business, Engineering a source of the second s	& Technology	Date: 1/19/2023			
7	AA Leadership Team:	Kevin Li	Date:	01/23/23			
	Recommended: X	Not Recommended: _					
	Comments:						
8.	VP/Academic Affairs:	Mr. James M. Keane	Date:	01/23/23	-		
	Recommended: X Comments:	Not Recommended: _					
9.I	earning Council:	John Stazinski	Date:	02/14/23	_		
	Recommended: X	Not Recommended: _					
	Comments: Incorpora	te prerequisite and corequisite cha	nge for ERG221	and prerequisite chan	ge for ERG 223		
10.	VP/Academic Affairs:_	Dr. James M. Keane	Date:	02/14/23	_		
	Approved: X	Not Approved:					
	Comments:						

1

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Engineering - Associate in Science (Program Code: ERG)

Provide a detailed list of the proposed changes to the degree or certificate.

1. Semester 1: Incorporate new course name for ERG 101 from Engineering Graphics to *Engineering Design and Graphics Using CAD*

2. Semester 3: Incorporate the course name and prerequisite change of Principles of Biology I (BIO 107) to Biology II: Introduction to Cells and Molecules (BIO 107).

Attachments:

Current academic map

Proposed academic map with changes in **bold**

Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted. ERG 101

BIO 107

Provide a rationale for the proposed changes.

Modernize naming to be consistent with transfer institutions.

In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to clarify the content, the name has been changed to BIO 107: Introduction to Cells and Molecules.

Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.

Program SLOs and goals remain the same.

Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.

No other departments affected by the degree changes.

Department(s) Affected:

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.

For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?

The order of courses and prerequisites have changed, but the content remains the same. There is no effect on MassTransfer.

If yes please provide a rationale.

Will any of the following be required: None

Additional staff	Additional space	_Additional equipment	Additional library resources
Provide a rationale	for any needs indicat	ed and include approximate	e cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING OUTCOMES FOR (insert the name of the program)	Supporting course(s)	I, M, E
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

3

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes (Gen. Ed. Goals adopted 2022).

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR (insert the	Supporting	I, M, E
name of the program)	course(s)	
Civic Learning & Engagement: Students will develop civic knowledge, skills and dispositions through learning and practice.		
Communication Skills: Students will read, write and speak effectively to build		
knowledge and convey meaning.		
Information and Digital Literacy: Students will engage in a reflective process of		
information discovery, use information responsibly and employ digital		
technologies to learn, communicate and collaborate.		
Intercultural Knowledge and Competence: Students will demonstrate		
intercultural knowledge within a variety of cultural contexts and with culturally		
different ideas and individuals		
Quantitative and Scientific Reasoning: Students will apply concepts and		
methods of mathematics and science to acquire knowledge and solve problems.		

Engineering & Engineering Technology Engineering - Associate in Science (Program Code: ERG)

Current

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester	I (Fall)		Apply and get accepted to this
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	program (Program Code: ERG).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in five semesters.
Engineering Graphics	ERG 101	F/S/SU	3	MAT 124	Meet with Program Coordinator.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Attend Transfer Services events. For information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	17		Complete ENG 101 and MAT 233.
	S	emester 2	(Spring)		Meet with a Transfer Services
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	Advisor. See www.QCC.edu/transfer. Attend
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	Transfer Services events.
Calculus II	MAT 234	F/S/SU	4	MAT 233	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	15		
	Se	mester 3 (Summer)		
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	
Composition II	ENG 102	F/S/SU	3	ENG 101	
		Total	7		
	• •	Semester 4	4 (Fall)		Meet with representatives of four-
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	year schools to discuss/begin the transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
	L	Total	17 (Section of)		
	S	emester 5	(Spring)		Continue with/complete the transfer
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Differential Equations	MAT 238	F/S/SU	3	MAT 235	
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	
		Total	16		
Total Credits F	Required		72		

Engineering & Engineering Technology Engineering - Associate in Science (Program Code: ERG)

Proposed

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester '			Apply and get accepted to this
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	program (Program Code: ERG).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in five semesters.
Engineering Design and Graphics Using CAD	ERG 101	F/S/SU	3	MAT 124	Meet with Program Coordinator.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Attend Transfer Services events. For information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	17		Complete ENG 101 and MAT 233.
	S	emester 2	(Spring)		Meet with a Transfer Services
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	Advisor. See www.QCC.edu/transfer. Attend Transfer Services events.
Engineering Computation and Modeling Calculus II	ERG 280 MAT 234	F/S/SU F/S/SU	3	MAT 233 MAT 233	Transfer Services events.
General Physics I:	-		-		-
Newtonian Mechanics	PHY 105	F/S/SU Total	4 15	MAT 233	_
	Se	mester 3 (
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123; ENG 101	
Composition II	ENG 102	F/S/SU	3	ENG 101	-
· · · · · · · · · · · · · · · · · · ·		Total	7		
		Semester 4	4 (Fall)		Meet with representatives of four-
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	year schools to discuss/begin the transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
	C.	Total emester 5	17 (Spring)		Continuo with/complete the transfer
			(opinig)	CHM 124, MAT 235, PHY 106 or	Continue with/complete the transfer application process.
Thermodynamics	ERG 223	S/SU	3	PHY 107 ERG 221, MAT 235, Coreq: MAT	Submit an Intent to Graduate Form,
Strength of Materials	ERG 225	S/SU	3	238	located on <i>The Q</i> .
Differential Equations	MAT 238	F/S/SU	3	MAT 235	-
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	-
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	_
Total Oraclita	Convirod	Total	16 72		
Total Credits F	kequirea		12		

DEGREE OR CERTIFICATE REVISION PROPOSAL

1. Degree or Certificate Name and Code: Engineering - Biomedical Engineering Option - Associate in Science (Program Code: ERBM)

(from current AY 22/23 catalog)

2.	Originator: Dadbeh Bigonahy	Date: 1/19/2023			
3.	School Dean: Betty Lauer	Date: 1/19/2023			
4.	Effective Date: Fall 2023				
5.	Reviewed by Program and Process (if applicable)	Date:			
6.	Recommended by the School of Business, Engineering & Comments: Unanimous vote	Technology Date: 1/19/2023			
7	AA Leadership Team:	Date: <u>01/23/23</u>			
	Recommended: X Not Recommended:				
	Comments:				
8.	VP/Academic Affairs: Mr. James M. Keane	Date: <u>01/23/23</u>			
	Recommended: Not Recommended: X				
	X Comments:				
9.I	John Stazinski	Date:02/14/23			
	Recommended: X Not Recommended:				
	Comments: Incorporate prerequisite and co-requisite change	ge for ERG 221 and prerequisite change for ERG 223			
10.	VP/Academic Affairs: Dr. James M. Keane	Date:02/14/23			
	Approved: Not Approved:				
	Comments:				

1

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: **Engineering - Biomedical Engineering Option - Associate in** Science (Program Code: ERBM)

Provide a detailed list of the proposed changes to the degree or certificate.

- 1. Semester 2: Move BIO 107 from semester 1 to semester 2.
- 2. Semester 2: Incorporate the course name and prerequisite change of Principles of Biology I (BIO 107) to Biology II: Introduction to Cells and Molecules (BIO 107).
- 3. Semester 4: Move BIO 259 from semester 2 to semester 4.
- 4. Semester 4: Incorporate prerequisite change for BIO 259 (Cell Biology).

Attachments: Current academic map Proposed academic map with changes in **bold**

Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted. BIO 107 BIO 259

Provide a rationale for the proposed changes.

In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to clarify the content, the name has been changed to BIO 107: Introduction to Cells and Molecules. Due to the prerequisite change for BIO 107, the chemistry prerequisite has been removed from BIO 259.

Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.

Program SLOs and goals remain the same.

Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.

No other departments affected by the degree changes.

Department(s) Affected:

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.

For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?

The order of courses and prerequisites have changed, but the content remains the same. There is no effect on MassTransfer.

If yes please provide a rationale.

Will any of the following be required: None				
Additional staff	_Additional space	Additional equipment	Additional library resources	
Provide a rationale for any needs indicated and include approximate cost of equipment.				

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING program)	OUTCOMES FOR (insert the name of the	Supporting course(s)	I, M, E
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes (Gen. Ed. Goals adopted 2022).

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR (insert the	Supporting	I, M, E
name of the program)	course(s)	
Civic Learning & Engagement: Students will develop civic knowledge, skills and dispositions through learning and practice.		
Communication Skills: Students will read, write and speak effectively to build		
knowledge and convey meaning.		
Information and Digital Literacy: Students will engage in a reflective process of		
information discovery, use information responsibly and employ digital		
technologies to learn, communicate and collaborate.		
Intercultural Knowledge and Competence: Students will demonstrate		
intercultural knowledge within a variety of cultural contexts and with culturally		
different ideas and individuals		
Quantitative and Scientific Reasoning: Students will apply concepts and		
methods of mathematics and science to acquire knowledge and solve problems.		

Engineering & Engineering Technology Engineering - Biomedical Engineering Option - Associate in Science (Program Code: ERBM) Current

Course Title	Course #	Offere d	Credits	Prerequisites	Milestones
		Semest	er 1		Apply and get accepted to this
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	program (Program Code: ERBM). Register for and successfully complete all courses to graduate in
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	five semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Meet with Program Coordinator. Attend Transfer Services events.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	For information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	18		Complete ENG 101 and MAT 233.
		Semest	-		Meet with a Transfer Services
Cell Biology	BIO 259	F/S	4	BIO 107 and CHM 105 or CHM 123	Advisor. See
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	www.QCC.edu/transfer. Attend Transfer Services events.
Calculus II	MAT 234	F/S/SU	4	MAT 233	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	16		
		mester 3 (
Composition II	ENG 102	F/S/SU	3	ENG 101	
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
· · · · · ·		Total	13		
		Semest	-		Meet with representatives of four-
Molecular Biology	BIO 260	S	4	BIO 107	year schools to discuss/begin the
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
		Total	14		
		Semest	er 5		Continue with/complete the transfer
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form, located on <i>The</i> Q.
Differential Equations	MAT 238	F/S/SU	3	MAT 235	
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	
	1	Total	16		
Total Credits F	Required		77		

<u>Engineering & Engineering Technology</u> Engineering - Biomedical Engineering Option - Associate in Science (Program Code: ERBM) Proposed

Course Title	Course #	Offere	Credits	Prerequisites	Milestones
		d Semest	or 1		Apply and get accepted to this
	1	Ocificat			program (Program Code: ERBM).
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	Register for and successfully
Composition I	ENG 101	F/S/SU	3	Placement into college level English	complete all courses to graduate in five semesters.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Meet with Program Coordinator.
Social Science Elective		F/S/SU	3		Attend Transfer Services events. For information see www.QCC.edu/transfer.
		Total	<mark>14</mark>		Complete ENG 101 and MAT 233.
		Semest	er 2		Meet with a Transfer Services
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123; ENG 101	Advisor. See <u>www.QCC.edu/transfer</u> . Attend
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	Transfer Services events.
Calculus II	MAT 234	F/S/SU	4	MAT 233	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	16		
0 1 1		mester 3 (
Composition II	ENG 102	F/S/SU	3	ENG 101	_
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
		Total	13		
	BIO 259	Semest F/S	-	BIO 107	Meet with representatives of four-
Cell Biology Molecular Biology	BIO 259 BIO 260	S	<mark>4</mark> 4	BIO 107 BIO 107	year schools to discuss/begin the transfer application process.
Introduction to Materials	ERG 211	F/SU	4 3	CHM 123, PHY 105	transier application process.
Science Statics	ERG 221	F/IN	3	PHY 105, Coreq: MAT 235,	-
Calculus III	MAT 235	F/S/SU	4	MAT 234	-
		Total			-
		Semest	er 5		Continue with/complete the transfer
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 107	application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form,
Differential Equations	MAT 238	F/S/SU	3	MAT 235	located on The Q.
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	
		Total	16		
Total Credits F	Required		77		

COURSE REVISION PROPOSAL

1.	Course Number and Name: DHY 212 Dental Hygiene Proce	ess IV			
2.	Originator: Jane Gauthier	Date: <u>11/28/22</u>			
3.	School Dean: C. Pat Schmohl, Jr.	Date: <u>11/29/22</u>			
4.	2024 Effective Date: Spring 2023 (Course runs every spring seme	ester)			
5.	Reviewed by Program and Process (if applicable)	Date: N/A			
6.	Recommended by the School of Healthcare Comments: unanimous approval	Date: <u>12/15/22</u>			
7.	Kevin Li AA Leadership Team:	Date: 01/23/23			
	Recommended: X Not Recommended:				
	Comments:				
8.	VP/Academic Affairs: Mr. James M. Keane	Date: <u>01/23/23</u>			
	Recommended: Not Recommended:				
	Comments:				
9.L	John Stazinski	Date:			
	Recommended: X Not Recommended:				
Comments: Friendly amendment to change effective date to Spring 2024					
10.	VP/Academic Affairs: Dr. James M. Keane				
	Approved: X Not Approved:	_			
	Comments:				

COURSE REVISION PROPOSAL

Type of Revision:			
X_DescriptionPrerequisiteCorequisiteNumberName# Credits			
Elective TypeOther (explain)			
Course Discipline or Department: Dental Hygiene School: Healthcare			
Current Course Number: DHY 212			
Current Course Name: Dental Hygiene Process IV			
Current Course Description (as it appears in the college catalog including course three letter designation			
and number, title, credits, semesters offered and prerequisites/corequisites):			
DHY 212 Dental Hygiene Process IV			
This clinical theory course emphasizes the various dental specialties, including, but not limited to:			
General, Orthodontics, Pediatric Dentistry, Endodontics, Periodontics and Oral surgery practice. Lectures			
provided by dental specialists highlight the role of the dental hygienist in each area. The clinical component emphasizes mastering the delivery of the dental hygiene process of care while demonstrating			
independent decision-making, sound judgment, and critical thinking and problem-solving skills. The			
course emphasizes the treatment of periodontally involved patients requiring advanced instrumentation			
skills. Service-learning externships include oral health promotion and provision of services to specific			
target populations in the community.			
Credits: 6			
Prerequisite: DHY 201 with a grade of "C" or higher, DHY 211 with a grade of "C" or higher, DHY			
231 with a grade of "C" or higher, DHY 241 with a grade of "C" or higher Semester Offered: S			
Proposed Description (include all proposed changes):			
rioposed Description (include all proposed changes).			
DHY 212 Dental Hygiene Process IV			
This clinical theory course emphasizes the role of the dental hygienist in various dental specialties,			
including, but not limited to: General, Orthodontics, Pediatric Dentistry, Endodontics, Periodontics and			
Oral surgery practice. The clinical component emphasizes continued development in the delivery of the			
dental hygiene process of care while demonstrating independent decision-making, critical thinking and			
problem-solving skills focusing on the periodontally involved patients requiring advanced instrumentation			
skills. Service-learning externships include oral health promotion and provision of services to specific target populations in the community.			
Credits: 6			
Prerequisite: DHY 201 with a grade of "C" or higher, DHY 211 with a grade of "C" or higher, DHY			
231 with a grade of "C" or higher, DHY 241 with a grade of "C" or higher			
Semester Offered: S			
Rationale for the change:			
The reason for the recommended change is two-fold:			
• language is in alignment with that of the other clinical course descriptions.			
• eliminate the language "lectures provided by dental specialists" so we do not have to rely on			
outside providers to deliver course content.			
Provide a description of any change in course content.			
No change in course content.			
List the programs that are affected by this change (list program names and program codes as they appear			
in the college catalog):			

• Dental Hygiene Program (DH)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

No changes in current Academic Map.

Please submit a generic syllabus to your dean with all of the revisions included.

Done. Submitted to Dean Schmohl on 11/29/22.

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 100 Paramedic to ADN Bridge

2.	Originator:	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fal	11 2023	
5.	Reviewed by Prog	ram and Process (if applicable)	Date: NA
6.	Recommended by Comments: unanin	the School of Healthcare mous approval	Date: <u>12/15/2022</u>
7.	AA Leadership T	Kevin Li eam:	Date: <u>01/23/23</u>
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Aff	airs: Mr. James M. Keane	Date: <u>01/23/23</u>
		Not Recommended:	
	X Comments:		
9.	Learning Council	John Stazinski	Date: 02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10.	VP/Academic Affa	irs: Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision: _X_ Description _X_ P Elective Type _X_ Other (explai	-	-	lits	
Course Discipline or Department: NUR		School: HealthCare		
Current Course Number: NUR 100	Current Course Nat	me: Paramedic to ADN Bridge		
Current Course Description (as it appears in credits, semesters offered and prerequisites/c		ncluding course three letter designation and nun	ıber, title,	
NUR 100 Paramedic to ADN Bridge				
This one credit course focuses on curriculum topics that are essential for those students who hold a Paramedic certification in the state of Massachusetts and who are seeking Advanced Placement into the QCC Associate of Science Degree Nurse Education Evening Program. Topics include: Foundations of Nursing Practice, Nursing Theory and Evidenced Based Practice, Scope of Practice, Legal, Ethical and Advocacy Issues, Roles basic to nursing care, role transition, actions basic to nursing care and promoting healthy psychosocial responses. Introduction to the nursing process is also discussed. Clinical lab content includes basic nursing skills practice and competency. This course also includes clinical practice of basic skills in the long-term care setting. Successful completion of this one-credit course with a "C+" or higher enables students to enter the NUR 101 Advanced Placement Nursing I course.				
Credits: 1	110 - 11 "0" 1.	1 ENC 101 DOX 101		
Prerequisite: Passing both BIO 111 and BIO Semester Offered: F	112 with a "C" or hi	gher, ENG 101, PSY 101		
Restriction: Restricted to those students who have met admissions requirements for the Associate in Science in Nurse Education Program and hold a current certification in Massachusetts as a Paramedic or current certification from the National Registry of Emergency Medical Technicians (NREMT)				
Proposed Description (include all proposed changes):				
NUR 100 Paramedic to ADN Bridge				
This course focuses on curriculum topics that are essential for those students who hold a Paramedic certification and who are seeking enrollment into the Nurse Education - Advanced Placement Paramedic Program (NUP). Topics include foundations of nursing practice, nursing theory, evidenced based practice, legal, ethical and advocacy issues, nursing care, role transition, nursing process, and promoting healthy psychosocial responses. Lab content includes basic nursing skills practice and competency. This course also includes clinical practice of basic skills in the long-term care setting. Successful completion of this one-credit course with a "C+" or higher enables students to enter the NUR 101 course.				
	or higher BIO 112	with a grade of "C" or higher, ENG 101, PS	SV 101	
Semester Offered: F	or inglier, bio 112	with a grade of C of mgner, Erro 101, 10	,1 101	
Restriction: Restricted to those students who have met admissions requirements for the Associate in Science in Nurse Education Program and hold a current certification in Massachusetts as a Paramedic or current certification from the National Registry of Emergency Medical Technicians (NREMT) in good standing.				
Rationale for the change: Updating description	Rationale for the change: Updating description to reflect current program admission requirements accurately.			
Provide a description of any change in course content. None.				
List the programs that are affected by this change (list program names and program codes as they appear in the college catalog): Nurse Education - Advanced Placement Paramedic (NUP) Please confer with the coordinator of the affected department.				
Attach current and proposed academic maps (with changes in bold) for all affected programs.				
Please submit a generic syllabus to your dear	n with all of the revis	ions included. Submitted to Dean Schmohl		

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 101 Advanced Placement Nursing I

2.	Originator: 1	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fall		
5.	Reviewed by Progra	Date: NA	
6.	Recommended by th Comments: unanim	ne School of Healthcare ous approval	Date: <u>12/15/2022</u>
7.	AA Leadership Tea	Kevin Li	Date: 01/23/23
	Recommended: X	K Not Recommended:	
	Comments:		
8.	VP/Academic Affai	rs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:		
9.		John Stazinski	02/14/23
	Recommended: X	Not Recommended:	
	Comments:		
10.	VP/Academic Affair	Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:	_	

Type of Revision: _X_ Description _X_ PrerequisiteCorequisiteNumberName# Credits				
Elective TypeX_ Other (explain): <u>Restriction</u> wording changing				
Course Discipline or Department: NUR	School: HealthCare			
Current Course Number: NUR 101	Current Course Name: Advanced Placement Nursing I			
Current Course Description (as it appears in the credits, semesters offered and prerequisites/cor	e college catalog including course three letter designation and number, title, requisites):			
NUR 101 Advanced Placement Nursing I				
This one credit course is designed for all qualified Licensed Practical Nurses and Paramedics who are seeking advanced placement into the Evening Associate of Science Degree Program, NUR 105 course. The course focuses on curriculum topics that are essential for the first semester Associate Degree nursing student. Topics include: Nursing philosophy of the profession and of the QCC Associate of Science degree Nurse Education Program, nursing process application, decision-making, critical thinking and priority setting, Orem's Theory of Self Care and Erickson Theory of Human Development. The course also reinforces roles basic to nursing care, health promotion and complementary alternative medicine, physical assessment and fluid and electrolytes. The lab component includes practice and competency of all lab modules including asepsis, wound care, and other assigned modules. Successful completion of this one-credit course with a "C+" or higher is required.				
Credits: 1				
Prerequisite: Passing BIO 112 with a "C" or hi Placement LPN program	gher, PSY 101, NUR 100 or Admission to Nurse Education Advanced			
Semester Offered: F				
	Restriction: Restricted to those students who have met admissions requirements for the Associate Degree in the Nursing Program and hold a current license to practice as a Licensed Practical Nurse (LPN) in good standing			
Proposed Description (include all proposed changes):				
NUR 101 Advanced Placement Nursing I				
This course is designed for eligible Licensed Practical Nurses and Paramedics who are seeking enrollment into the Nurse Education - Advanced Placement LPN (NUL) or Advanced Placement Paramedic (NUP) Program. The course focuses on curriculum topics that are essential for the first semester Associate Degree nursing student. Topics include nursing philosophy of the profession and of the QCC Associate in Science degree Nurse Education Program, nursing process application, decision-making, critical thinking and priority setting, Nursing Theory, Maslow's Hierarchy of Needs, and Erikson's Stages of Psychosocial Development. The course also reinforces foundations of basic nursing care, health promotion, complementary alternative medicine, physical assessment, and fluid and electrolytes. The lab component includes practice and competency demonstration of lab skills including asepsis, wound care, and other assigned modules. Successful completion of this one-credit course with a "C+" or higher is required. Credits: 1				
	r higher, PSY 101, NUR 100 with a grade of "C+" or higher or			
Admission to Nurse Education - Advanced Placement LPN (NUL) Program				
Semester Offered: F				
Restriction: Restricted to those students who have met admissions requirements for the Associate Degree in the Nursing Program and hold a current license to practice as a Licensed Practical Nurse (LPN) in good standing or to those students who have met admissions requirements for the Associate in Science in Nurse Education Program and hold a current certification in Massachusetts as a Paramedic or current certification from the National Registry of Emergency Medical Technicians (NREMT) in good standing.				
Rationale for the change: Updating description to reflect current program admission requirements accurately.				

Provide a description of any change in course content. None.

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

Nurse Education - Advanced Placement LPN (NUL)

Nurse Education - Advanced Placement Paramedic (NUP)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs.

Please submit a generic syllabus to your dean with all of the revisions included. Submitted to Dean Schmohl

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 103 Current Concepts in Nursing & Health Care I

2.	Originator:	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fa	all 2023	
5.	Reviewed by Prog	gram and Process (if applicable)	Date: NA
6.	Recommended by Comments: unan	v the School of Healthcare imous approval	Date: <u>12/15/2022</u>
7.	AA Leadership	Kevin Li	Date: 01/23/23
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Af	fairs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:		
9.	Learning Counci	John Stazinski	Date:02/14/23
	Recommended:		
	Comments:		
10.	. VP/Academic Af	fairs:Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	-
	Comments:		

Type of Revision: _X_ Description _X_ Prei # CreditsElective Ty	requisite _X_Corequisite _X_ Number _X_ Name ype Other (explain)				
Course Discipline or Department: NUR School: Healthcare					
Current Course Number: NUR 103	Current Course Name: Current Concepts in Nursing & Health Care I				
Current Course Description (as it appears in the credits, semesters offered and prerequisites/core	college catalog including course three letter designation and number, title, equisites):				
NUR 103 Current Concepts in Nursing & He	alth Care I				
The student discusses influences of the past on p	g in relation to historical development, social trends, and healthcare changes. present day nursing, health care trends and legislation, challenges and issues sing. Successful completion of this one-credit course with a "C+" or higher is				
Credits: 1					
Prerequisite: Passing BIO 111 with a "C" or	higher, ENG 101				
Corequisite: BIO 112, NUR 104, PSY 101					
Semester Offered: F/S					
Proposed Description (include all proposed chan	nges):				
NUR 106 Introduction to Nursing Concepts &	& Health Care				
legislation, challenges and issues for today's nu diversity, equity and inclusion in discussion of p "C+" or higher is required. Credits: 1	nces of the past on present day nursing, health care settings, trends and irse and future predictions for nursing. Students will integrate concepts of patient-centered care. Successful completion of this one-credit course with a				
Prerequisite: BIO 111 with a grade of "C" or hig	gher, ENG 101				
Corequisite: BIO 112, NUR 107, PSY 101					
Semester Offered: F/S					
	nade to incorporate additional trends in nursing education. Finally, based on have been incorporated across the curriculum to promote currency of topics.				
Provide a description of any change in course co	ontent.				
Additional focus on diversity, equity and inclusion	ion. Course name change. No change in credits.				
List the programs that are affected by this chang catalog):	e (list program names and program codes as they appear in the college				
• Nurse Education (NUR)					
• Nurse Education Evening (NUE)					
Nurse Education - Advanced Placement	nt LPN (NUL)				
• Nurse Education - Advanced Placemen	nt Paramedic (NUP)				
Please confer with the coordinator of the affecte	d department.				
Attach current and proposed academic maps (winner maps from Barb Zabka.	ith changes in bold) for all affected programs. You can obtain academic				
Please submit a generic syllabus to your dean w	ith all of the revisions included. Submitted to Dean Schmohl				

Please submit a generic syllabus to your dean with all of the revisions included. Submitted to Dean Schmohl

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 104 Fundamentals of Nursing

2.	Originator: Pat Creelman		Date: <u>11/29/2022</u>
3.	School Dean:	Date: <u>11/29/2022</u>	
4.	Effective Date: Fal	1 2023	
5.	Reviewed by Prog	am and Process (if applicable)	Date: NA
6.	Recommended by Comments: unanir	Date: <u>12/15/2022</u>	
7.	AA Leadership Te	Kevin Li eam:	Date: 01/23/23
		X Not Recommended:	
	Comments:		
8.	VP/Academic Affa	irs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:		
	Comments:		
9.	Learning Council:	John Stazinski	02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10.	VP/Academic Affa	irs: Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision: _X_ Description Prerequisite Elective Type Other (explain	_X_Corequisite _X_ NumberName _X_ # Credits			
Course Discipline or Department: NUR	School: Healthcare			
Current Course Number: NUR 104	Current Course Name: Fundamentals of Nursing			
Current Course Description (as it appears in the colleg title, credits, semesters offered and prerequisites/corec	ge catalog including course three letter designation and number, quisites):			
NUR 104 Fundamentals of Nursing				
This course provides an introduction to the role of the nurse in the health care system. Orem's Theory of Self-Care and Erickson Theory of Human Development are introduced and utilized as organizing frameworks. Students also learn the concept of therapeutic self-care demands. Students develop an understanding of and ability to use the nursing process as a method for assisting patients to meet self-care needs. Students develop basic communication skills in order to promote effective relationships with patients, families and members of the health team. Students participate in Nursing Practice Laboratory and planned clinical experiences to learn nursing skills. Successful completion of this seven-credit course with a "C+" or higher is required.				
Credits: 7				
Prerequisite: Passing BIO 111 with a "C" or higher, E Corequisite: BIO 112, NUR 103, PSY 101 Semester Offered: F/S	NG 101			
Proposed Description (include all proposed changes):				
NUR 107 Fundamentals of Nursing				
This course provides an introduction to the role of the Hierarchy of Needs, and Erikson's Stages of Psychoso frameworks. Additional integration of professional sta other professional organizations is included. Students as a method for assisting patients to meet healthcare n promote effective relationships with patients, families limited to oxygenation, health assessment, elimination participate in laboratory to acquire nursing skills and or reinforce nursing skills and promote clinical judgment higher is required. Credits: 8	nurse in the health care system. Nursing Theory, Maslow's bocial Development are introduced and utilized as organizing undards and competencies from National League for Nursing and develop an understanding of and ability to use the nursing process eeds. Students develop basic communication skills in order to and members of the health team. Content includes but is not and members of the health team. The health team of the health team.			
Prerequisite: BIO 111 with a grade of "C" or higher, I	ENG 101			
Corequisite: BIO 112, <mark>NUR 106</mark> , PSY 101				
Semester Offered: F/S				
Rationale for the change: Based on curricular review, determination was made to include additional theoretical and professional foundations in response to current trends in nursing education. Additionally, effort to improve balance of curriculum credit requirements across the curriculum. Finally, based on further review of curriculum, additional topics have been incorporated across the curriculum to promote currency of topics.				
	Additional focus on clinical judgment. Reallocating credit load for 1.87 credits lab, and 2.13 credits clinical.			
List the programs that are affected by this change (list catalog): Nurse Education (NUR) 	program names and program codes as they appear in the college			

• Nurse Education Evening (NUE)

- Nurse Education Advanced Placement LPN (NUL)
- Nurse Education Advanced Placement Paramedic (NUP)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included. Submitted to Dean Schmohl

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 105 Medical Surgical Nursing I/Maternal Newborn

2.	Originator:	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fal	1 2023	
5.	Reviewed by Prog	ram and Process (if applicable)	Date: NA
6.	Recommended by Comments: unanin	the School of Healthcare nous approval	Date: <u>12/15/2022</u>
7.	AA Leadership T	Kevin Li	Date: 01/23/23
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Aff	airs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:		
9.		John Stazinski	02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10. VP/Academic Affairs: Dr. James M. Keane Date		Date: 02/14/23	
	Approved: X Comments:	Not Approved:	

Type of Revision: _X_ Description _X_ PrerequisiteCorequisiteX_ NumberName _X_ # CreditsElective TypeOther (explain)					
Course Discipline or Department: NUR School: Health care					
Current Course Number: NUR 105 Current Course Name: Medical Surgical Nursing I/Maternal Newborn					
Current Course Description (as it appears in the college catalog including course three letter designation and number, title, credits, semesters offered and prerequisites/corequisites):					
NUR 105 Medical Surgical Nursing I/Maternal Newborn					
This course focuses on content related to caring for perinatal patients and patients who have health care deviations that require specific nursing system interventions. Content will include health concerns related to the perioperative experience, cellular proliferation, nutrition, metabolic activity, cardiovascular disorders, substance abuse, reproductive issues, domestic violence and maternal-infant health. Students will use a developmental focus and a life span approach to concepts of health promotion, developmental needs, and health deviations. The course is based on Orem's Theory of Self Care, Erickson Theory of Human Development and the Nursing Process. Emphasis is placed upon meeting needs of patients whose therapeutic self-care demands exceed their capacity to engage in self-care activities. Selected learning experiences are provided in the care of perinatal patients and adult patients in the acute care, rehabilitation and community settings. Successful completion of this eight-credit course with a "C+" or higher is required. Credits: 8 Prerequisite: NUR 101 with a grade of "C+" or higher; or NUR 103 and NUR 104 with a grade of "C+" or higher					
Corequisite: BIO 232, PSY 121					
Semester Offered: F/S					
Proposed Description (include all proposed changes):					
NUR 108 Medical Surgical Nursing I/Maternal Newborn This course focuses on caring for maternal newborn patients and adults who have health care deviations that require specific nursing interventions. Content includes but is not limited to the perioperative experience, cellular proliferation, nutrition, metabolic activity, cardiovascular disorders, substance abuse, reproductive issues, domestic violence and maternal-newborn health. Students will use a developmental focus and a life span approach to concepts of health promotion and deviations. The course is based on Nursing Theory, Maslow's Hierarchy of Needs, Erikson's Stages of Psychosocial Development, and the Nursing Process. Students participate in the laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment in the care of maternal newborn patients and adult patients in the acute care, rehabilitation and/or community settings. Successful completion of this nine-credit course with a "C+" or higher is required. Credits: 9					
Prerequisite: BIO 112 with a grade of "C" or higher, NUR 101 with a grade of "C+" or higher or NUR 106 with a					
grade of "C+" or higher and NUR 107 with a grade of "C+" or higher Corequisite: BIO 232, PSY 121					
Semester Offered: F/S					
Rationale for the change:					
In an effort to improve balance of curriculum credit requirements across the curriculum. Based on further review of curriculum, additional topics have been incorporated across the curriculum to promote currency of topics. Clarification of prerequisite requirement.					
Provide a description of any change in course content. Reallocating credit load from eight credits to nine credits as follows: Total of 9 credits - 5 credits didactic, 0.53 credits lab, and 3.47 credits clinical.					
List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):					
Nurse Education (NUR)					

- Nurse Education Evening (NUE)
- Nurse Education Advanced Placement LPN (NUL)
- Nurse Education Advanced Placement Paramedic (NUP)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included. Submitted to Dean Schmohl

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 201 Medical Surgical Nursing II/Pediatric

2.	Originator:	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fal	1 2023	
5.	Reviewed by Progr	am and Process (if applicable)	Date: NA
6.	Recommended by t Comments: unanin	the School of Healthcare nous approval	Date: <u>12/15/2022</u>
7.	AA Leadership Te	Kevin Li am:	Date: 01/23/23
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Affa	irs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:		
	Comments:		
9.	Learning Council:	John Stazinski	Date:02/14/23
	B acommondod.	X Not Recommended:	
	Comments:		
10.	VP/Academic Affai	Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision: _X_ Description _X_ CreditsElective TypeOther (end to the section of the section	· _ · _					
Course Discipline or Department: NUR	School: Healthcare					
Current Course Number: NUR 201	urrent Course Number: NUR 201 Current Course Name: Medical Surgical Nursing II/Pediatric					
number, title, credits, semesters offered an						
	NUR 201 Medical Surgical Nursing II/Pediatric This course focuses on content related to caring for children and adult patients who have health care deviations that					
require specific nursing system interventions. Topics include growth and development, respiratory and cardiac deviations, dermatologic conditions and burns, gastrointestinal system deviations, genitourinary deviations, musculoskeletal deviations, specific neurological deviations and hematologic and immunologic deviations. The course is based on Orem's Theory of Self Care, Erickson Theory of Human Development and the Nursing Process. Selected learning experiences are provided in the care of adult and children in the acute care, rehabilitation settings and/or health care agencies. Successful completion of this 10-credit course with a "C+" or higher is required.						
Credits: 10						
Prerequisite: BIO 112, BIO 232, PSY 121, Corequisite: ENG 102, any HST, SOC 101	a grade of "C+" or higher is required in NUR 105 or SOC 111					
Semester Offered: F/S/SU						
Proposed Description (include all proposed	1 changes):					
NUR 204 Medical Surgical Nursing II/P	ediatric					
This course focuses on content related to caring for children and adult patients who have health care deviations that require specific nursing system interventions. Content includes but is not limited to growth and development, and deviations in respiratory, cardiac, dermatologic conditions, burns, gastrointestinal, genitourinary, musculoskeletal, neurological, hematologic and immunologic systems. The course is based on Nursing Theory, Maslow's Hierarchy of Needs, Erikson's Stages of Psychosocial Development, and the Nursing Process. Students participate in the laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment in the care of pediatric and adult patients in the acute care, rehabilitation and/or community settings. Successful completion of this nine-credit course with a "C+" or higher is required.						
	<mark>C" or higher, NUR 108</mark> with a grade of "C+" or higher, PSY 121					
Corequisite: ENG 102, any HST, SOC 101	or SOC 111					
Semester Offered: F/S/SU						
Rationale for the change. In an effort to improve balance of curriculum credit requirements across the curriculum. Based on further review of curriculum, additional topics have been incorporated across the curriculum to promote currency of topics. Clarification of prerequisite requirement.						
	rse content. Reallocating credit load from ten credits to nine credits as tic, 0.27 credits lab, and 3.73 credits clinical.					
List the programs that are affected by this change (list program names and program codes as they appear in the college catalog): Nurse Education (NUR) Nurse Education Evening (NUE) 						
Nurse Education - Advanced Place	ement LPN (NUL)					

• Nurse Education - Advanced Placement Paramedic (NUP)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included. Submitted to Dean Schmohl

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 202 Advanced Medical Surgical Nursing III/Mental Health

2.	Originator:	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fal	1 2023	
5.	Reviewed by Prog	am and Process (if applicable)	Date: NA
6.	Recommended by Comments: unanir	the School of Healthcare nous approval	Date: <u>12/15/2022</u>
7.	AA Leadership Te	Kevin Li	Date: <u>01/23/23</u>
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Affa	irs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended:		
	X Comments:		
9.	Learning Council:	John Stazinski	Date:02/14/23
	Bacommondod .	X Not Recommended:	
	Comments:		
10.	VP/Academic Affa	irs: Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision: _X_ Description _X Elective Type Other (explain)		X_Corequisite	<u>_X_</u> Number	Name	_X_ # Credits	
Course Discipline or Department: NUR School: Healthcare						
Current Course Number: NUR 202 Current Course Name: Advanced Medical Surgical Nursing III/Mental Health						
Current Course Description (as it appears in the college catalog including course three letter designation and number, title, credits, semesters offered and prerequisites/corequisites): NUR 202 Advanced Medical Surgical Nursing III/Mental Health						
This course focuses on content related to mental health issues and the care of patients who experience health care deviations that require complex nursing interventions. Principles of pathophysiology, pharmacology, teaching, and management are incorporated into each unit. Specific topics include health care deviations related to oxygen, nutrition, elimination, protection from hazards, solitude and social interaction. The course is based upon Nursing Process, Orem's Theory of Self-Care and Erickson Human Development Theory. Students participate in clinical experiences with patients in acute, community, and psychiatric care settings. The clinical experience emphasizes application of nursing process, leadership, and management of complex patients. Successful completion of this 10-credit course with a "C+" or higher is required.						
Credits: 10 Prerequisite: ENG 102, any HST, SOC 2 Corequisite: NUR 203, Humanities Elec		a grade of "C+" o	r higher is requi	red in NUR	201	
Semester Offered: F/S						
Proposed Description (include all propo	e ,					
NUR 205 Advanced Medical Surgical Nursing III/Mental Health This course focuses on content related to mental health issues and the care of patients who experience health care deviations that require complex nursing interventions. Content includes but is not limited to deviations in respiratory, cardiac, gastrointestinal, renal, neurological; and emergency and disaster management. The course is based on Nursing Theory, Maslow's Hierarchy of Needs, Erikson's Stages of Psychosocial Development, and the Nursing Process. Students participate in the laboratory to acquire nursing skills and demonstrate competency. Clinical experiences are provided to reinforce nursing skills and promote clinical judgment in the care of patients in acute, community, and mental health care settings. The clinical experience emphasizes application of nursing process, leadership, and management of complex patients. Successful completion of this nine-credit course with a "C+" or higher is required.						
Credits: <mark>9</mark>						
Prerequisite: ENG 102, any HST, <mark>NU</mark>	0	de of "C+" or hi	gher, SOC 101	or SOC 111		
Corequisite: NUR 206, Humanities El	ective					
Semester Offered: F/S						
Rationale for the change:	a a		. 1 D	1 6 1	· c	
In an effort to improve balance of curriculum credit requirements across the curriculum. Based on further review of curriculum, additional topics have been incorporated across the curriculum to promote currency of topics.						
Provide a description of any change in course content. Reallocating credit load from 10 credits to 9 credits as follows: Total of 9 credits - 5 credits didactic, 0.27 credits lab, and 3.73 credits clinical.						
List the programs that are affected by th catalog):	is change (list pro	gram names and	program codes a	as they appea	ar in the college	
• Nurse Education (NUR)						
• Nurse Education Evening (NU	E)					
• Nurse Education - Advanced P	lacement LPN (N	UL)				

• Nurse Education - Advanced Placement Paramedic (NUP)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included. Submitted to Dean Schmohl

2022 - 2023

QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 203 Current Concepts in Nursing & Health Care II

2.	Originator:	Pat Creelman	Date: <u>11/29/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>11/29/2022</u>
4.	Effective Date: Fal	1 2023	
5.	Reviewed by Prog	ram and Process (if applicable)	Date: NA
6.	Recommended by Comments: unanin	the School of Healthcare nous approval	Date: <u>12/15/2022</u>
7.	AA Leadership T	Kevin Li eam:	Date: <u>01/23/23</u>
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Aff	airs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:	Not Recommended:	
9.	Learning Council	John Stazinski	Date:
	Recommended:	X Not Recommended:	
	Comments:		
10.	. VP/Academic Affa	Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision: _X_ Description _X_ Prerequisite Elective Type Other (explain)	_X_Corequisite _X_ Number _X_ Name# Credits				
Course Discipline or Department: NUR	School: Healthcare				
Current Course Number: NUR 203 Current Course Name: Current Concepts in Nursing & Health Care II					
Current Course Description (as it appears in the college ca title, credits, semesters offered and prerequisites/corequisi	talog including course three letter designation and number, tes):				
NUR 203 Current Concepts in Nursing & Health Care					
This course is the study of contemporary nursing in relation to historical development, social trends, and health care changes and ethical issues. The student will discuss influences of the past on present day nursing, health care trends and legislation, challenges and issues for today's nurse. Management and delegation responsibilities of the professional practitioner will be included with theoretical content and application through vignettes and case study. As a result, the student will be able to describe the role and responsibilities of the Registered Nurse. The student will assess his/her career potential and future employment status. Student participation and presentation is required. Successful completion of this two-credit course with a "C+" or higher is required. Credits: 2					
Prerequisite: A grade of "C+" or higher is required in NUI	3 201				
Corequisite: NUR 202					
Semester Offered: F/S					
Proposed Description (include all proposed changes):					
NUR 206 Advanced Nursing Concepts & Transition to Practice This course is the study of contemporary nursing in relation to social trends, health care changes, ethical issues, and transition to practice. The student will discuss influences of the past on present day nursing, health care trends and legislation, and challenges and issues for today's nurse. Management and delegation responsibilities of the professional practitioner will be included with theoretical content and application. The student will describe the role and responsibilities of the Registered Nurse, assess career potential, and future employment opportunities. Successful completion of this two-credit course with a "C+" or higher is required. Credits: 2					
Prerequisite: NUR 204 with a grade of "C+" or higher					
Corequisite: NUR 205					
Semester Offered: F/S					
Rationale for the change: Based on further review of curri currency of topics and standardized descriptions for all nu					
Provide a description of any change in course content. No	ne.				
List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):					
• Nurse Education (NUR)					
• Nurse Education Evening (NUE)					
• Nurse Education - Advanced Placement LPN (N	UL)				
Nurse Education - Advanced Placement Paramed					
Please confer with the coordinator of the affected department.					
Attach current and proposed academic maps (with changes in bold) for all affected programs.					
Please submit a generic syllabus to your dean with all of the	he revisions included. Submitted to Dean Schmohl				

CURRENT (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones	
			nmer I or II)		Register for and successfully	
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	complete all courses to graduate in five semesters. Complete BIO 111 with a grade of	
Composition I	ENG 101	F/S/SU	3	Placement into college level English	"C" or higher.	
		Total	7		Complete ENG 101.	
		Semeste			Complete BIO 112 with a grade of	
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.	
Current Concepts in Nursing & Health Care I	NUR 103	F/S	1	Passing BIO 111 with a "C" or higher, ENG 101, Coreq: BIO 112, NUR 104, PSY 101	Complete NUR 103 and NUR 104 with grades of "C+" or higher.	
Fundamentals of Nursing	NUR 104	F/S	7	Passing BIO 111 with a "C" or higher, ENG 101, Coreq: BIO 112, NUR 103, PSY 101		
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English		
		Total	15			
Medical Microbiology	BIO 232	Semeste F/S/SU	er 3 4	BIO 112 or CHM 105 or CHM 123	If considering transfer, meet with a Transfer Services Advisor. See	
Medical Microbiology	ы0 232	F/3/30	4	NUR 101 with a grade of "C+" or	www.QCC.edu/transfer.	
Medical Surgical Nursing I/ Maternal Newborn	NUR 105	F/S	8	higher; or NUR 103 and NUR 104 with a grade of "C+" or higher, Coreq: BIO 232, PSY 121	Complete BIO 232 with a grade of "C" or higher.	
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 105 with a grade of	
		Total	15		"C+" or higher.	
0		Semeste			If considering transfer, meet with	
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools to discuss/begin the transfer	
Medical Surgical Nursing II/ Pediatric	NUR 201	F/S	10	BIO 112, BIO 232, PSY 121, a grade of "C+" or higher is required in NUR 105, Coreq: ENG 102, any HST, SOC 101 or SOC 111	application process; or create an account on the QCC job board to search for internships, co-ops and	
Introductory Sociology (Principles) OR	SOC 101	F/S/SU	3	Discoment into college level English	jobs.	
Social Problems & Social Change	SOC 111		_	Placement into college level English	Complete NUR 201 with a grade of "C+" or higher.	
History Elective		F/S/SU	3			
		Total	19	<u> </u>	Continue with/complete the transfer	
	Semester 5					
Advanced Medical Surgical Nursing III/Mental Health	NUR 202	F/S	10	ENG 102, any HST, SOC 101 or SOC 111, a grade of "C+" or higher is required in NUR 201, Coreq: NUR 203, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about	
Current Concepts in Nursing & Health Care II	NUR 203	F/S	2	A grade of "C+" or higher is required in NUR 201, Coreq: NUR 202	QCC's job board. Complete NUR 202 and NUR 203 with grades of "C+" or higher.	
Humanities Elective		F/S/SU	3 15		Submit an Intent to Graduate Form,	
		Total			located on The Q.	
Total Credits Re	equired		71			

PROPOSED (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
oourse nue			nmer I or II)		Register for and successfully
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	complete all courses to graduate in five semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	"C" or higher.
		Total	7		Complete ENG 101.
		Semeste	er 2		Complete BIO 112 with a grade of
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.
Introduction to Nursing Concepts & Health Care	NUR 106	F/S	<mark>1</mark>	BIO 111 with a grade of "C" or higher, ENG 101, Coreq: BIO 112, NUR 107, PSY 101	Complete NUR 106 and NUR 107 with grades of "C+" or higher.
Fundamentals of Nursing	NUR 107	F/S	8	BIO 111 with a grade of "C" or higher, ENG 101, Coreq: BIO 112, NUR 106, PSY 101	
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English]
		Total	<mark>16</mark>		
Modical Microbiology	BIO 232	Semeste F/S/SU	er 3 4	BIO 112 or CHM 105 or CHM 123	If considering transfer, meet with a Transfer Services Advisor, See
Medical Microbiology Medical Surgical Nursing I/	NUR 108	F/S/SU	9 9	BIO 112 of CHM 103 of CHM 123 BIO 112 with a grade of "C" or higher, NUR 101 with a grade of "C+" or higher or NUR 106 and NUR 107 with	www.QCC.edu/transfer.
Maternal Newborn		17 5	2	grades of "C+" or higher, Coreq: BIO 232, PSY 121	"C" or higher.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 108 with a grade of "C+" or higher.
		Total	16		
Composition II	ENG 102	Semeste F/S/SU		ENG 101	If considering transfer, meet with
Composition II Medical Surgical Nursing II/ Pediatric	NUR 204	F/S/SU	3 9	BIO 232 with a grade of "C" or higher, NUR 108 with a grade of "C+" or higher, PSY 121, Coreq: ENG 102, any HST, SOC 101 or SOC 111	representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and
Introductory Sociology (Principles) OR Social Problems & Social	SOC 101	F/S/SU	3	Placement into college level English	jobs. Complete NUR 204 with a grade of
Change	SOC 111				"C+" or higher.
History Elective		F/S/SU	3		
		Total	<mark>18</mark>		
		Semeste	er 5		Continue with/complete the transfer
Advanced Medical Surgical Nursing III/Mental Health	NUR 205	F/S	9	ENG 102, any HST, NUR 204 with a grade of "C+" or higher, SOC 101 or SOC 111, Coreq: NUR 206, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.
Advanced Nursing Concepts & Transition to Practice	NUR 206	F/S	2	NUR 204 with a grade of "C+" or higher, Coreq: NUR 205	Complete NUR 205 and NUR 206 with grades of "C+" or higher.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .
Total Credits R	auired	Total	14 71		
	equired				

CURRENT (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones	
			nmer I or II)		Register for and successfully	
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	complete all courses to graduate in five semesters. Complete BIO 111 with a grade of "C" or higher.	
Composition I	ENG 101	F/S/SU	3	Placement into college level English		
		Total	7		Complete ENG 101.	
		Semester 2	<u> </u>		Complete BIO 112 with a grade of	
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.	
Current Concepts in Nursing & Health Care I	NUR 103	F/S	1	Passing BIO 111 with a "C" or higher, ENG 101, Coreq: BIO 112, NUR 104, PSY 101	Complete NUR 103 and NUR 104 with grades of "C+" or higher.	
Fundamentals of Nursing	NUR 104	F/S	7	Passing BIO 111 with a "C" or higher, ENG 101, Coreq: BIO 112, NUR 103, PSY 101		
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English		
		Total	15			
Madical Microbiology	BIO 232	emester 3 (F/S/SU	Spring) 4	BIO 112 or CHM 105 or CHM 123	If considering transfer, meet with a	
Medical Microbiology	ы0 232	F/3/30	4	NUR 101 with a grade of "C+" or	Transfer Services Advisor. See www.QCC.edu/transfer.	
Medical Surgical Nursing I/ Maternal Newborn (January- April)	NUR 105	F/S	8	higher; or NUR 103 and NUR 104 with a grade of "C+" or higher, Coreq: BIO 232, PSY 121	www.QCC.edu/transfer. Complete BIO 232 with a grade of "C" or higher.	
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 105 with a grade of	
		Total	15		"C+" or higher.	
			nmer I & II)		If considering transfer, meet with	
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools	
Medical Surgical Nursing II/ Pediatric (May-July)	NUR 201	F/S/SU	10	BIO 112, BIO 232, PSY 121, a grade of "C+" or higher is required in NUR 105, Coreq: ENG 102, any HST, SOC 101 or SOC 111	to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete NUR 201 with a grade of "C+" or higher.	
Introductory Sociology (Principles) OR	SOC 101	F/S/SU	3	Placement into college level English		
Social Problems & Social Change	SOC 111		_			
History Elective		F/S/SU	3			
	L	Total	19 (Fall)			
	1	Semester 5	(Fall)		Continue with/complete the transfer	
Advanced Medical Surgical Nursing III/Mental Health	NUR 202	F/S	10	ENG 102, any HST, SOC 101 or SOC 111, a grade of "C+" or higher is required in NUR 201, Coreq: NUR 203, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about	
Current Concepts in Nursing & Health Care II	NUR 203	F/S	2	A grade of "C+" or higher is required in NUR 201, Coreq: NUR 202	QCC's job board. Complete NUR 202 and NUR 203 with grades of "C+" or higher.	
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form,	
		Total	15		located on The Q.	
Total Credits Re	equired		71			

PROPOSED (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
Course fille		ster 1 (Sun			
	Seine	ster i (Suii			Register for and successfully complete all courses to graduate in
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	five semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	"C" or higher.
		Total	7		Complete ENG 101.
	<u> </u>	Semester 2	(Fall)		Complete BIO 112 with a grade of
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.
Introduction to Nursing Concepts & Health Care	NUR 106	F/S	<mark>1</mark>	BIO 111 with a grade of "C" or higher, ENG 101, Coreq: BIO 112, NUR 107, PSY 101	Complete NUR 106 and NUR 107 with grades of "C+" or higher.
Fundamentals of Nursing	NUR 107	F/S	8	BIO 111 with a grade of "C" or higher, ENG 101, Coreq: BIO 112, NUR 106, PSY 101	
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	<mark>16</mark> Cranina ex)		
Medical Microbiology	BIO 232	emester 3 (F/S/SU	Spring) 4	BIO 112 or CHM 105 or CHM 123	If considering transfer, meet with a Transfer Services Advisor. See
Medical Microbiology	DIO 232	1/3/30	4	BIO 112 with a grade of "C" or higher,	www.QCC.edu/transfer.
Medical Surgical Nursing I/ Maternal Newborn (January- April)	NUR 108	F/S	9	NUR 101 with a grade of "C+" or higher or NUR 106 and NUR 107 with grades of "C+" or higher, Coreq: BIO 232, PSY 121	Complete BIO 232 with a grade of "C" or higher.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 108 with a grade of "C+" or higher.
		Total	16		
Oseran estition II		ster 4 (Sun			If considering transfer, meet with
Composition II Medical Surgical Nursing II/ Pediatric (May-July)	ENG 102	F/S/SU <mark>F/S</mark>	3 9	ENG 101 BIO 232 with a grade of "C" or higher, NUR 108 with a grade of "C+" or higher, PSY 121, Coreq: ENG 102, any HST, SOC 101 or SOC 111	representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and
Introductory Sociology (Principles) OR	SOC 101	F/S/SU	3	Placement into college level English	jobs.
Social Problems & Social Change	SOC 111				Complete NUR 204 with a grade of "C+" or higher.
History Elective		F/S/SU	3		
	L,	Total	(Fell)	l	Over the second start has the first
	1	Semester 5	(raii)		Continue with/complete the transfer
Advanced Medical Surgical Nursing III/Mental Health	NUR 205	F/S	9	ENG 102, any HST, NUR 204 with a grade of "C+" or higher, SOC 101 or SOC 111, Coreq: NUR 206, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.
Advanced Nursing Concepts & Transition to Practice	NUR 206	F/S	2	NUR 204 with a grade of "C+" or higher, Coreq: NUR 205	Complete NUR 205 and NUR 206 with grades of "C+" or higher.
Humanities Elective		F/S/SU	3 <mark>14</mark>		Submit an Intent to Graduate Form, located on <i>The</i> Q.
Total Credits Re	auirod	Total	71		
	quired		11		

CURRENT (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
Course The		nester 1 (S		Fielequisites	
	Register for and successfully				
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	complete all courses to graduate in six semesters. Complete BIO 111 with a grade of "C" or higher.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	
		Total	7		Complete ENG 101.
	Sem	nester 2 (Si	ummer II)	•	Complete BIO 112 with a grade of
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	7		
		Semester 3	(Fall)	•	Meet with Career Services to
Advanced Placement Nursing I (October-December)	NUR 101	F	1	Passing BIO 112 with a "C" or higher, PSY 101, NUR 100 or Admission to Nurse Education Advanced Placement LPN program	credential seven nurse education credits for current LPN License. NUR 101 (1 credit) and credentialed credits (7 credits) equivalent to NUR
Upon successful completion of NUR 101 (with a grade of "C+" or higher) and current license as a Practical Nurse, seven credits credentialed	NUR 888	F	7		103 and NUR 104 (8 credits total). Complete NUR 101 with a grade of "C+" or higher.
		Total	8		
		emester 4 (If considering transfer, meet with a
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	Transfer Services Advisor. See
Medical Surgical Nursing I/ Maternal Newborn (January- April)	NUR 105	F/S	8	NUR 101 with a grade of "C+" or higher; or NUR 103 and NUR 104 with a grade of "C+" or higher, Coreq: BIO 232, PSY 121	www.QCC.edu/transfer. Complete BIO 232 with a grade of "C" or higher.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 105 with a grade of
		Total	15		"C+" or higher.
	Seme		nmer I & II)		If considering transfer, meet with
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.
Medical Surgical Nursing II/ Pediatric (May-July)	NUR 201	F/S/SU	10	BIO 112, BIO 232, PSY 121, a grade of "C+" or higher is required in NUR 105, Coreq: ENG 102, any HST, SOC 101 or SOC 111	
Introductory Sociology (Principles) OR	SOC 101	F/S/SU	3	Placement into college level English	
Social Problems & Social Change	SOC 111				Complete NUR 201 with a grade of "C+" or higher.
History Elective		F/S/SU	3		
		Total Semester 6	19		
	Continue with/complete the transfer				
Advanced Medical Surgical Nursing III/Mental Health	NUR 202	F/S	10	ENG 102, any HST, SOC 101 or SOC 111, a grade of "C+" or higher is required in NUR 201, Coreq: NUR 203, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about
Current Concepts in Nursing & Health Care II	NUR 203	F/S	2	A grade of "C+" or higher is required in NUR 201, Coreq: NUR 202	QCC's job board. Complete NUR 202 and NUR 203 with grades of "C+" or higher.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form,
		Total	15		located on The Q.
Total Credits Re	equired		71		

PROPOSED (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Drereguisites	Milestones
Course The		nester 1 (S		Prerequisites	Register for and successfully
	complete all courses to graduate in				
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Complete all courses to graduate in six semesters. Complete BIO 111 with a grade of "C" or higher.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	
		Total	7		Complete ENG 101.
	Sem	nester 2 (Su	ummer II)	•	Complete BIO 112 with a grade of
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Ŭ
		Total	7		1
		Semester 3	(Fall)		Meet with Career Services to
Advanced Placement Nursing I (October-December)	NUR 101	F	1	BIO 112 with a grade of "C" or higher, PSY 101, NUR 100 with a grade of "C+" or higher or Admission to Nurse Education - Advanced Placement LPN (NUL) Program	credential eight nurse education credits for current LPN License. NUR 101 (1 credit) and credentialed credits (8 credits) equivalent to NUR 106 and NUR 107 (9 credits total).
Upon successful completion of NUR 101 (with a grade of "C+" or higher) and current license as a Practical Nurse, eight credits credentialed	NUR 888	F	8		Complete NUR 101 with a grade of "C+" or higher.
		Total			
		emester 4 (If considering transfer, meet with a
Medical Microbiology Medical Surgical Nursing I/ Maternal Newborn (January- April)	BIO 232	F/S/SU <mark>F/S</mark>	4 9	BIO 112 or CHM 105 or CHM 123 BIO 112 with a grade of "C" or higher, NUR 101 with a grade of "C+" or higher or NUR 106 and NUR 107 with grades of "C+" or higher, Coreq: BIO 232, PSY 121	Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Complete BIO 232 with a grade of "C" or higher.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 108 with a grade of "C+" or higher.
Dereich		Total	<mark>16</mark>		
	Seme	ester 5 (Sun	nmer I & II)		If considering transfer, meet with
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools
Medical Surgical Nursing II/ Pediatric (May-July)	NUR 204	F/S	9	BIO 232 with a grade of "C" or higher, NUR 108 with a grade of "C+" or higher, PSY 121, Coreq: ENG 102, any HST, SOC 101 or SOC 111	to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and
Introductory Sociology (Principles) OR	SOC 101	F/S/SU	3	Placement into college level English	jobs.
Social Problems & Social Change	SOC 111				Complete NUR 204 with a grade of "C+" or higher.
History Elective		F/S/SU	3		-
		Total Semester 6	<mark>18</mark>		
	Continue with/complete the transfer				
Advanced Medical Surgical Nursing III/Mental Health	NUR 205	F/S	9	ENG 102, any HST, NUR 204 with a grade of "C+" or higher, SOC 101 or SOC 111, Coreq: NUR 206, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.
Advanced Nursing Concepts & Transition to Practice	NUR 206	F/S	2	NUR 204 with a grade of "C+" or higher, Coreq: NUR 205	Complete NUR 205 and NUR 206 with grades of "C+" or higher.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form,
Total Credits Re		Total	14 71		located on The Q.

<u>Healthcare</u>

Nurse Education - Advanced Placement Paramedic - Associate in Science (Program Code: NUP)

CURRENT (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prereguisites	Milestones
		nester 1 (S	ummer I)		Register for and successfully
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	complete all courses to graduate in six semesters. Complete BIO 111 with a grade of
Composition I	ENG 101	F/S/SU	3	Placement into college level English	"C" or higher.
		Total	7		Complete ENG 101.
		nester 2 (Su	ummer II)		Complete BIO 112 with a grade of
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
	L	Total Semester 3	7 (Fall)		Maat with Canaar Carriage to
	Meet with Career Services to				
Paramedic to ADN Bridge (October-November)	NUR 100	F	1	Passing both BIO 111 and BIO 112 with a "C" or higher, ENG 101, PSY 101	credential six nurse education credits for current paramedic certification (State or National
Advanced Placement Nursing I (November-December)	NUR 101	F	1	Passing BIO 112 with a "C" or higher, PSY 101, NUR 100 or Admission to Nurse Education Advanced Placement LPN program	Paramedic). NUR 100 (1 credit), NUR 101 (1 credit), and credentialed credits (6 credits) equivalent to NUR 103 and NUR
Upon successful completion of NUR 100 and NUR 101 (with grades of "C+" or higher) and successful completion of state or national Paramedic exam, six credits credentialed	NUR 888	F	6		104 (8 credits total). Complete NUR 100 and NUR 101 with grades of "C+" or higher.
		Total	8		
	Se	emester 4 (Spring)		If considering transfer, meet with a
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	Transfer Services Advisor. See
Medical Surgical Nursing I/ Maternal Newborn (January- April)	NUR 105	F/S	8	NUR 101 with a grade of "C+" or higher; or NUR 103 and NUR 104 with a grade of "C+" or higher, Coreq: BIO 232, PSY 121	www.QCC.edu/transfer. Complete BIO 232 with a grade of "C" or higher.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 105 with a grade of
		Total	15		"C+" or higher.
Oseran estitione II		ster 5 (Sun F/S/SU			If considering transfer, meet with
Composition II Medical Surgical Nursing II/ Pediatric (May-July)	ENG 102 NUR 201	F/S/SU	3 10	ENG 101 BIO 112, BIO 232, PSY 121, a grade of "C+" or higher is required in NUR 105, Coreq: ENG 102, any HST, SOC	representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete NUR 201 with a grade of "C+" or higher.
Introductory Sociology (Principles) OR	SOC 101			101 or SOC 111	
Social Problems & Social Change	SOC 111	F/S/SU	3	Placement into college level English	
L Patawa Ela attaixa		F/S/SU Total	3 19		
History Elective			19		
History Elective			(Fall)		Continue with/complete the transfer
History Elective	,	Semester 6	(Fall)	ENG 102 any HST_SOC 101 or SOC	Continue with/complete the transfer application process; or if seeking
History Elective Advanced Medical Surgical Nursing III/Mental Health	NUR 202		(Fall) 10	ENG 102, any HST, SOC 101 or SOC 111, a grade of "C+" or higher is required in NUR 201, Coreq: NUR 203, Humanities Elective	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about
		Semester 6		111, a grade of "C+" or higher is required in NUR 201, Coreq: NUR	application process; or if seeking employment, meet with Career Services for career readiness
Advanced Medical Surgical Nursing III/Mental Health Current Concepts in Nursing &	NUR 202	Semester 6 F/S	10	111, a grade of "C+" or higher is required in NUR 201, Coreq: NUR 203, Humanities Elective A grade of "C+" or higher is required in	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete NUR 202 and NUR 203

<u>Healthcare</u>

Nurse Education - Advanced Placement Paramedic - Associate in Science (Program Code: NUP)

PROPOSED (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Sen	nester 1 (S	ummer I)	· · · · ·	Register for and successfully
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	complete all courses to graduate in six semesters. Complete BIO 111 with a grade of
Composition I	ENG 101	F/S/SU	3	Placement into college level English	"C" or higher.
		Total	7		Complete ENG 101.
		nester 2 (Su			Complete BIO 112 with a grade of
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	"C" or higher.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
	L	Total Semester 3	7 (Fall)		Meet with Career Services to
	т. Т	Semester S	(rall)	DIO 111 with a made of "O" on high on	
Paramedic to ADN Bridge (October-November)	NUR 100	F	<mark>1</mark>	BIO 111 with a grade of "C" or higher, BIO 112 with a grade of "C" or higher, ENG 101, PSY 101	credential seven nurse education credits for current paramedic certification (State or National
Advanced Placement Nursing I (November-December)	NUR 101	F	<mark>1</mark>	BIO 112 with a grade of "C" or higher, PSY 101, NUR 100 with a grade of "C+" or higher or Admission to Nurse Education - Advanced Placement LPN (NUL) Program	Paramedic). NUR 100 (1 credit), NUR 101 (1 credit), and credentialed credits (7 credits) equivalent to NUR 106 and NUR 107 (9 credits total).
Upon successful completion of NUR 100 and NUR 101 (with grades of "C+" or higher) and successful completion of state or national Paramedic exam, seven credits credentialed	NUR 888	F	7		Complete NUR 100 and NUR 101 with grades of "C+" or higher.
		Total			
Ma dia at Mianakia ta ma		emester 4 (If considering transfer, meet with a
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	Transfer Services Advisor. See
Medical Surgical Nursing I/ Maternal Newborn (January- April)	NUR 108	<mark>F/S</mark>	<mark>9</mark>	BIO 112 with a grade of "C" or higher, NUR 101 with a grade of "C+" or higher or NUR 106 and NUR 107 with grades of "C+" or higher, Coreq: BIO 232, PSY 121	www.QCC.edu/transfer. Complete BIO 232 with a grade of "C" or higher.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Complete NUR 108 with a grade of "C+" or higher.
		Total	<mark>16</mark>		
		ster 5 (Sun			If considering transfer, meet with
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools
Medical Surgical Nursing II/ Pediatric (May-July)	NUR 204	F/S	<mark>9</mark>	BIO 232 with a grade of "C" or higher, NUR 108 with a grade of "C+" or higher, PSY 121, Coreq: ENG 102, any HST, SOC 101 or SOC 111	to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and
Introductory Sociology (Principles) OR	SOC 101	F/S/SU	3	Placement into college level English	jobs.
Social Problems & Social Change	SOC 111				Complete NUR 204 with a grade of "C+" or higher.
History Elective		F/S/SU	3		
		Total	18		
		Semester 6	(Fall)		Continue with/complete the transfer
		F/S	9	ENG 102, any HST, NUR 204 with a grade of "C+" or higher, SOC 101 or SOC 111, Coreq: NUR 206,	application process; or if seeking employment, meet with Career Services for career readiness
Advanced Medical Surgical Nursing III/Mental Health	NUR 205			Humanities Elective	preparation and to learn more about QCC's job board.
	NUR 205	F/S	2	Humanities Elective NUR 204 with a grade of "C+" or higher, Coreq: NUR 205	preparation and to learn more about QCC's job board. Complete NUR 205 and NUR 206 with grades of "C+" or higher.
Nursing III/Mental Health Advanced Nursing Concepts &				NUR 204 with a grade of "C+" or	QCC's job board.

DEGREE OR CERTIFICATE REVISION PROPOSAL

1. Degree or Certificate Name and Code: Healthcare - Practical Nursing - Associate in Science (Program Code: HCPN)

2.	Originator:	Meg Yoder	Date: <u>12/05/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>12/05/2022</u>
4.	Effective Date:	Fall 2023	
5.	Reviewed by Pro	gram and Process (if applicable)	Date: NA
6.	Recommended b Comments: unar	y the School of Healthcare imous approval	Date: <u>12/15/2022</u>
7.	AA Leadership Te	Kevin Li eam:	Date: <u>01/23/23</u>
		X Not Recommended:	
	Comments:		
8.	VP/Academic Affa	irs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:	Not Recommended:	
9.	Learning Council:	John Stazinski	02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10.	VP/Academic Affa	irs: Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	_
	Comments:		

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Healthcare - Practical Nursing - Associate in Science (Program Code: HCPN) Provide a detailed list of the proposed changes to the degree or certificate. 1. Increase Credentialed Credits, from 17 to 18 total; Remove PNP 210 and PNP 233 from list of Transfer Courses and add PNP 240. 2. Remove FYE 102 from Semester 2. 3. Remove Semester 2; Re-number remaining Semesters. 4. Move ENG 101 and PSY 101 to new Semester 2. 5. Move ENG 102 to new Semester 3. 6. Adjust Semester Milestones and Semester Credit Totals, accordingly. 7. Decrease Total Credits Required for program, from 62 to 60 total. Attachments: Current academic map. Proposed academic map with changes in **bold** Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted. None. Provide a rationale for the proposed changes. Students taking this program are LPN's and have petitioned to replace FYE 102. Aligning to courses needed in our nursing degree and our up-to 90 credit RN to BSN transfer agreements. Pathway - LP/LPE to HCPN to NUL and transfer 90 credits with our RN to BSN transfer agreements. Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes. No. Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. Department(s) Affected: None. Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? No, Meets Mass Transfer Block. Aligning to courses needed in our nursing degree and our up-to 90 credit RN to BSN transfer agreements. Pathway – LP/LPE to HCPN to NUL and transfer 90 credits with our RN to BSN transfer agreements. If yes please provide a rationale. Will any of the following be required: Additional staff Additional space Additional equipment Additional library resources Provide a rationale for any needs indicated and include approximate cost of equipment.

CURRENT (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	-	ester 1 (Sur	nmer		Apply and get accepted to this program
Upon successful completion of LP certificate, LPE certificate, or state Licensed Practical Nursing exam, 17 credits credentialed (17 credits can be transferred from regionally accredited college)	Transfer Courses: PNP 210 PNP 233 PNP 235 (or any combination of PNP courses)		17		 (Program Code: HCPN). Meet with Career Services to credential up to 17 Healthcare Elective credits for current LPN certification. Contact Career Services (www.QCC.edu/APexams) to receive credit for High School (HS) Advanced Placement (AP)
		Total	17		Exams. QCC School Code: 3714.
Composition I	ENG 101	mester 2 (F F/S/SU	3	Placement into college level English	Apply and get accepted to a QCC nurse education program (e.g., Program Code: NUR, NUL, etc.) as these high demand programs have waitlists; or if considering transfer (LPN to BSN), meet with a Transfer Services Advisor. See
Healthcare First Year Experience	FYE 102	F/S/SU	<mark>3</mark>		www.QCC.edu/transfer. Complete ENG 101; or AP English/Language and Composition, with AP Exam grade of "3" or
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college leve <mark>l</mark> English	higher, to count as ENG 101. Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY
		Total)		101.
	Sem	<mark>ester 3 (S</mark> p	<mark>ring)</mark>	BIO 101 or BIO 107 or HS AP	Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.
Anatomy & Physiology I	BIO 111	F/S/SU	4	Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Monitor status on waitlist for selected QCC nurse education program.
Composition II	ENG 102	F/S/SU	<mark>3</mark>	ENG 101	Complete BIO 111 with a grade of "C" or higher.
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher or approp place	Complete ENG 102; or AP English/Literature and Composition, with AP Exam grade of "3" or
		Total mester 4 (F	10		higher, to count as ENG 102. Follow Academic Plan from FYE 102; adjust with
					Academic Advisor, as needed.
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	Monitor status on waitlist for selected QCC nurse
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	education program; or if considering transfer, meet with representatives of four-year schools to
History Elective		F/S/SU	3		discuss/begin the transfer application process; or create an account on the QCC job board to
Humanities Elective		F/S/SU	3		search for internships, co-ops and jobs.
		Total	13		Complete BIO 112 with a grade of "C" or higher.
	Sem Sem	<mark>ester 5 (</mark> Sp	ring)		Follow Academic Plan from FYE 102; adjust with
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	Academic Advisor, as needed. Monitor status on waitlist for selected QCC nurse
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	education program; or continue with/complete the transfer application process for LPN to BSN; or if seeking employment, meet with Career Services for career readiness preparation and to
Humanities Elective		F/S/SU	3		learn more about QCC's job board. Complete BIO 232 with a grade of "C" or higher.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on
		Total	<mark>13</mark>		The Q.
Total Credits	Required				

PROPOSED (Includes any approved curriculum changes from 11/08/2022 Learning Council)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Se		Apply and get accepted to this program		
Upon successful completion of LP certificate, LPE certificate, or state Licensed Practical Nursing exam, 18 credits credentialed (18 credits can be transferred from regionally accredited college)	Transfer Courses: PNP 235 PNP 240 (or any combination of PNP courses)		18		 (Program Code: HCPN). Meet with Career Services to credential up to 18 Healthcare Elective credits for current LPN certification. Apply and get accepted to a QCC nurse education program (e.g., Program Code: NUR, NUL, etc.) as these high demand programs have waitlists; or if considering transfer (LPN to BSN), meet with a Transfer Services Advisor. See
		Total	<mark>18</mark>		www.QCC.edu/transfer.
	Sem	ester 2 (Sp	ring)		Contact Career Services
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	(www.QCC.edu/APexams) to receive credit for High School (HS) Advanced Placement (AP) Exams. QCC School Code: 3714. Monitor status on waitlist for selected QCC nurse
Composition I	ENG 101	F/S/SU	3	Placement into college level English	education program. Complete BIO 111 with a grade of "C" or higher.
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher or approp place	Complete ENG 101; or AP English/Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY
	6 0	Total mester 3 (F	13		101. Monitor status on waitlist for selected QCC nurse
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	education program; or if considering transfer, meet with representatives of four-year schools to
Composition II	ENG 102	F/S/SU	<mark>3</mark>	ENG 101	discuss/begin the transfer application process; or create an account on the QCC job board to
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	search for internships, co-ops and jobs. Complete BIO 112 with a grade of "C" or higher.
History Elective		F/S/SU	3		
Humanities Elective		F/S/SU	3		Complete ENG 102; or AP English/Literature and Composition, with AP Exam grade of "3" or higher, to count as ENG 102.
	Som	Total ester 4 (Sp	16		Monitor status on waitlist for selected QCC nurse
	Sem				education program; or continue with/complete
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	the transfer application process for LPN to BSN; or if seeking employment, meet with Career
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Services for career readiness preparation and to learn more about QCC's job board.
Humanities Elective		F/S/SU	3		Complete BIO 232 with a grade of "C" or higher.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on
		Total	<mark>13</mark>		The Q.
Total Credits	Required		<mark>60</mark>		

DEGREE OR CERTIFICATE REVISION PROPOSAL

1. Degree or Certificate Name and Code: Fire Science Certificate (Program Code: FSC)

2.	Originator:	Mark Cady	Date: <u>12/05/2022</u>
3.	School Dean:	Pat Schmohl	Date: <u>12/05/2022</u>
4.	Effective Date:	Fall 2023	
5.	Reviewed by Pro	gram and Process (if applicable)	Date: NA
6.	Recommended b Comments: unar	y the School of Healthcare nimous approval	Date: <u>12/15/2022</u>
7.	AA Leadership T	Kevin Li eam:	Date: <u>01/23/23</u>
		X Not Recommended:	
	Comments:		
8.	VP/Academic Aff	airs: Mr. James M. Keane	Date: 01/23/23
	Recommended: X Comments:		
9.	Learning Council	John Stazinski	Date:02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10.	VP/Academic Affa	irs:Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code:	
Fire Science Certificate (Program Co	ode: FSC)
Provide a detailed list of the proposed chang	
1. Add Fire Science Elective as an altern	
Attachments:	2
Current academic map. Proposed aca	ademic map with changes in bold
Submit separate proposals for any new course	ses or revised courses in the degree or certificate. Please list
here the new courses or revised courses for w	which separate proposals will be submitted.
None.	
Provide a rationale for the proposed changes	
Students taking this certificate have	petitioned for other fire science courses to meet this course.
This will allow for students to comp	lete this certificate without needing a petition. This program
will start an academic program revie	w to determine the future of this certificate.
Do any of the proposed changes affect the pr	rogram goals and/or the program student learning outcomes?
Please indicate any revisions to the program	goals and/or program student learning outcomes.
No.	
Do any of the proposed changes affect anoth	er department? Examples include the deletion or addition of
program courses that are offered by other de	partments. Please confer with the coordinators of affected
departments.	
Department(s) Affected: None.	
	lation agreements? Consult with the Transfer Coordinator.
For an associate degree program, are there an	ny changes in the number of general education credits that
could affect MassTransfer?	
NA	
If yes please provide a rationale.	
Will any of the following be required:	
	Additional equipment Additional library resources

Provide a rationale for any needs indicated and include approximate cost of equipment.

Fire Science Certificate (Program Code: FSC)

CURRENT (Includes any approved curriculum changes from 11/08/2022 Learning Council, if applicable)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Basic Emergency Medical Technology	EMT 101	F/S/SU	7		program (Program Code: FSC). Register for and successfully
Principles of Emergency Services	FSC 101	F	3	Placement into college level English	complete all courses to graduate in two semesters.
Occupational Safety and Health for Emergency Services	FSC 151	F	3	Placement into college level English	 Meet with Academic Advisor to discuss associate degree (Program Code: FS); or create an account on the QCC job board to search for
		Total	13		internships, co-ops and jobs.
		Semeste	er 2		Apply to associate degree (Program
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Code: FS); or if seeking employment, meet with Career
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Services for career readiness
Fire Behavior and Combustion	FSC 104	S	3	Placement into college level English, FSC 101	preparation and to learn more about QCC's job board.
Building Construction for Fire Protection	FSC 121	S	3	Placement into college level English, FSC 101	Submit an Intent to Graduate Form,
		Total	12		located on The Q.
Total Credits Required			25		

Public & Social Services (Area of Study) Fire Science Certificate (Program Code: FSC)

PROPOSED (Includes any approved curriculum changes from 11/08/2022 Learning Council, if applicable)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Basic Emergency Medical Technology	EMT 101	F/S/SU	7		program (Program Code: FSC).
Principles of Emergency Services	FSC 101	F	3	Placement into college level English	Register for and successfully complete all courses to graduate in two semesters. Meet with Academic Advisor to discuss associate degree (Program
Occupational Safety and Health for Emergency Services OR	FSC 151	F	3	Placement into college level English	
Fire Science Elective		F/S			Code: FS); or create an account on the QCC job board to search for
		Total	13		internships, co-ops and jobs.
	•	Semest	er 2	·	Apply to associate degree (Program
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Code: FS); or if seeking employment, meet with Career
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Services for career readiness
Fire Behavior and Combustion	FSC 104	S	3	Placement into college level English, FSC 101	preparation and to learn more about QCC's job board.
Building Construction for Fire Protection	FSC 121	S	3	Placement into college level English, FSC 101	Submit an Intent to Graduate Form,
		Total	12		located on The Q.
Total Credits R	equired		25		

1.	Course Number and Name: OTA 101 Introduction to Occupational Therapy: Concepts & Interventions
	(from current AY22/23 catalog)

2.	Originator:	Michelle Savrann	Date: 1/18/23
3.	School Dean:	Pat Schmohl/Shanan Stratis	Date: 1/18/23
4.	Effective Date:	Fall 2023	
5.	Reviewed by Prog	ram and Process (if applicable)	Date: NA
6.	Recommended by Comments:	the School of Healthcare	Date: 01/19/23
7.	AA Leadership Te	Kevin Li am:	Date: 01/23/23
		X Not Recommended:	
	Comments:		
8.	VP/Academic Affa	irs: Mr. James M. Keane	Date: <u>01/23/23</u>
		Not Recommended:	
	X Comments:		
9.	Learning Council:	John Stazinski	Date:02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10.	VP/Academic Affai	Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Pavision:
Type of Revision: V Description Propagaicite Corequisite Number Name # Credite
_X_DescriptionPrerequisiteCorequisiteNumberName# Credits Elective TypeOther (explain)
Course Discipline or Department: OTA School: Healthcare
Current Course Number: OTA 101
Current Course Name: Introduction to Occupational Therapy: Concepts & Interventions
Current Course Description (as it appears in the college catalog including course three letter designation
and number, title, credits, semesters offered and prerequisites/corequisites):
OTA 101 Introduction to Occupational Therapy: Concepts & Interventions
This course provides an introduction to the occupational therapy profession. Students study the history,
philosophy, and ethics of the profession. Students develop an understanding of the concept of occupation,
and how activity is used to provide treatment interventions. The course examines the different settings in
which a Certified Occupational Therapy Assistant can work, and teaches the basic written and oral
communication skills required by the healthcare profession.
Credits: 3
Semester Offered: F
Proposed Description (include all proposed changes):
roposed Description (mende un proposed enanges).
OTA 101 Introduction to Occupational Therapy, Concepts & Interventions
OTA 101 Introduction to Occupational Therapy: Concepts & Interventions
This course introduces the basic tenets of the occupational therapy profession. Students will examine the
history and philosophy of occupational therapy, current issues, future trends in the profession and OT
practice globally. Educational requirements to practice, roles and responsibilities of the occupational
therapist (OT) and occupational therapy assistant (OTA), ethical and legal aspects of practice, and
professional organizations will be introduced. Practice settings, models of healthcare delivery and service
management functions are explored.
Credits: 3
Semester Offered: F
Rationale for the change:
This revised course description utilizing language more consistent with current occupational therapy
practice and provides a comprehensive foundation for the following semesters that will support 2018
accreditation standards. Accreditation outcomes include:
• preparing students to understand the distinct roles and responsibilities of the OT/OTA,
• upholding ethical standards,
 educated as a generalist for broad exposure to service delivery models and systems used in
settings where OT is practiced and where it is emerging as a service.
Provide a description of any change in course content. N/A
List the programs that are affected by this change (list program names and program codes as they appear
in the college catalog). Please confer with the coordinator of the affected department:
Course description wording change only – does not affect any program grids.
Attach current and proposed academic maps (with changes in bold) for all affected programs. You can
obtain academic maps from Barb Zabka.
Please submit a generic syllabus to your dean with all of the revisions included.

COURSE REVISION PROPOSAL

1.	Course Number and Name: OTA 131 Occupational Therapy Methods and Modalities 1 (from current AY22/23 catalog)									
2.	Originator: Michelle Savrann	Date: 1/18/22								
3.	School Dean: Pat Schmohl/ Shanan Stratis	Date:								
4.	Effective Date: Fall 2023									
5.	Reviewed by Program and Process (if applicable)	Date:								
6.	Recommended by the School of Comments:	Date:								
7.	Kevin Li AA Leadership Team:	Date: <u>01/23/23</u>								
	Recommended: X Not Recommended: _									
	Comments:									
8.	VP/Academic Affairs: Mr. James M. Keane	Date: <u>01/23/23</u>								
	Recommended: Not Recommended:									
	Comments:									
9.	John Stazinski	Date:02/14/23								
	Recommended:X Not Recommended:									
	Comments:									
10.	VP/Academic Affairs:Dr. James M. Keane	Date: 02/14/23								
	Approved: Not Approved:									
	Comments:									

COURSE REVISION PROPOSAL

Type of Revision:				
_X_Description _ PrerequisiteCorequisiteNumberName# Credits				
Elective TypeOther (explain)				
Course Discipline or Department: OTA School: Healthcare				
Current Course Number: OTA 131				
Current Course Name: Occupational Therapy Methods and Modalities 1				
Current Course Description (as it appears in the college catalog including course three letter designation and number, title, credits, semesters offered and prerequisites/corequisites)				
OTA 131: Occupational Therapy: Methods and Modalities 1				
This course provides an introduction to the use of living tasks, group skills, and crafts as therapeutic tools. Student learn specific treatment techniques valuable to the occupational therapy profession and perform indepth study of several activities to determine their therapeutic value. Students assume the role of teacher to instruct others in various activities, and explore how these activities can be used therapeutically with clients. The course course consists of two hour of lecture and three hours of laboratory per week. Credits: 3 Co-req: OTA 101 Semester Offered: F				
Proposed Description (include all proposed changes):				
Revised Course Description				
This course provides in-depth study of occupations and begins to introduce students to how therapeutic occupations are used in occupational therapy practice. Students will learn to analyze occupational tasks and functional activities utilizing the Occupational Therapy Practice Framework as a guide, grade and adapt activities, and build the basic skills necessary for teaching therapeutic activities to meet the needs of occupational therapy consumers, either individually or in groups.				
Credits: 3				
Creats: 5 Co-req: OTA 101				
Semester Offered: F				
Semester Oriereu. F				
Rationale for the change:				
 This revised course description utilizing language more consistent with current occupational therapy practice and supports 2018 ACOTE accreditation standards which emphasizes preparing students to articulate therapeutic use of occupation as informed by the Occupational Therapy Practice Framework. Current credit distribution as two lecture and 3 hour lab. This revised course will remain 3 				
2 Current credit distribution as two lecture and 2 hour lab. This revised course will remain 2				

credits, however, given the content is more didactic in nature rather than assessment and practice of psychomotor skills, this course is better suited for a 3 hour lecture. In addition, this change would support students who are also completing general education curriculum requirements. This course will scheduled within the new College schedule and provide them more options for course selection to manage other demands of their weekly schedule such as work and childcare.

Provide a description of any change in course content.

N/A

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

N/A

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

1.	Course Number and Name: BIO 107 Principles of Biology I (from current AY22/23 catalog)		
2.	Originator: Jessica Cro	vley	Date: 11/8/2022
3.	School Dean: Dr. Ben E	enton	Date: 11/14/2022
4.	Effective Date: Fall 202	3	
5.	Reviewed by Program a	nd Process (if applicable)	Date:
6.	Recommended by the So Comments: Unanimous	chool of <u>Math and Science</u> y approved	Date: 01/19/2023
7.	AA Leadership Team:	Kevin Li	Date: 01/23/23
	Recommended: X	Not Recommended:	
	Comments:		
8.	8. VP/Academic Affairs: Mr. James M. Keane		Date: <u>01/23/23</u>
	Recommended:	Not Recommended:	
	Comments:		
9.	Learning Council:	ohn Stazinski	Date:02/14/23
	Recommended: X	Not Recommended:	
	Comments:		
10.	VP/Academic Affairs:	Dr. James M. Keane	Date:02/14/23
	Approved: X Comments:	Not Approved:	
	Comments:		

COURSE REVISION PROPOSAL

Type of Revision: X Description X Prerequisite X Corequisite Number X Name # Credits Elective Type X Other (explain): Revised course student learning outcomes				
Course Discipline or Department: Natural Sciences School: Mathematics & Sciences				
Current Course Number: BIO 107				
Current Course Name: Principles of Biology I				
Current Course Description (as it appears in the college catalog in and number, title, credits, semesters offered and prerequisites/cor				
BIO 107 Principles of Biology I This course examines principles of molecular, cellular and physiological levels of living organisms. Topics include biomolecules, cell structure and function, cellular energetics, heredity, gene expression, and evolution. The laboratory component focuses on scientific methodology, acquiring and interpreting data and experimental design. The course is designed for those planning to major in the biological sciences, biotechnology, biochemistry, or biomedical engineering. Credits: 4				
Prerequisite: MAT 099 with a grade of "C" or higher or appro Corequisite: ENG 101 Semester Offered: F/S/SU	priate placement score			
Proposed Description (include all proposed changes):				
BIO 107 Biology II: Introduction to Cells and Molecules This course examines principles of molecular, cellular and physiological levels of living organisms. Topics include structure and function of biomolecules and cells, cellular energetics, heredity, gene expression, and evolution. The laboratory component focuses on scientific methodology, acquiring and interpreting data, and experimental design. This course is designed for students majoring in science and engineering. Credits: 4 Prerequisite: CHM 105 or CHM 123, ENG 101				
Semester Offered: F/S/SU				
Rationale for the change and Course Student Learning Outcomes:				
Student success data in Principles of Biology I indicates a barrier to student progression through STEM programs for which the course is a requirement. Many times, this is a student's first laboratory course, and they often struggle with the workload and the fast pace of the course. In addition, the concepts covered in Principles of Biology I (BIO 107) are more abstract (molecules and metabolism) than those in Principles of Biology II (BIO 108), which focuses on organismal diversity. Therefore, beginning students may see more success with Principles of Biology II. Addition of a chemistry prerequisite to Principles of Biology I will ease the amount of new content in the class, giving students a foundation of atomic structure and bonding, which will be built upon for biological macromolecules. In addition, students will be more adept at managing their time for a laboratory course.				
BIO 108 (new course number 106) will not be the prerequisite for BIO 107. While the themes of structure-function relationships and evolution run through both courses, these courses do not build upon each other. The BIO 107 course focuses more on molecular structure, and so chemistry is a more appropriate prerequisite. Additionally, some programs (ERG, ERBM, GSBT, BI) do not require students				

to take the organismal diversity course (BIO 108/BIO 106).

Revised CSLOs:

Upon successful completion of this course, students will be able to:

- 1. Explain the mechanism of natural selection and its role in evolution.
- 2. Apply basic chemical principles of bond formation, including the properties of water and carbon compounds, to biological systems.
- 3. Describe the structures and properties of the major classes of biological macromolecules and give examples of their functions in the cell.
- 4. Describe the generalized structures and functions of bacteria, animal and plant cells.
- 5. Describe energy flow and transformations in cells and organisms through metabolism and metabolic pathways.
- 6. Describe the processes by which heritable material is passed on to the next generation.
- 7. Discuss the structure and function of the genetic material and its role in inheritance and gene expression.
- 8. Demonstrate competency with the scientific techniques used in biology including measurements of volume and mass, microscopy, and graphing.
- 9. Apply the scientific method in the laboratory setting to design controlled experiments, collect and interpret data, and clearly communicate experimental results.

Provide a description of any change in course content.

Course content will not change significantly. Chemistry content from the prerequisite will be reviewed with emphasis on knowledge required for understanding biological molecular structure and function. List the programs that are affected by this change (list program names and program codes as they appear

List the programs that are affected by this change (list program names and program codes as they app in the college catalog):

Liberal Arts - Biology Option (LABI)

Liberal Arts - Chemistry Option (LACH) Liberal Arts - Environmental Science Option (LAES) General Studies - Pre-Pharmacy Option (GSPH) General Studies - Biotechnology (GSBT) Biotechnology Technician Certificate (BI) Engineering (ERG) Engineering - Biomedical Engineering Option (ERBM)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

1.	Course Number and Name: BIO 108 Principles of Biology II (from current AY22/23 catalog)		
2.	Originator:	Jessica Crowley	Date: 11/8/22
3.	School Dean:	Dr. Ben Benton	Date: 11/14/22
4.	Effective Date: Fal	1 2023	
5.	Reviewed by Prog	ram and Process (if applicat	le) Date:
6.	Recommended by Comments: Unani		<u>ence</u> Date: <u>01/19/2023</u>
7.	AA Leadership To	Kevin Li	Date: <u>01/23/23</u>
	Recommended:	X Not Recomm	ended:
	Comments:		
8.	VP/Academic Affa	irs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended:		ended:
	X Comments:		
9.	Learning Council:	John Stazinski	Date: 02/14/23
	Recommended:	X Not Recomm	ended:
	Comments:		
10.	VP/Academic Affa	Dr. James M. Keane	Date: 02/14/23
	Approved: X	Not Approve	d:
	Comments:		

COURSE REVISION PROPOSAL

Type of Revision:			
_X_Description X_Prerequisite X_Corequisite _X Number _X Name# Credits			
Elective Type _X_ Other (explain): Revised course student learning outcomes			
Course Discipline or Department: Natural Sciences School: Mathematics & Sciences			
Current Course Number: BIO 108			
Current Course Name: Principles of Biology II			
Current Course Description (as it appears in the college catalog including course three letter designation			
and number, title, credits, semesters offered and prerequisites/corequisites):			
BIO 108 Principles of Biology II			
This course examines the principles of organismal biology. Topics include evolution, comparative			
anatomy and physiology, diversity of biological organisms, and plant phylogeny and biology. The			
laboratory component focuses on scientific methodology, acquiring and interpreting data, and			
experimental design. The course is designed for those planning to major in the biological sciences.			
Credits: 4			
Prerequisite: BIO 107			
Semester Offered: F/S			
Proposed Description (include all proposed changes):			
DIO 400 Dislams h Interchentian to Organismal Discovity			
BIO 106 Biology I: Introduction to Organismal Diversity			
This course examines the principles of organismal biology. Topics include evolution, comparative anatomy and physiology, diversity of biological organisms, phylogeny, and interactions at different levels			
of biological hierarchy. The laboratory component focuses on observing, sketching and dissecting			
specimens, designing experiments, as well as acquiring and interpreting data. The course is designed for			
students majoring in the sciences.			
Credits: 4			
Corequisite: ENG 101			
Semester Offered: F/S			
Rationale for the change and Course Student Learning Outcomes:			
In order to increase student success, we are proposing to change the sequencing of the introductory			
biology first year courses for STEM majors. This organismal diversity course does not require the course			
material in the introduction to cells and molecules course. In addition, the content of this course is less			
abstract and more tangible and will provide the students with experience in navigating laboratory courses			
prior to the more challenging content in the introduction to cells and molecules course. Due to the			
amount of reading and writing, an ENG 101 co-requisite is suggested. Students will be introduced to			
scientific writing conventions, including source citations.			
Revised CSLOs:			
Upon successful completion of this course, students will be able to:			
1. Describe the characteristics of the domains and kingdoms of organisms including differentiating			
between prokaryotic and eukaryotic species.			
2. Compare and contrast the kingdoms of life with regard to cellular structure,			
metabolism, homeostatic and reproductive strategies.			
3. Recognize and explain the causes of large evolutionary trends in biodiversity, and how cladistics			
inform phylogeny.			
 Explain the processes and outcomes of macroevolution and microevolution. 			
5. Explain organismal interactions at the levels of populations, communities, ecosystems,			
5. Explain organisma interactions at the levels of populations, communities, ecosystems,			

5. Explain organismal interactions at the levels of populations, communities, ecosystems, and biosphere.

- 6. Demonstrate competency with the scientific techniques used in biology including observation, sketching, microscopy, and dissections.
- 7. Apply the scientific method in the laboratory setting to design controlled experiments, collect and interpret data, and clearly communicate experimental results.

Provide a description of any change in course content.

Course content will not change.

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

Liberal Arts-Biology (LABI) Liberal Arts-Chemistry (LACH) Liberal Arts-Environmental Science (LAES) General Studies Pre-Pharmacy (GSPH) Liberal Arts - Mathematics Option (LAMT) – "BIO 108" mentioned in Milestones only

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

1.	Course Number and Name: BIO 231 General Microbiology (from current AY22/23 catalog)		
2.	Originator:	Jessica Crowley	Date: 11/10/22
3.	School Dean:	Dr. Ben Benton	Date: 11/14/22
4.	Effective Date:	Fall 2023	
5.	Reviewed by Prog	ram and Process (if applicable)	Date:
6.	Recommended by Comments: Unani	the School of <u>Math and Science</u> mously approved	Date: 01/19/2023
7.	AA Leadership To	Kevin Li eam:	Date: <u>01/23/23</u>
	Recommended:	X Not Recommended:	
	Comments:		
8.	VP/Academic Affa	airs: Mr. James M. Keane	Date: <u>01/23/23</u>
	Recommended: X Comments:	Not Recommended:	
9.	Learning Council:	John Stazinski	Date:02/14/23
	Recommended:	X Not Recommended:	
	Comments:		
10.	VP/Academic Affa	irs: Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision:				
_X_Description _X_PrerequisiteCorequisiteNumberName# Credits				
Elective Type \bar{X} Other (explain): Revised course student learning outcomes				
Course Discipline or Department: Natural Sciences School: Mathematics & Sciences				
Current Course Number: BIO 231				
Current Course Name: General Microbiology				
Current Course Description (as it appears in the college catalog including course three letter designation and number, title, credits, semesters offered and prerequisites/corequisites):				
BIO 231 General Microbiology				
This course explores the morphology, growth, metabolism, and genetics of microorganisms including bacteria, fungi, and viruses. Topics include microbial growth, identification, genetic manipulation				
techniques used in the biotechnology industry, pathogenicity, disease transmission, and immunology. The				
course emphasizes documentation, data manipulation, and experimental design. Credits: 4				
Prerequisite: BIO 107 and CHM 105 or CHM 123				
Semester Offered: F/S				
Proposed Description (include all proposed changes):				
BIO 231 General Microbiology				
This course explores the morphology, growth, metabolism, and genetics of microorganisms including				
bacteria, fungi, and viruses. Topics include microbial growth and control, genetic transmission and				
expression, microbial pathogenicity, infectious disease transmission, immunology, and the role of microbes in biotechnology. Students also focus on microscopy, aseptic transfer, and safe cultivation of				
microorganisms with an additional emphasis on documentation, data analysis, and experimental design.				
Credits: 4				
Prerequisite: BIO 107 Semester Offered: F/S				
Rationale for the change and Course Student Learning Outcomes:				
Radonale for the change and course student Dearning Outcomes.				
In an effort to increase student success in the former BIO 107 course, renamed BIO 107, one semester of				
chemistry (either CHM 105 or CHM 123) has been added as a prerequisite. Therefore, chemistry is no				
longer needed as a prerequisite for this course.				
Revised CSLOs: On successful completion of this course, students will be able to:				
1. Compare the structures, physiology and metabolism of prokaryotic and eukaryotic microbes, and				
viruses.				
2. Explain microbial growth patterns, nutritional requirements, and mechanisms to control growth.				
3. Examine the processes of gene transfer, and the role of microbes in biotechnology.				
4. Examine the role of microbes in the environment and their interactions with other organisms.				
5. Describe the role of host defense mechanisms in the process of disease.				
6. Demonstrate laboratory proficiency in microscopy, aseptic transfer, cultivation of microbes, microbial identification, and laboratory safety.				
7. Employ the scientific method to collect, analyze, and interpret data; effectively communicate				
experimental results.				
Provide a description of any change in course content.				
No change in course content.				

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

Liberal Arts-Biology Option (LABI) General Studies - Biotechnology (GSBT) Biotechnology Technician Certificate (BI) General Studies - Pre-Pharmacy Option (GSPH)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

1.	Course Number and Name: Cell Biology (BIO 259) (from current AY22/23 catalog)		
2.	Originator: Jes	sica Crowley	Date: 11/10/22
3.	School Dean: Dr.	Ben Benton	Date: 11/14/22
4.	Effective Date: Fall 20	23	
5.	Reviewed by Program	and Process (if applicable)	Date:
6.	Recommended by the S Comments: Unanimou	School of <u>Math and Science</u> sly approved	Date: 01/19/2023
7.	AA Leadership Team	Kevin Li	Date: <u>01/23/23</u>
		Not Recommended:	
	Comments:		
8.	VP/Academic Affairs:	Mr. James M. Keane	Date: <u>01/23/23</u>
	Х	Not Recommended:	
	Comments:		
9.	Learning Council:	John Stazinski	Date:02/14/23
	Recommended: X	Not Recommended:	
	Comments:		
10.	VP/Academic Affairs:	Dr. James M. Keane	Date:02/14/23
	Approved: X	Not Approved:	
	Comments:		

Type of Revision:					
_X_Description _X_PrerequisiteCorequisiteNumberName# CreditsElective TypeOther (explain)					
Course Discipline or Department: Natural Sciences School: Mathematics & Sciences					
Current Course Number: BIO 259					
Current Course Name: Cell Biology					
Current Course Description (as it appears in the college catalog including course three letter designation					
and number, title, credits, semesters offered and prerequisites/corequisites):					
BIO 259 Cell Biology					
This course focuses on the structure and function of cells. Topics include organelles, membrane structure					
and function, metabolism, signal transduction, cytoskeletal dynamics and regulation of growth as well as					
data collection, analysis, and documentation methods. Students learn laboratory instrumentation,					
microscopy, cellular techniques, and manipulations employed in the biotechnology industry. Credits: 4					
Prerequisite: BIO 107 and CHM 105 or CHM 123					
Semester Offered: F/S					
Proposed Description (include all proposed changes):					
BIO 259 Cell Biology					
This course focuses on the structure and function of cells. Topics include organelles, membrane structure					
and function, protein structure, function and trafficking, metabolism, signal transduction, cytoskeletal					
dynamics and regulation of growth as well as data collection, analysis, and documentation methods.					
Students learn laboratory instrumentation, microscopy, cellular techniques, and protein analysis methods					
employed in biomedical research and the biotechnology industry. Credits: 4					
Prerequisite: BIO 107					
Semester Offered: F/S					
Rationale for the change and Course Student Learning Outcomes:					
In an effort to increase student success in BIO 107, one semester of chemistry (either CHM 105 or CHM					
123) has been added as a prerequisite. Therefore, chemistry is no longer needed as a prerequisite for this					
course.					
The course description has been updated to clarify techniques covered in the class.					
Upon successful completion of this course, students will be able to:					
1. Compare and contrast the generalized structures and functions of bacterial, animal and plant cells.					
2. Apply the laws of thermodynamics to chemical reactions in the cell and chemical equilibrium.					
3. Explain how a protein is synthesized, modified, and trafficked to its site of action.					
 Explain how enzymes mediate catalysis and describe mechanisms of enzyme regulation in metabolic pathways. 					
 Characterize the different modes by which molecules are transported across membranes and 					
relate this to the structure of membranes.					
6. Explain how signals are transduced from outside the cell to elicit an internal cellular response and					
predict how disruptions to these processes affect the cell.					
7. Compare and contrast the functions of the cytoskeletal proteins, including structures, dynamics,					

- and interactions with other cellular components.8. Describe the mechanisms of cell cycle control.

- 9. Compare and contrast various methods of visualizing and manipulating cells, including methods of cell lysis and protein purification.
- 10. Apply the scientific method in the laboratory setting to design controlled experiments using current cell biology techniques, collect and interpret data, and document and clearly communicate experimental results.

Provide a description of any change in course content.

No change in content.

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

Liberal Arts-Biology Option (LABI) General Studies - Biotechnology (GSBT) Biotechnology Technician Certificate (BI) Engineering - Biomedical Engineering Option (ERBM)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

Attached.

1.	Course Number and Name: Principles of Genetics (BIO 262) (from current AY22/23 catalog)		
2.	Originator: Jessica Crowley	Date: 11/9/22	
3.	School Dean: Dr. Ben Benton	Date: 11/14/22	
4.	Effective Date: Fall 2023		
5.	Reviewed by Program and Process (if applicable)	Date:	
6.	Recommended by the School of <u>Math and Science</u> Comments: Unanimously approved	Date: 01/19/2023	
7.	AA Leadership Team:	Date: <u>01/23/23</u>	
	Recommended: X Not Recommended:		
	Comments:		
8.	VP/Academic Affairs: Mr. James M. Keane	Date: <u>01/23/23</u>	
	Recommended:		
	Comments:		
9.	John Stazinski	Date:02/14/23	
	Recommended: Not Recommended:		
	Comments:		
10.	VP/Academic Affairs: Dr. James M. Keane	Date:02/14/23	
	Approved: Not Approved:		
	Comments:		

Type of Re	vision:			
_X_I	Description _X PrerequisiteCorequisiteNumberName# Credits			
	lective Type _XOther (explain): Revised course student learning outcomes			
	cipline or Department: Natural Sciences School: Math and Science			
	urse Number: BIO 262			
	urse Name: Principles of Genetics			
	urse Description (as it appears in the college catalog including course three letter designation			
and number	r, title, credits, semesters offered and prerequisites/corequisites):			
	inciples of Genetics e covers the principles of classical and molecular genetics in both model organisms and			
	ne material focuses on experimental evidence for genetic principles along with application of			
	ples to solve problems involving inheritance patterns. Students perform investigative			
	exercises in genetic mapping, recombinant DNA techniques, gene regulation, and			
bioinformat	ics.			
Credits: 4				
	te: BIO 108, MAT 122 Offered: F/S			
	Description (include all proposed changes):			
i ioposed D	esemption (monute un proposed enunges).			
BIO 262 Pr	inciples of Genetics			
	e covers the principles of classical, molecular and population genetics in both model organisms			
	s. Students explore inheritance, gene expression, population genetics and evolution, and			
	tation and repair. The material emphasizes experimental evidence for genetic principles along			
	ation of these principles to solve problems. Students perform investigative laboratory exercises napping, recombinant DNA techniques, gene regulation, and bioinformatics.			
Credits: 4	happing, recombinant DNA techniques, gene regulation, and bioinformatics.			
	te: BIO 106, BIO 107, MAT 122			
Semester (Offered: F/S			
Rationale for the change and Course Student Learning Outcomes:				
	prerequisite for Principles of Genetics (BIO 262) is BIO 108 and MAT 122. Course content			
	ntroductory biology courses are necessary for success in Principles of Genetics. With the			
A A	e and course name and number changes for BIO 107/108, the prerequisite for Principles of			
Genetics sh	ould be updated to include both Biology I and II (BIO 106 and BIO 107).			
Revised CS				
	ful completion of this course, students will be able to:			
	Compare and contrast the mechanisms of transmission of genetic material in prokaryotes and			
	eukaryotes.			
2.	Apply genetic mapping strategies to determine the position of genes in prokaryotic and			
	eukaryotic genomes.			
3.	Describe the genomic content, organization, and packaging of genetic material.			
	Explain the mechanisms of DNA replication, transcription and translation.			
5.	Compare and contrast the regulation of gene expression in prokaryotes and eukaryotes.			
6.	Explain the mechanisms responsible for genetic mutation and DNA repair.			
7.	Explain evolution in the context of population dynamics and genetic processes such as			
	mutation, migration, natural selection, and random genetic drift.			
8.	Utilize experimental methods in model organisms to characterize transmission, interaction,			
	expression and function of genes.			

- 9. Apply the scientific method in the laboratory setting to design controlled experiments, collect and interpret data, and document and clearly communicate experimental results.
- 10. Integrate genetic concepts with societal issues such as genetic counseling, ethics of eugenics, ownership of personal genetic information.

Provide a description of any change in course content.

No change in course content.

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

Liberal Arts-Biology Option (LABI)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and Code: Liberal Arts-Biology (LABI) (from current AY 22/23 catalog)		
2.	Originator: Jessica Crowley	Date: 11/8/22	
3.	School Dean: Dr. Ben Benton	Date: 11/16/2022	
4.	Effective Date: Fall 2023		
5.	Reviewed by Program and Process (if applicable)	Date:	
6. Recommended by the School of Math and Science Comments: Unanimously approved Date: 01/19/23			
7.	AA Leadership Team:	Date: <u>01/23/23</u>	
	Recommended: X Not Recommended:		
	Comments:		
8.	VP/Academic Affairs: Mr. James M. Keane	Date: <u>01/23/23</u>	
	Recommended: Not Recommended: X		
	Comments:		
9.	John Stazinski	Date:02/14/23	
	Recommended: Not Recommended:		
	Comments:		
10.	VP/Academic Affairs: Dr. James M. Keane	Date:02/14/23	
	Approved: Not Approved:		
	Comments:		

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Liberal Arts-Biology Option (LABI) Provide a detailed list of the proposed changes to the degree or certificate. 1. Incorporate course name and prerequisite changes for BIO 107. 2. Incorporate course name, course number, and prerequisite changes for BIO 108 (now BIO 106). 3. Incorporate prerequisite changes for BIO 231. 4. Incorporate prerequisite changes for BIO 259. 5. Incorporate prerequisite changes for BIO 262. 6. Incorporate prerequisite changes for MAT 122. 7. Move BIO 107 from Semester 1 to Semester 2. 8. Move BIO 106 from Semester 2 to Semester 1. 9. Adjust milestones, accordingly. Attachments: Current academic map Proposed academic map with changes in **bold** Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted. Course Revisions submitted for: Principles of Biology I (BIO 107) Principles of Biology II (BIO 108) General Microbiology (BIO 231) Cell Biology (BIO 259) Principles of Genetics (BIO 262) Statistics (MAT 122) Provide a rationale for the proposed changes. In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to maintain the timing of the degree and to give students more opportunity to gain experience in laboratory courses prior to BIO 107, BIO 108 (revised to BIO 106) will be moved to the first semester. In order to clarify the content and suggested order of courses, the names have been changed to BIO 106: Introduction to Organismal Diversity and BIO 107: Introduction to Cells and Molecules. Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes. Program SLOs and goals remain the same. Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. Department(s) Affected: No other departments affected by the degree changes. Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. The order of courses and prerequisites have changed, but the content remains the same. For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? If yes please provide a rationale.

MassTransfer will not be affected.

Will any of the following be required: No additional needs.

Additional staff____Additional space____Additional equipment_____Additional library resources _____

Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PRO	GRAM STUDENT LEARNING OUTCOMES FOR Liberal Arts-Biology	Supporting course(s)	I, M, E
1	Demonstrate an understanding of general biology principles including evolution and organismal diversity, cell structure and function, metabolism and enzyme function, cell reproduction and genetics.	BIO 106 BIO 107 BIO 262 BIO 231/BIO 259	M M E E
2	Explain how the chemical principles of matter and energy affect processes in biological systems.	BIO 107 CHM 105 CHM 106 BIO 231/BIO 259	M M M E
3	Employ the scientific method to investigate scientific principles, analyze and interpret data, and solve complex problems.	BIO 106 BIO 107 CHM 105 CHM 106 BIO 262 BIO 231/BIO 259	M M M E E E
4	Demonstrate proper use of basic laboratory equipment, adhering to laboratory safety protocols, as well as a technical proficiency in computer technology for data analysis.	BIO 106/BIO 107 BIO 262 BIO 231/BIO 259 CHM 105 CHM 105 CHM 106 CHM 201/202 PHY 101/102; PHY 105/107	M E E M M E M
5	Apply mathematical reasoning to explore biological and chemical concepts, including data analysis using statistics, the correct composition and interpretation of graphs, and solution chemistry and calculations to support the preparation of reagents.	MAT 122, 123, 124 BIO 106, 131 PHY 101/102; PHY 105/107 BIO 262 BIO 231/BIO 259	M M M E E M E

		CHM 105/CHM	
		106	
		CHM 201/202	
6	Demonstrate clear and effective communication skills, including verbal,	ENG 101/ENG	М
-	written, graphic, and numerical, with emphasis on the presentation of	102	М
	experimental results.	BIO 106/BIO	М
	····	107	Μ
		CHM 105/CHM	Μ
		106	M
		CHM 201/202	E
		BIO 262	Ľ
		BIO 231/BIO	I/E
		259	1/12
		PHY 101/102;	
		PHY 105/107	Е
		Multiple	Ľ
		Perspectives Elective	Е
			E
		Literature,	
		Philosophy, or	Б
		Language	E
		Social Science	
		Foundational	
		Elective	
_		History Elective	-
7	Identify reliable sources of information for use in the formation and	BIO 106/107	E
	support of evidence-based arguments.	ENG 102	M
		BIO 262	E
		BIO 231/BIO	E
		259	E
		Social Science	
		Foundational	
		Elective	E
		History Elective	
8	Utilize the broad-based liberal arts curriculum to recognize the value of	Creative Arts	М
	multiple perspectives needed to participate in a global society.	Elective	
		Multiple	E
		Perspectives	
		Elective	
		Literature,	Μ
		Philosophy, or	
		Language	
		elective	М
		Social Science	
		Foundational	
		Elective	М
		History Elective	Ι
		BIO 106	Ι
		BIO 262	

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes (Gen. Ed. Goals adopted 2022).

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR: Liberal Arts-Biology (LABI)	Supporting course(s)	I, M, E
Civic Learning & Engagement: Students will develop civic knowledge, skills	History elective	Е
and dispositions through learning and practice.	Social Science	E
	Foundational	
	Elective	
Communication Skills: Students will read, write and speak effectively to build	BIO 106, 107,	Е
knowledge and convey meaning.	231, 259, 262	
	ENG 101, 102	E
	Literature,	М
	Philosophy, or	
	Language	
	elective	
Information and Digital Literacy: Students will engage in a reflective process of	BIO 106, 107,	Е
information discovery, use information responsibly and employ digital	231, 259, 262	
technologies to learn, communicate and collaborate.	ENG 102	М
Intercultural Knowledge and Competence: Students will demonstrate	Multiple	М
intercultural knowledge within a variety of cultural contexts and with culturally	Perspectives	
different ideas and individuals	Elective	
	Literature,	Ι
	Philosophy, or	
	Language	
	elective	Ι
	Social Science	
	Foundational	
	Elective	Ι
	History elective	
Quantitative and Scientific Reasoning: Students will apply concepts and	BIO 106, 107,	Е
methods of mathematics and science to acquire knowledge and solve problems.	231, 259, 262	
	CHM 105/106	E
	PHY 101/102 or	E
	PHY 105/107	E
	MAT 122, 123	E
	and 124	

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and Code: Liberal Arts - Chemistry Option (LACH)
	(from current AY 22/23 catalog)

2.	Originator:	Hirul Patel		Date: 1	11/16/22
3.	School Dean:	Dr. Ben Bentor	1	Date: 1	1/16/2022
4.	Effective Date: Fal	ll 2023			
5.	Reviewed by Prog	ram and Process	s (if applicable)	Date:	
1.	Recommended by Comments: Unar	•	f <u>Math and Science</u> oved	-	Date: 01/19/2023
2.	AA Leadership Te	eam:			Date:
	Recommended: Comments:		Not Recommended:		
3.					Date:
	Recommended: Comments:		Not Recommended:		_
4.	Learning Council:				Date:
	Recommended: Comments:		Not Recommended:		
5.	VP/Academic Affa	irs:			Date:
	Approved: Comments:		Not Approved:		

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Liberal Arts - Chemistry Option (LACH)

Provide a detailed list of the proposed changes to the degree or certificate.

1. Incorporate course name and prerequisite changes for BIO 107.

2. Incorporate course name, course number, and prerequisite changes for BIO 108 (now BIO 106).

3. Move BIO 107 from Semester 1 to Semester 2.

4. Move BIO 106 from Semester 2 to Semester 1.

Attachments:

Current academic map

Proposed academic map with changes in **bold**

Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted.

BIO 107 BIO 108

Provide a rationale for the proposed changes.

In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to maintain the timing of the degree and to give students more opportunity to gain experience in laboratory courses prior to BIO 107, BIO 108 (revised to BIO 106) will be moved to the first semester. In order to clarify the content and suggested order of courses, the names have been changed to BIO 106: Introduction to Organismal Diversity and BIO 107: Introduction to Cells and Molecules.

Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.

Program SLOs and goals remain the same.

Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.

Department(s) Affected: No other departments affected by the degree changes.

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?

The order of courses and prerequisites have changed, but the content remains the same. There is no effect on MassTransfer.

If yes please provide a rationale.

Will any of the following be required: None.

Additional staff _____Additional space _____Additional equipment _____Additional library resources _____

Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

	GRAM STUDENT LEARNING OUTCOMES FOR ERAL ARTS -CHEMISTRY OPTION	Supporting course(s)	I, M, E
1	Demonstrate understanding of basic chemical principles including relation of matter and energy, atomic structure, stoichiometry, chemical reactions, thermodynamics, and theory of bonding.	CHM 105, CHM 106, CHM 201/ CHM 202 BIO 107, PHY 105, PHY 107	E
2	Apply basic chemical principles to organic chemistry including organic synthesis design and related lab skills.	CHM 201/CHM 202	E
3	Incorporate the Physics principles into the understanding of chemistry and apply chemical principles to biological systems.	PHY 105, PHY 107 BIO 107, BIO 106	Ι
4	Employ the scientific method to investigate scientific principles, analyze and interpret data, and solve complex problems.	CHM 105/CHM 106 CHM 201/ CHM 202 BIO 107 /BIO 106 PHY 105 /PHY 107	М
5	Apply mathematical reasoning to explore chemical concepts, including data analysis using statistics and the correct composition and interpretation of graphs.	MAT 233/ MAT 234 CHM 105/CHM 106 CHM 201/ CHM 202 BIO 107 /BIO 106 PHY 105 /PHY 107	М
6	Demonstrate proper use of basic laboratory equipment, adhering to laboratory safety protocols, as well as a technical proficiency in computer technology for data analysis.	CHM 105/CHM 106 CHM 201/ CHM 202 BIO 107 /BIO 106 PHY 105 /PHY 107	E
7	Demonstrate clear and effective communication skills, including verbal, written, graphic, and numerical, with emphasis on the presentation of experimental results.	CHM 105/ CHM 106 CHM 201/CHM 202 BIO 107 /BIO 106 PHY 105 /PHY 107 ENG 101/ ENG 102	E
8	Utilize the broad-based liberal arts curriculum in the fine arts, humanities, mathematics, natural sciences, and social and behavioral sciences to examine the role of chemistry in society.	Creative Arts Elective Multiple Perspectives Elective Literature, Philosophy, or Language Elective Social Science Foundational Elective U.S. or World History Survey Elective	E

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes (Gen. Ed. Goals adopted 2022).

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR: Liberal Arts-Biology (LABI)	Supporting course(s)	I, M, E
Civic Learning & Engagement: Students will develop civic knowledge, skills and dispositions through learning and practice.	History elective Social Science Foundational Elective	E
Communication Skills: Students will read, write and speak effectively to build knowledge and convey meaning.	Literature, Philosophy, or Language Elective ENG 101, ENG 102 CHM 105, 106, 201, 202 BIO 106, 107 PHY 105, 107	М
Information and Digital Literacy: Students will engage in a reflective process of information discovery, use information responsibly and employ digital technologies to learn, communicate and collaborate.	CHM 105,106,201,202 BIO 106, 107, ENG 102 MAT 233,234	E
Intercultural Knowledge and Competence: Students will demonstrate intercultural knowledge within a variety of cultural contexts and with culturally different ideas and individuals	Multiple Perspectives Elective Literature, Philosophy, or Language elective Social Science Foundational Elective History elective	Ι
Quantitative and Scientific Reasoning: Students will apply concepts and methods of mathematics and science to acquire knowledge and solve problems.	BIO 106, 107, CHM 105,106, 201,202 PHY 105,107 MAT 233,234	E

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and Code: Liberal Arts - Environmental Science Option (LAES)
	(from current AY 22/23 catalog)

2.	Originator: Anita Soracco	Date: 11/16/22
3.	School Dean: Ben Benton	Date: 11/16/22
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date:
1.	Recommended by the School of <u>Math and Scienc</u> Comments: Unanimously approved	e Date: 01/19/2023
2.	AA Leadership Team:	Date:
	Recommended: Not Recommended: Comments:	
3.	VP/Academic Affairs: Recommended: Not Recommended: Comments:	
4.	Learning Council: Recommended: Not Recommended: Comments:	
5.	VP/Academic Affairs: Approved: Not Approved:	
	Comments:	

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Liberal Arts - Environmental Science Option (LAES) Provide a detailed list of the proposed changes to the degree or certificate.

1. Incorporate course name and prerequisite changes for BIO 107.

2. Incorporate course name, course number, and prerequisite changes for BIO 108 (now BIO 106).

3. Incorporate prerequisite changes for MAT 122.

4. Move BIO 107 from Semester 1 to Semester 2.

5. Move BIO 106 from Semester 2 to Semester 1.

Attachments:

Current academic map

Proposed academic map with changes in **bold**

Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted.

BIO 107 BIO 108

Provide a rationale for the proposed changes.

In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to maintain the timing of the degree and to give students more opportunity to gain experience in laboratory courses prior to BIO 107, BIO 108 (revised to BIO 106) will be moved to the first semester. In order to clarify the content and suggested order of courses, the names have been changed to BIO 106: Introduction to Organismal Diversity and BIO 107: Introduction to Cells and Molecules.

Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.

Program SLOs and goals remain the same.

Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.

Department(s) Affected:

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.

For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?

The order of courses and prerequisites have changed, but the content remains the same. There is no effect on MassTransfer.

If yes please provide a rationale.

Will any of the following be required: None

Additional staff _____Additional space _____Additional equipment _____Additional library resources _____

Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PRO	GRAM STUDENT LEARNING OUTCOMES FOR (insert the name of	Supporting course(s)	I, M, E
the pr	ogram)		
1	Evaluate human impact on the environment and be able to identify	SCI 105	Ι
	and explain local and global environmental issues to a diverse	SCI 104	E
	audience.	SCI 110	М
2	Employ the scientific method to investigate scientific principles,	SCI 104	Ι
	analyze and interpret data, and solve complex problems.	SCI 105, SCI 110	E
		CHM 105, PHY 101,	E
		BIO 107	М
		BIO 106, CHM 106	
3	Demonstrate proper use of basic laboratory equipment, adhering to	SCI 105, SCI 110	Ι
	laboratory safety protocols, as well as a technical proficiency in	BIO 106, BIO 107,	Е
	computer technology for data analysis.	CHM 105, CHM 106,	М
		PHY 101	
4	Apply mathematical reasoning to explore environmental	MAT 122, MAT 123,	Ι
	phenomenon, including data analysis using statistics, and the correct	MAT 124, MAT 233	E
	composition and interpretation of graphs.	ECO elective	Ē
		BIO 106, BIO 107	Ē
		CHM 105, CHM 106,	M
		PHY 101	
		SCI 104, SCI 105, SCI	
		110	
5	Demonstrate clear and effective communication skills, including	SCI 105, SCI 110, SCI	Ι
	verbal, written, graphic, and numerical, with emphasis on the	104	Ē
	presentation of experimental results.	ENG 101/ENG 102	Ē
		BIO 106/BIO 107	Ē
		CHM 105/CHM 106	Ē
		PHY 101	Ē
		SPH 101, PHI 131,	Ľ
		ECO elective	
6	Identify reliable sources of information for use in the formation and	SCI 104, SCI 105, SCI	Ι
0	support of evidence-based arguments.	110	E
	support of evidence based arguments.	BIO 106/BIO 107	E
		PHI 131, SPH 101	M
		ENG 102	141
7	Utilize the broad-based liberal arts curriculum to recognize the value	BIO 108	Ι
/	of multiple perspectives needed to participate in a global society.	SCI 104, SCI 110,	E
	or multiple perspectives needed to participate in a global society.		с М
		SPH 101, SOC 101 PHI 131	11/1

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes (Gen. Ed. Goals adopted 2022).

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR	Supporting course(s)	I, M, E
(insert the name of the program)		
Civic Learning & Engagement: Students will develop civic knowledge,	SCI 104	Ι
skills and dispositions through learning and practice.	SCI 110	E
	SOC 101	E
	PHI 131	М
Communication Skills: Students will read, write and speak effectively to	SCI 105, SCI 110, SCI 104	Ι
build knowledge and convey meaning.	ENG 101/ENG 102	E
	BIO 106/BIO 107	E
	CHM 105/CHM 106	E
	PHY 101	E
	SPH 101, PHI 131, ECO	E
	elective	
Information and Digital Literacy: Students will engage in a reflective	CHM 105, CHM 106,	Ι
process of information discovery, use information responsibly and employ	PHY 101	E
digital technologies to learn, communicate and collaborate.	SCI 110, SCI 105	М
	BIO 106, BIO 107	
Intercultural Knowledge and Competence: Students will demonstrate	BIO 107	Ι
intercultural knowledge within a variety of cultural contexts and with	SCI 104, SCI 110, SPH	E
culturally different ideas and individuals	101, SOC 101	М
	PHI 131	
Quantitative and Scientific Reasoning: Students will apply concepts and	SCI 104, SCI 105, SCI 110	Ι
methods of mathematics and science to acquire knowledge and solve	ECO 200 LEVEL	E
problems.	BIO 106, BIO 107,	E
	CHM 105, CHM 106,	М
	PHY 101	М
	MAT 122, MAT 123,	
	MAT 124, MAT 233	

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and O	Code (current): General Studie	s—Pre-Pharmacy Option (GSPH)
2.	Originator: Dilip Patel		Date: November 15, 2022
3.	School Dean: Dr. Ben Benton		Date: 11/16/2022
4.	Effective Date: Fall 2023		
5.	Reviewed by Program and Proce	ss (if applicable)	Date:
1.	Recommended by the School o Comments: Unanimously appr		Date: 01/19/2023
2.	AA Leadership Team:		Date:
	Recommended: Comments:	Not Recommended:	
3.	VP/Academic Affairs:		
	Recommended: Comments:	Not Recommended:	
4.	Learning Council:		Date:
	Recommended: Comments:	Not Recommended:	
5.	VP/Academic Affairs:		Date:
	Approved: Comments:	Not Approved:	

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: General Studies—Pre-Pharmacy Option (GSPH) Provide a detailed list of the proposed changes to the degree or certificate. 1. Incorporate course name and prerequisite changes for BIO 107. 2. Incorporate course name, course number, and prerequisite changes for BIO 108 (now BIO 106). 3. Incorporate prerequisite changes for BIO 231. 4. Incorporate prerequisite changes for MAT 122. 5. Move BIO 107 from Semester 1 to Semester 2. 6. Move BIO 106 from Semester 2 to Semester 1. Attachments: Current academic map Proposed academic map with changes in **bold** Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted. Course Revisions submitted for: Principles of Biology I (BIO 107) Principles of Biology II (BIO 108) General Microbiology (BIO 231) Statistics (MAT 122) Provide a rationale for the proposed changes. In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to maintain the timing of the degree and to give students more opportunity to gain experience in laboratory courses prior to BIO 107, BIO 108 (revised to BIO 106) will be moved to the first semester. In order to clarify the content and suggested order of courses, the names have been changed to BIO 106: Introduction to Organismal Diversity and BIO 107: Introduction to Cells and Molecules. Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes. Program SLOs and goals remain the same. Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. Department(s) Affected: No other departments affected by the degree changes.

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.

The order of courses and prerequisites have changed, but the content remains the same.

For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? If yes please provide a rationale.

MassTransfer will not be affected.

Will any of the following be required: No additional needs.

Additional staff _____Additional space _____Additional equipment _____Additional library resources ____

Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

	GRAM STUDENT LEARNING OUTCOMES FOR GENERAL STUDIES E-PHARMACY OPTION	Supporting course(s)	I, M, E
1	Apply general chemistry principles such as bond formation, pH, and states of matter, energetics, equilibria, and stoichiometry. Understand basic principles of physics such as laws of motion, work & energy, momentum, along with understanding of general biology, and microbiology principles. Use understanding of the organization of the human body for better understanding of Pharmacology.	CHM 105, CHM 106, BIO 106 BIO 107, BIO 111, PHY 105, BIO 231/232	E
2	Demonstrate a foundational understanding of general chemistry principles including atomic structure, quantum theory, nuclear chemistry, reaction types, gas laws, chemical kinetics, equilibria, intermolecular forces, theory of acid base, thermodynamics of reactions. Understand the chemistry of carbon and carbon compounds including aliphatic and aromatic compounds and there derivatives. Learn various techniques used in organic synthesis. Synthesize intermediates, pharmaceuticals, polymers and bio molecules in lab. Demonstrate skill of organic analysis using NMR, GC and IR spectroscopy.	CHM 105, CHM 106, CHM 201, CHM 202	E
3	Demonstrate a proficiency in mathematics to support future STEM courses in fields such as chemistry, biology, physics, and environmental science. Apply this skill for solving the problems related to chemistry, and physics	MAT 122 MAT 124, MAT 233,	М
4	Utilize critical thinking skills and the scientific method to investigate scientific principles and solve complex problems.	CHM 105, CHM 106, CHM 201, CHM 202, BIO 106, BIO 107, BIO 111, BIO 231/232 PHY 105,	E
5	Utilize the broad-based liberal arts curriculum in the fine arts, humanities, mathematics, natural sciences, and social and behavioral sciences to examine the role of chemistry in society.	CHM, PHY and BIO, MAT, SPH, SOC, HTS courses	Ι
6	Demonstrate the multiple perspectives that derive from knowledge and awareness of cultures and cultural practices	Multiple perspective electives	Ι
7	Demonstrate high-level communication skills (verbal, written, graphic, and numerical) across the full span of the liberal arts disciplines.	CHM, PHY and BIO courses	М

8	Utilize interlibrary catalog/loan systems and electronic databases and to distinguish between reliable and non-reliable sources, whether print, cinematic, televisual, or web.	CHM, PHY, BIO, MAT, SPH, SOC, HTS, and PSC courses	Ι
9	Demonstrate a technical proficiency in computer technology along with in using number of scientific instrumentation utilized in the curriculum.	CHM, PHY and BIO, MAT Courses	М

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR:	Supporting	I, M, E
General Studies—Pre-Pharmacy Option (GSPH)	course(s)	
Civic Learning & Engagement: Students will develop civic knowledge, skills	History elective	Е
and dispositions through learning and practice.	Social Science	Е
	Foundational	
	Elective	
Communication Skills: Students will read, write and speak effectively to build	CHM 105, 106,	Е
knowledge and convey meaning.	201,202	
	BIO 106, 107,	Е
	231/232	
	PHY 105	E
	MAT 233	E
	ENG 101, 102	М
	Literature,	
	Philosophy, or	
	Language	
	elective	
Information and Digital Literacy: Students will engage in a reflective process of	CHM 105, 106,	E
information discovery, use information responsibly and employ digital	201,202	
technologies to learn, communicate and collaborate.	ENG 102	М
Intercultural Knowledge and Competence: Students will demonstrate	Multiple	М
intercultural knowledge within a variety of cultural contexts and with culturally	Perspectives	
different ideas and individuals	Elective	
	Literature,	Ι
	Philosophy, or	
	Language	
	elective	Ι
	Social Science	
	Foundational	
	Elective	Ι
	History elective	
Quantitative and Scientific Reasoning: Students will apply concepts and	CHM 105, 106,	E
methods of mathematics and science to acquire knowledge and solve problems.	201, 202	
	BIO 106, 107,	E
	111, 231/232,	E
	PHY 105	E
	MAT 233	E

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and Co	ode (current): General Studie	es - Biotechnology Option (GSBT)
2.	Originator: Archana Mudbidri		Date: 01/12/2023
3.	School Dean: Dr. Ben Benton		Date: 01/12/2023
4.	Effective Date: Fall 2023		
5.	Reviewed by Program and Process	s (if applicable)	Date:
1.	Recommended by the School of Comments: Unanimously appro		Date: 01/19/2023
2.	AA Leadership Team:		Date:
	Recommended: Comments:	Not Recommended:	
3.	VP/Academic Affairs:		Date:
	Recommended: Comments:	Not Recommended:	
4.	Learning Council:		Date:
	Recommended: Comments:	Not Recommended:	
5.	VP/Academic Affairs:		Date:
	Approved: Comments:	Not Approved:	

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: General Studies - Biotechnology Option (GSBT)

Provide a detailed list of the proposed changes to the degree or certificate.
1. Incorporate course name and prerequisite changes for BIO 107.
2. Incorporate prerequisite changes for BIO 231.
3. Incorporate prerequisite changes for BIO 259.
4. Incorporate prerequisite changes for MAT 122.
5. Move BIO 107 from Semester 1 to Semester 2.
6. Move BIO 259 from Semester 2 to Semester 4.
7. Move MAT 122 from Semester 2 to Semester 1.
8. Move MAT 123 from Semester 3 to Semester 2.
9. Move MAT 124 from Semester 4 to Semester 3.
10. Adjust individual semester credit totals and milestones, accordingly (no change to overall total credits required for program).

Attachments:

Current academic map

Proposed academic map with changes in **bold**

Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted.

Course Revisions submitted for: Principles of Biology I (BIO 107) General Microbiology (BIO 231) Cell Biology (BIO 259) Statistics (MAT 122)

Provide a rationale for the proposed changes.

In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to clarify the content, the name has been changed to BIO 107: Introduction to Cells and Molecules.

Moved the MAT 122 Statistics to the first semester to align with college goal of first semester completion of a college-level mathematics.

Moved MAT 123 College Mathematics I: Pre-Calculus and MAT 124 College Mathematics II: Trigonometry to better align the grid.

Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.

No changes.

Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.

Department(s) Affected: No other departments affected by the degree changes.

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?

If yes please provide a rationale.

Will any of the following be required: No additional needs.

Additional staff____Additional space____Additional equipment_____Additional library resources _____

Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

 \mathbf{E} – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PRO	GRAM STUDENT LEARNING OUTCOMES FOR: GSBT	Supporting	I, M, E
		course(s)	
1	Explain the fundamental scientific principles in the field of biotechnology.	BIO 107	Μ
		BTT 101	Ι
		BIO 231	E
		BIO 259	E
		BIO 260	E
		BTT 211	E
		BTT 212	Μ
2	Work effectively and collaboratively in a laboratory setting.	BIO 107	М
		BIO231	E
		BIO259	E
		BIO260	E
		BTT211	E
		BTT212	Ι
		CHM105/106	E
3	Demonstrate the proper use of basic laboratory equipment, adhering to	BIO107	М
	laboratory safety protocols, as well as a technical proficiency in computer	BIO231	E
	technology for data analysis.	BIO259	E
		BIO260	E
		BTT211	E
		BTT212	Ι
		CHM105/106	E
4	Apply mathematical principles to biotechnological concepts.	MAT122, 123,	М
		124	М
		BIO231	E
		BIO262	Е
		BIO259	Е
		BTT211	Е
		BTT212	Ι
		CHM105	Е
5	Demonstrate clear and effective communication skills, including verbal,	ENG101/102	М
	written, graphic, and numerical, with emphasis on documentation.	BIO107	М
		CHM105/106	М
		BIO 231	М
		BIO 259	M
		BIO 260	Μ
		BTT211/212	E
		SPH101	Ē

6	Utilize scientific methodology and critical thinking to analyze and/or	BTT101	Ι
	troubleshoot biotechnological issues.	BIO231	E
		BIO259	E
		BIO260	Е
		BTT211	Е
		BTT212	Е
7	Demonstrate knowledge and appreciation of the relative historical and	History elective	Е
	cultural perspectives of society.	BTT 101	Μ
8	Identify careers in biotechnology and utilize skills to seek employment	BTT101	Е
	including job search databases and resume writing.	BTT212	Е

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR: GSBT	Supporting	I, M, E
	course(s)	
Civic Learning & Engagement: Students will develop civic knowledge, skills	BTT 101	Ι
and dispositions through learning and practice.	History Elective	E
Communication Skills: Students will read, write and speak effectively to build	BIO 107	Е
knowledge and convey meaning.	BIO 231	E
	BIO 259	E
	BIO 260	Е
	ENG 101/102 E	E
Information and Digital Literacy: Students will engage in a reflective process of	BIO 107	Е
information discovery, use information responsibly and employ digital	BIO 231	E
technologies to learn, communicate and collaborate.	BIO 259	E
	BIO 260	E
	BTT 101	Μ
	ENG102	Μ
Intercultural Knowledge and Competence: Students will demonstrate	History Elective	Ι
intercultural knowledge within a variety of cultural contexts and with culturally		
different ideas and individuals		
Quantitative and Scientific Reasoning: Students will apply concepts and	BIO 107	М
methods of mathematics and science to acquire knowledge and solve problems.	BIO231	E
	BIO259	E
	BIO260	E
	BTT211	E
	BTT212	Ι
	CHM105/106	E

DEGREE OR CERTIFICATE REVISION PROPOSAL

1.	Degree or Certificate Name and Code (current): Biotechnology Technician Certificate (BI)
	(from current AY 22/23 catalog)

2.	Originator: Archana Mudbidri		Date: 01/12/2023
3.	School Dean: Dr. Ben Benton		Date: 01/12/2023
4.	Effective Date: Fall 2023		
5.	Reviewed by Program and Process (i	if applicable)	Date:
1.	Recommended by the School of _ Comments: Unanimously approve		Date: 01/19/2023
2.	AA Leadership Team:		Date:
	Recommended: No Comments:	ot Recommended:	
3.	VP/Academic Affairs:		
	Recommended: No Comments:	ot Recommended:	
4.	Learning Council:		Date:
	Recommended: No Comments:	ot Recommended:	
5.	VP/Academic Affairs:		Date:
	Approved: No Comments:	ot Approved:	

DEGREE OR CERTIFICATE REVISION PROPOSAL

Degree or Certificate name and code: Biotechnology Technician Certificate (BI) Provide a detailed list of the proposed changes to the degree or certificate. 1. Incorporate course name and prerequisite changes for BIO 107. 2. Incorporate prerequisite changes for BIO 231. 3. Incorporate prerequisite changes for BIO 259. 4. Remove CHM 105 from Semester 1. 5. Adjust individual semester credit totals and milestones, accordingly. 6. Adjust overall total credits required for program from 29 to 25. Attachments: Current academic map Proposed academic map with changes in **bold** Submit separate proposals for any new courses or revised courses in the degree or certificate. Please list here the new courses or revised courses for which separate proposals will be submitted. Course Revisions submitted for: Principles of Biology I (BIO 107) General Microbiology (BIO 231) Cell Biology (BIO 259) Provide a rationale for the proposed changes. In order to increase student success in Liberal Arts-Biology and other programs that require BIO 107, the prerequisite has been changed to require one semester of chemistry (CHM 105 or CHM 123). In order to clarify the content, the name has been changed to BIO 107: Introduction to Cells and Molecules.

In order to complete this certificate in 3 semesters, the admission requirements for this certificate were changed to include the new prerequisites for BIO 107 in semester 1.

Do any of the proposed changes affect the program goals and/or the program student learning outcomes? Please indicate any revisions to the program goals and/or program student learning outcomes.

No changes.

Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.

Department(s) Affected: No other departments affected by the certificate changes.

Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.

For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer?

If yes please provide a rationale.

Will any of the following be required: No additional needs.

Additional staff _____ Additional space _____ Additional equipment _____ Additional library resources _____

Provide a rationale for any needs indicated and include approximate cost of equipment.

Please complete the following tables for your program or indicate the date of the **Academic Matters** (within the last three years) where they have previously been published.

List the PROGRAM STUDENT LEARNING OUTCOMES in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PRC	GRAM STUDENT LEARNING OUTCOMES FOR: BI	Supporting	I, M, E
		course(s)	
1	Explain the fundamental scientific principles in the field of biotechnology.	BIO 107	Μ
		BTT 101	Ι
		BIO 231	E
		BIO 259	E
		BIO 260	E
		BTT 211	E
		BTT 212	Μ
2	Work effectively and collaboratively in a laboratory setting.	BIO 107	М
		BIO231	E
		BIO259	E
		BIO260	E
		BTT211	Е
		BTT212	Ι
3	Demonstrate the proper use of basic laboratory equipment, adhering to	BIO107	М
	laboratory safety protocols, as well as a technical proficiency in computer	BIO231	E
	technology for data analysis.	BIO259	Е
		BIO260	Е
		BTT211	Е
		BTT212	Ι
4	Apply mathematical principles to biotechnological concepts.	BIO231	М
		BIO262	Е
		BIO259	E
		BTT211	Е
		BTT212	E
5	Demonstrate clear and effective communication skills, including verbal,	BIO107	М
	written, graphic, and numerical, with emphasis on documentation.	BIO 231	Μ
		BIO 259	Μ
		BIO 260	Μ
		BTT211/212	E
6	Utilize scientific methodology and critical thinking to analyze and/or	BTT101	Ι
	troubleshoot biotechnological issues.	BIO231	Е
		BIO259	Е
		BIO260	Е
		BTT211	Е
		BTT212	Е

7	Demonstrate knowledge and appreciation of the relative historical and	BTT 101	Е
	cultural perspectives of society.		Μ
8	Identify careers in biotechnology and utilize skills to seek employment	BTT101	E
	including job search databases and resume writing.	BTT212	E

For a DEGREE PROGRAM, indicate the courses that fulfill the General Education Student Learning Outcomes.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR:	Supporting	I, M, E
	course(s)	
Civic Learning & Engagement: Students will develop civic knowledge, skills		
and dispositions through learning and practice.		
Communication Skills: Students will read, write and speak effectively to build		
knowledge and convey meaning.		
Information and Digital Literacy: Students will engage in a reflective process of		
information discovery, use information responsibly and employ digital		
technologies to learn, communicate and collaborate.		
Intercultural Knowledge and Competence: Students will demonstrate		
intercultural knowledge within a variety of cultural contexts and with culturally		
different ideas and individuals.		
Quantitative and Scientific Reasoning: Students will apply concepts and		
methods of mathematics and science to acquire knowledge and solve problems.		

<u>Mathematics & Sciences</u> Liberal Arts - Biology Option - Associate in Arts (Program Code: LABI)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste		i lorequisites	Apply and get accepted to this
		Comeste			program (Program Code: LABI).
Principles of Biology I	BIO 107	F/S/SU	<mark>4</mark>	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	Register for and successfully complete all courses to graduate in
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	four semesters. Attend Transfer Services events.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	For information see <u>www.QCC.edu/transfer</u> .
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	Complete BIO 107, ENG 101, and MAT 122. Complete prerequisite(s) for MAT
		Total	14		123.
		Semeste	er 2		Meet with Academic Advisor to
Principles of Biology II	BIO 108	<mark>F/S</mark>	<mark>4</mark>	BIO 107	review choices (CHM 201 or PHY 101 or PHY 105) that depend on
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	transfer plans and mathematics prerequisite(s) completed.
Composition II	ENG 102	F/S/SU	3	ENG 101	Meet with a Transfer Services
College Mathematics I: Pre- Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score	Advisor. See <u>www.QCC.edu/transfer</u> . Attend
Social Science Foundational Elective		F/S/SU	3		Transfer Services events.
		Total	17		Complete BIO 108.
		Semeste	er 3		Meet with representatives of four-
Principles of Genetics	BIO 262	F/S	<mark>4</mark>	BIO 108, MAT 122	year schools to discuss/begin the
Organic Chemistry I OR	CHM 201	F/S/SU		CHM 106 or CHM 124	transfer application process.
Physics I OR	PHY 101	F/SU	4	MAT 148 or Coreq: MAT 124	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	-	MAT 233	Confirm that MassTransfer general education transfer block can be
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score	completed.
Literature, Philosophy, or Language Elective		F/S/SU	3		
U.S. or World History Survey Elective		F/S/SU	3		
		Total Semeste	17		
	Continue with/complete the transfer				
General Microbiology OR	BIO 231	F/S	<mark>4</mark>	BIO 107 and CHM 105 or CHM 123	application process.
Cell Biology	BIO 259		•		Submit on Intent to Creducto Form
Organic Chemistry II OR Physics II OR	CHM 202 PHY 102	F/S/SU S/SU		CHM 201 PHY 101	Submit an Intent to Graduate Form, located on <i>The</i> Q.
General Physics II: Electricity	PHY 102 PHY 107	F/S/SU	4	MAT 234, PHY 105	
& Magnetism		F/S/SII	3		
Creative Arts Elective		F/S/SU F/S/SU	3		-
		F/S/SU F/S/SU Total	3 3 14		

<u>Mathematics & Sciences</u> Liberal Arts - Biology Option - Associate in Arts (Program Code: LABI)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	•	Semeste	er 1	-	Apply and get accepted to this
					program (Program Code: LABI).
Biology I: Introduction to Organismal Diversity	BIO 106	F/S	<mark>4</mark>	Coreq: ENG 101	Register for and successfully complete all courses to graduate in
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	four semesters. Attend Transfer Services events.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	For information see <u>www.QCC.edu/transfer</u> . Complete CHM 105, ENG 101, and
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	MAT 122. Complete prerequisite(s) for MAT
		Total	14		123.
		Semeste	er 2		Meet with Academic Advisor to
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123, ENG 101	review choices (CHM 201 or PHY 101 or PHY 105) that depend on
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	transfer plans and mathematics prerequisite(s) completed.
Composition II	ENG 102	F/S/SU	3	ENG 101	Meet with a Transfer Services
College Mathematics I: Pre- Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score	Advisor. See www.QCC.edu/transfer. Attend
Social Science Foundational Elective		F/S/SU	3		Transfer Services events.
		Total	17		Complete BIO 107.
		Semeste	er 3		Meet with representatives of four-
Principles of Genetics	BIO 262	F/S	<mark>4</mark>	BIO 106, BIO 107, MAT 122	year schools to discuss/begin the
Organic Chemistry I OR	CHM 201	F/S/SU		CHM 106 or CHM 124	transfer application process.
Physics I OR	PHY 101	F/SU	4	MAT 148 or Coreq: MAT 124	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU		MAT 233	Confirm that MassTransfer general education transfer block can be
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score	completed.
Literature, Philosophy, or Language Elective		F/S/SU	3		
U.S. or World History Survey Elective		F/S/SU	3		
		Total Semeste	17		
	Continue with/complete the transfer				
General Microbiology OR Cell Biology	BIO 231 BIO 259	F/S	<mark>4</mark>	BIO 107	application process.
Organic Chemistry II OR	CHM 202	F/S/SU		CHM 201	Submit an Intent to Graduate Form.
Physics II OR	PHY 102	S/SU		PHY 101	located on <i>The Q</i> .
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
Creative Arts Elective		F/S/SU	3		
Multiple Perspectives Elective		F/S/SU	3		-
• •		Total	14		
Total Credits R	equired		62		

<u>Mathematics & Sciences</u> Liberal Arts - Chemistry Option - Associate in Arts (Program Code: LACH)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones			
		Semeste			Apply and get accepted to this			
Principles of Biology I	BIO 107	F/S/SU	<mark>4</mark>	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	program (Program Code: LACH). Register for and successfully			
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	complete all courses to graduate in five semesters.			
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Attend Transfer Services events. For information see			
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	www.QCC.edu/transfer.			
		Total	15		Complete ENG 101 and MAT 233.			
		Semeste	er 2		Meet with a Transfer Services			
Principles of Biology II	BIO 108	F/S	<mark>4</mark>	BIO 107	Advisor. See www.QCC.edu/transfer. Attend			
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	Transfer Services events.			
Composition II	ENG 102	F/S/SU	3	ENG 101	Confirm that MassTransfer general education transfer block can be			
Calculus II	MAT 234	F/S/SU	4	MAT 233	completed.			
		Total	15		Complete CHM 106 and MAT 234.			
		mester 3 (S						
Creative Arts Elective		F/S/SU	3					
Multiple Perspectives Elective		F/S/SU	3					
		Total	6					
Orașe la Obașe lateral	01114.004	Semeste			Meet with representatives of four-			
Organic Chemistry I	CHM 201	F/S/SU	4	CHM 106 or CHM 124	year schools to discuss/begin the			
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	transfer application process.			
Literature, Philosophy, or Language Elective		F/S/SU	3		Complete CHM 201 and PHY 105.			
		Total	11		Continue with/complete the transfer			
	Semester 5							
Organic Chemistry II	CHM 202	F/S/SU	4	CHM 201	application process.			
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	Submit an Intent to Graduate Form,			
Social Science Foundational Elective		F/S/SU	3		located on <i>The</i> Q.			
U.S. or World History Survey Elective		F/S/SU	3					
		Total	14					
Total Credits R	equired		61					

<u>Mathematics & Sciences</u> Liberal Arts - Chemistry Option - Associate in Arts (Program Code: LACH)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones	
		Semeste	er 1		Apply and get accepted to this	
Biology I: Introduction to Organismal Diversity	BIO 106	F/S	<mark>4</mark>	Coreq: ENG 101	program (Program Code: LACH).	
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	Register for and successfully complete all courses to graduate in five semesters.	
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Attend Transfer Services events.	
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	For information see <u>www.QCC.edu/transfer</u> .	
		Total	15		Complete ENG 101 and MAT 233.	
	•	Semeste	er 2	·	Meet with a Transfer Services	
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123, ENG 101	Advisor. See www.QCC.edu/transfer. Attend	
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	Transfer Services events.	
Composition II	ENG 102	F/S/SU	3	ENG 101	Confirm that MassTransfer general education transfer block can be	
Calculus II	MAT 234	F/S/SU	4	MAT 233	completed.	
		Total	15		Complete CHM 106 and MAT 234.	
	Sei	mester 3 (S				
Creative Arts Elective		F/S/SU	3			
Multiple Perspectives Elective		F/S/SU	3			
		Total	6			
	0.000	Semeste			Meet with representatives of four-	
Organic Chemistry I	CHM 201	F/S/SU	4	CHM 106 or CHM 124	year schools to discuss/begin the	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	transfer application process.	
Literature, Philosophy, or Language Elective		F/S/SU	3		Complete CHM 201 and PHY 105.	
		Total	11			
		Semeste			Continue with/complete the transfer	
Organic Chemistry II	CHM 202	F/S/SU	4	CHM 201	application process.	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	Submit an Intent to Graduate Form,	
Social Science Foundational Elective		F/S/SU	3		located on The Q.	
U.S. or World History Survey Elective		F/S/SU	3			
		Total	14			
Total Credits R	equired		61			

<u>Mathematics & Sciences</u> Liberal Arts - Environmental Science Option - Associate in Arts (Program Code: LAES) CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	oouroo #	Semeste		i loi oquionoo	Apply and get accepted to this
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	program (Program Code: LAES). Register for and successfully
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	complete all courses to graduate in five semesters. Meet with Academic Advisor to
Composition I	ENG 101	F/S/SU	3	Placement into college level English	choose courses consistent with academic plan.
College Mathematics I: Pre- Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score	Attend Transfer Services events. For information see <u>www.QCC.edu/transfer</u> .
		Total	14		Complete ENG 101 and MAT 123.
		Semeste	er 2		Meet with a Transfer Services
Principles of Biology II	BIO 108	F/S	<mark>4</mark>	BIO 107	Advisor. See
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	www.QCC.edu/transfer. Attend
Composition II	ENG 102	F/S/SU	3	ENG 101	Transfer Services events.
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score	
~~~ ·		Total	14		
	Sei	mester 3 (S	Summer)		
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
		Total	6		
		Semeste	er 4	1	Meet with representatives of four-
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	year schools to discuss/begin the transfer application process.
Physics I	PHY 101	F/SU	4	MAT 148 or Coreq: MAT 124	
Climate and Weather: Causes and Effects	SCI 104	F/S/SU	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Complete MassTransfer block audit to determine eligibility for transfer to public colleges.
Integrated Science: Earth and Space	SCI 105	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Complete Liberal Arts - Environmental Science Option
		Total	15		degree audit.
		Semeste	er 5		Continue with/complete the transfer
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	application process.
Introduction to Ethics	PHI 131	F/S/SU	3	Placement into college level English	Complete MAT 122.
Sustaining Earth's Environment	SCI 110	F/S	4	Placement into college level English, MAT 095 with a grade of "C" or higher	Submit an Intent to Graduate Form, located on <i>The</i> Q.
Economics Elective (200-level)		F/S/SU	3	or approp place	
		Total	13		

### <u>Mathematics & Sciences</u> Liberal Arts - Environmental Science Option - Associate in Arts (Program Code: LAES) PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste			Apply and get accepted to this
Biology I: Introduction to Organismal Diversity	BIO 106	F/S	<mark>4</mark>	Coreq: ENG 101	program (Program Code: LAES). Register for and successfully
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	complete all courses to graduate in five semesters. Meet with Academic Advisor to choose courses consistent with
Composition I	ENG 101	F/S/SU	3	Placement into college level English	academic plan.
College Mathematics I: Pre- Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score	Attend Transfer Services events. For information see <u>www.QCC.edu/transfer</u> .
		Total	14		Complete ENG 101 and MAT 123.
	I.	Semeste	er 2	1	Meet with a Transfer Services
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123, ENG 101	Advisor. See <u>www.QCC.edu/transfer</u> . Attend
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	Transfer Services events.
Composition II College Mathematics II: Trigonometry	ENG 102 MAT 124	F/S/SU F/S/SU	3	ENG 101 MAT 123 or approp place score	-
Ingonomeny		Total	14		-
	Sei	mester 3 (S			
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
		Total	6		
		Semeste	1	1	Meet with representatives of four- year schools to discuss/begin the
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	transfer application process.
Physics I	PHY 101	F/SU	4	MAT 148 or Coreq: MAT 124	
Climate and Weather: Causes and Effects	SCI 104	F/S/SU	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Complete MassTransfer block audit to determine eligibility for transfer to public colleges.
Integrated Science: Earth and Space	SCI 105	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Complete Liberal Arts - Environmental Science Option
		Total	15		degree audit.
	1	Semeste	er 5		Continue with/complete the transfer
Statistics	MAT 122	F/S/SU	3	College level math course or QMAT place score > 21 or Coreq: MAT 052	application process.
Introduction to Ethics	PHI 131	F/S/SU	3	Placement into college level English	Complete MAT 122.
Sustaining Earth's Environment	SCI 110	F/S	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Economics Elective (200-level)		F/S/SU	3		-
· · · · · · · · · · · · · · · · · · ·		Total	13		
Total Credits R	equired		62		

# Mathematics & Sciences (cross-listed under Healthcare)General Studies - Pre-Pharmacy Option - Associate in Arts (Program Code: GSPH)CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester 1	(Fall)	•	Apply and get accepted to this
			_	MAT 099 with a grade of "C" or higher	program (Program Code: GSPH).
Principles of Biology I	BIO 107	F/S/SU	<mark>4</mark>	or approp place score, Coreq: ENG	
				101 (112	Register for and successfully
Canadal Chamistry I	01114.405			CHM 090 or one year of HS Chemistry, MAT 099 with a grade of	complete all courses to graduate in five semesters.
General Chemistry I	CHM 105	F/S/SU	4	"Cnemistry, MAT 099 with a grade of "C" or higher or approp place score	live semesters.
			1		Attend Transfer Services events.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	For information see
			_	MAT 095 with a grade of "C" or higher	www.QCC.edu/transfer.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	or approp place	
		Total	14		Complete ENG 101 and MAT 122.
	S	emester 2 (	Spring)	•	Meet with a Transfer Services
Principles of Biology II	BIO 108	F/S	<mark>4</mark>	BIO 107	Advisor. See
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	www.QCC.edu/transfer. Attend
Composition II	ENG 102	F/S/SU	3	ENG 101	Transfer Services events.
College Mathematics II:	MAT 124	F/S/SU	3	MAT 123 or approp place score	
Trigonometry			-		
Introduction to Psychology	PSY 101	F/S/SU Total	3 17	Placement into college level English	-
	<u> </u>	mester 3 (S			
	36	illester 5 (c	Summer)	BIO 101 or BIO 107 or HS AP Biology	Meet with Academic Advisor to choose Electives required for
Anatomy & Physiology I	BIO 111	F/S/SU	4	or PNP 240 with a grade of "C" or	program.
Anatomy & Thysiology T	BIO ITT	1/0/00	4	higher, Coreq: ENG 101	program.
Introductory Sociology		= 10 (01)			Complete BIO 111 with lab.
(Principles)	SOC 101	F/S/SU	3	Placement into college level English	
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
Economics Elective		F/S/SU	3		
		Total	13		
	;	Semester 4	(Fall)		Meet with representatives of
General Microbiology OR	BIO 231	F/S		BIO 107 and CHM 105 or CHM 123	pharmacy schools to discuss/begin the transfer application process.
Medical Microbiology	BIO 232	F/S/SU	- <mark>4</mark>	BIO 112 or CHM 105 or CHM 123	the transfer application process.
	01114.004	F/S/SU			Confirm that MassTransfer general education transfer block can be completed.
Organic Chemistry I	CHM 201	F/5/50	4	CHM 106 or CHM 124	
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	
History Elective		F/S/SU	3		Submit transfer application to
		Total	15		pharmacy school during October/November.
	Se	emester 5 (			Prepare for interview with pharmacy
Organic Chemistry II	CHM 202	F/S/SU	4	CHM 201	colleges for admission.
General Physics I: Newtonian					
Mechanics	PHY 105	F/S/SU	4	MAT 233	Submit an Intent to Graduate Form,
Political Science Elective		F/S/SU	3		located on The Q.
Psychology Elective (200-	1				
level) or Sociology Elective		F/S/SU	3		
(200-level)	ļ				
		Total	14		
Total Credits R	equired		73		

#### Mathematics & Sciences (cross-listed under Healthcare) General Studies - Pre-Pharmacy Option - Associate in Arts (Program Code: GSPH)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	ļ	Semester 1	(Fall)		Apply and get accepted to this
Biology I: Introduction to Organismal Diversity	BIO 106	F/S	<mark>4</mark>	Coreq: ENG 101	program (Program Code: GSPH). Register for and successfully
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	complete all courses to graduate in five semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Attend Transfer Services events. For information see
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	www.QCC.edu/transfer.
		Total	14		Complete ENG 101 and MAT 122.
	Se	emester 2 (	Spring)		Meet with a Transfer Services
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123, ENG 101	Advisor. See www.QCC.edu/transfer. Attend
General Chemistry II	CHM 106	F/S/SU	4	CHM 105	Transfer Services events.
Composition II	ENG 102	F/S/SU	3	ENG 101	-
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score	
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	17		
	Se	mester 3 (S	summer)		Meet with Academic Advisor to
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	choose Electives required for program.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete BIO 111 with lab.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	]
Economics Elective		F/S/SU	3		
		Total	13		
		Semester 4	(Fall)		Meet with representatives of
General Microbiology OR	BIO 231	F/S	-	BIO 107	pharmacy schools to discuss/begin
Medical Microbiology	BIO 232	F/S/SU	- <mark>4</mark>	BIO 112 or CHM 105 or CHM 123	the transfer application process. Confirm that MassTransfer general education transfer block can be completed. Submit transfer application to pharmacy school during
Organic Chemistry I	CHM 201	F/S/SU	4	CHM 106 or CHM 124	
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	
History Elective		F/S/SU	3		
		Total	15		October/November.
		emester 5 (			Prepare for interview with pharmacy
Organic Chemistry II	CHM 202	F/S/SU	4	CHM 201	colleges for admission.
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	Submit an Intent to Graduate Form,
Political Science Elective		F/S/SU	3		located on The Q.
Psychology Elective (200- level) or Sociology Elective (200-level)		F/S/SU	3		
		Total	14		
Total Credits R	equired		73		

#### <u>Mathematics & Sciences</u> General Studies - Biotechnology Option - Associate in Arts (Program Code: GSBT)

CURRENT

Semester 1         Apply and get accepted to this or approp place score, Coreq, ENG 101         Apply and get accepted to this program (Program Code: GSBT).           Principles of Biology 1         BIO 107         F/S/SU         4         MAT 099 with a grade of "C" or higher or approp place score. Coreq, ENG 101         Placement into college level English, MAT 099 with a grade of "C" or higher or approp place score         Register for and successfully complete all courses to graduate in five semesters.           General Chemistry 1         CHM 105         F/S/SU         3         CHM 090 or one year of HS C" or higher or approp place score         Complete BIO 107 and ENG 101.           Composition 1         ENG 101         F/S/SU         3         Placement into college level English Total         Total         14           Semester 2         3         Placement into college level English Total         14         Complete BIO 107 and CHM 105 or CHM 123         Complete BIO 107 and ENG 101.           Statistics         MAT 122         F/S/SU         3         ENG 101         Transfer Services Advisor. See www.QCC.edu/transfer.           Speech Communication Skills         SPH 101         F/S/SU         3         Placement into college level English infagonmetry         Confirm that MassTransfer general education transfer block can be completed.           Speech Communication Skills         SPH 101         F/S/SU         3         Placement into college level English infa	Course Title	Course #	Offered	Credits	Prerequisites	Milestones		
Principles of Biology I         BiO 107         F/S/SU         4         MAT 099 with a grade of 'C' or higher or approp place score, Coreq: ENG 101         program (Program Code: GSBT). Register for and successfully complete all courses to graduate in five semesters.           Introduction to Biotechnology         BTT 101         F/S/SU         3         MAT 099 with a grade of 'C' or higher or approp place score         Register for and successfully complete all courses to graduate in five semesters.           General Chemistry I         CHM 105         F/S/SU         4         CHM 090 or one year of HS Chemistry. MAT 099 with a grade of 'C' or higher or approp place score         Complete BIO 107 and ENG 101.           Composition I         ENG 101         F/S/SU         4         BIO 107 and CHM 105 or CHM 123           General Chemistry II         CHM 106         F/S/SU         4         BIO 107 and CHM 105 or CHM 123           General Chemistry II         CHM 106         F/S/SU         3         ENG 101           Statistics         MAT 122         F/S/SU         3         ENG 101         Transfer Services Advisor. See www.QCC.edu/transfer.           Statistics         MAT 122         F/S/SU         3         BIO 107 and CHM 105 or CHM 123         If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for intemships, co-ops and jobs.			Semeste		•	Apply and get accepted to this		
Principles of Biology I         BIO 107         F/S/SU         4         or approp place score, Coreq: ENG 01         Register for and successfully complete all courses to graduate in five semesters.           Introduction to Biotechnology         BTT 101         F/S/SU         3         Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score         Complete all courses to graduate in five semesters.           General Chemistry, MAT         CHM 105         F/S/SU         4         Chemistry, MAT 099 with a grade of "C" or higher or approp place score         Complete prerequisite(s) for MAT           Composition I         ENG 101         F/S/SU         3         Placement into college level English         Complete prerequisite(s) for MAT           Total         14         F         F/S/SU         3         ENG 101         F/S/SU         4         CHM 105           Composition I         ENG 102         F/S/SU         3         ENG 101         Transfer Services Advisor. See www.QCC.edu/transfer.         Transfer Services Advisor. See www.QCC.edu/transfer.           General Microbiology         BIO 231         F/S         4         BIO 107 and CHM 105 or CHM 123         If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.           College Mathematics I: Pre- Calculus		1			MAT 099 with a grade of "C" or higher			
Introduction to Biotechnology         BTT 101         F/S/SU         101         Register for and successfully or approp place score         Register for and successfully or approp place score           General Chemistry I         CHM 105         F/S/SU         4         CHM 090 or one year of HS Chemistry, MAT 099 with a grade of 'C or higher or approp place score         Complete BIO 107 and ENG 101.           Composition I         ENG 101         F/S/SU         3         Placement into college level English.         Complete BIO 107 and ENG 101.           Composition I         ENG 101         F/S/SU         3         Placement into college level English.         Complete BIO 107 and ENG 101.           Composition I         ENG 101         F/S/SU         3         Placement into college level English.         If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.           General Chemistry II         CHM 106         F/S/SU         3         ENG 101         Transfer General Microbiology         BIO 231         F/S         4         BIO 107 and CHM 105 or CHM 123         If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer calculus           Speech Communication Skills         SPH 101         F/S/SU         3         MAT 100 or approp place score calculus         Confirm that MassTransfer general education process; or relate an account on tha QCC job board to search for internsfip, co-ops and jobs.<	Principles of Biology I	<b>BIO 107</b>	F/S/SU	4		1 · 3 · · ( · 3 · · · · · · · · · ,		
Introduction to Biotechnology     BTT 101     F/S/SU     3     MAT 095 with a grade of *C* or higher or approp place score     five semesters.       General Chemistry I     CHM 105     F/S/SU     4     CHM 000 or one year of HS C*C or higher or approp place score     Complete BIO 107 and ENG 101.       Composition I     ENG 101     F/S/SU     3     Placement into college level English     Complete BIO 107 and ENG 101.       Composition I     ENG 102     F/S/SU     3     ENG 101     Total     If 4       Composition I     ENG 102     F/S/SU     3     ENG 101     Transfer Services dv/sor. See www.QCC edu/transfer.       General Chemistry II     CHM 106     F/S/SU     3     ENG 101     Transfer Services dv/sor. See www.QCC edu/transfer.       Statistics     MAT 122     F/S/SU     3     ENG 101     Transfer Services dv/sor. See www.QCC edu/transfer.       Statistics     MAT 122     F/S/SU     3     MAT 105 or CHM 123     Transfer services dv/sor. See www.QCC count on the QCC job board to search for internsfips, co-ops and jobs.       College Mathematics I: Pre- calculus     MAT 123     F/S/SU     3     Placement into college level English       College Mathematics II: Pre- calculus     Total     13     Confirm that MassTransfer general education transfer block can be completed.       College Mathematics II: Tiggonometry     MAT 124				_				
Indecedence Enclored and set of approp place score       Indecedence of HS       Complete Biol 007 and ENG 101.         General Chemistry I       CHM 105       F/S/SU       4       CHM 090 or one year of HS       Complete prerequisite(s) for MAT         Composition I       ENG 101       F/S/SU       3       Placement into college level English       Complete prerequisite(s) for MAT         Cell Biology       BIO 259       F/S       4       BIO 107 and CHM 105 or CHM 123       Transfer Services Advisor. See www.QCC.edu/transfer.         Composition II       ENG 102       F/S/SU       3       BIO 107 and CHM 105 or CHM 123       Transfer Services Advisor. See www.QCC.edu/transfer.         Composition II       ENG 101       F/S/SU       3       MAT 095 with a grade of *C* or higher or approp place       If considering transfer, meet with a transfer services advisor. See www.QCC.edu/transfer.         Statistics       MAT 122       F/S/SU       3       MAT 100 or approp place       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer approp place         College Mathematics I: Precale Microbiology       BIO 2201       F/S       3       Placement into college level English       Confirm that MassTransfer general education transfer discuss internship, co-ops and education transfer block can be completed.         College Mathematics II: Precale Microbiology       BIO 260       S <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
General Chemistry I     CHM 105     F/S/SU     4     CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score Total     Complete BIO 107 and ENG 101.       Composition I     ENG 101     F/S/SU     3     Placement into college level English     Complete prerequisite(s) for MAT 123.       Cell Biology     BIO 259     F/S     4     BIO 107 and CHM 105 or CHM 123 Composition II     If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.       Composition II     ENG 102     F/S/SU     3     ENG 101     Transfer Services Advisor. See www.QCC.edu/transfer.       Statistics     MAT 122     F/S/SU     3     ENG 101     Transfer Services Advisor. See www.QCC.edu/transfer.       College Mathematics I: Pre- calculus     MAT 123     F/S/SU     3     BIO 107 and CHM 105 or CHM 123     If considering transfer, meet with a cocurt on the QCC job board to search for internships, co-ops and picotion process; or create an account on the QCC job board to search for internships, co-ops and picotion transfer block can be completed.       Speech Communication Skills     SPH 101     F/S/SU     3     Placement into college level English       History Elective      F/S/SU     3     Placement into college level English       Mot 123     F/S/SU     3     Placement into college level English       Mot 124     F/S/SU     3     Placement into college level English	Introduction to Biotechnology	BTT 101	F/S/SU	3		five semesters.		
General Chemistry I       CHM 105       F/S/SU       4       Chemistry, MAT 099 with a grade of 'C' or higher or approp place score Placement into college level English       Complete prerequisite(s) for MAT 123.         Composition I       ENG 101       F/S/SU       3       Placement into college level English       Transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Cell Biology       BIO 259       F/S       4       BIO 107 and CHM 105 or CHM 123       Transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Composition II       ENG 102       F/S/SU       3       ENG 101       Transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Statistics       MAT 122       F/S/SU       3       MAT 095 with a grade of "C" or higher or approp place       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer account on the QCC job board to account on the QCC job board to account on the QCC job board to account on the QCC job board to discuss internships, co-ops and jobs.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         College Mathematics II: Ingonometry       MAT 124       F/S/SU       3       MAT 123 or approp place score services for career readiness preparation and to learn more about QCC's job board.         College Mathematic					or approp place score			
Composition I       ENG 101       F/S/SU 3       Placement into college level English       Complete prerequisite(s) for MAT         Composition I       ENG 101       F/S/SU 3       Placement into college level English       123.         Composition I       ENG 101       F/S/SU 4       BIO 107 and CHM 105 or CHM 123       If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Composition II       ENG 102       F/S/SU 3       ENG 101         Statistics       MAT 122       F/S/SU 3       F/S/SU 3       ENG 101         Semester 3         General Microbiology       BIO 231       F/S       4       BIO 107 and CHM 105 or CHM 123       of discuss/begin fue transfer         Semester 3         General Microbiology       BIO 231       F/S       4       BIO 107 and CHM 105 or CHM 123       representatives of four-year schools         Semester 3         If considering transfer, meet with representatives of four-year schools         General Microbiology       BIO 231       F/S       4       BIO 107 and CHM 105 or CHM 123       representatives of four-year schools       representatives of four-year schools       representatives of four-year schools         Semester 3       MAT 1						Complete BIO 107 and ENG 101.		
Composition I       ENG 101       F/S/SU       3       Placement into college fevel English       123.         Cell Biology       BIO 259       F/S       4       BIO 107 and CHM 105 or CHM 123       If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Composition II       ENG 102       F/S/SU       4       CHM 105       Total	General Chemistry I	CHM 105	F/S/SU	4				
Total       14         Semester 2         Cell Biology       BIO 259       F/S       4       BIO 107 and CHM 105 or CHM 123       If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Centre of Composition II       ENG 102       F/S VIU       4       CHM 105       Transfer Services Advisor. See www.QCC.edu/transfer.         Statistics       MAT 122       F/S VIU       8       MAT 095 with a grade of "C" or higher or approp place       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer account on the QCC job board to search for internships, co-ops and jobs.         College Mathematics I: Precaluus       MAT 123       F/S VIU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Continue with/complete the transfer application process; or f seeking empleted.         College Mathematics II:       MAT 124       F/S/SU       3       MAT 123 or approp place score       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260			= (0, (0) +		"C" or higher or approp place score			
Semester 2         If considering transfer, meet with a Transfer Services Advisor. See General Chemistry II         Cell Biology       BIO 259       F/S       4       BIO 107 and CHM 105 or CHM 123       If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.         Statistics       MAT 122       F/S/SU       3       ENG 101       Transfer Services Advisor. See www.QCC.edu/transfer.         Statistics       MAT 122       F/S/SU       8       MAT 095 with a grade of "C" or higher or approp place       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.         College Mathematics I: Pre- calculus       MAT 123       F/S/SU       3       Placement into college level English History Elective       Confirm that MassTransfer general education transfer block can be completed.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English History Elective       Confirm that MassTransfer general education transfer block can be completed.         College Mathematics II: Trigonometry       MAT 124       F/S/SU       3       MAT 123 or approp place score services for career readiness preparation and to learn more about QCC's job board.         College Mathematics II: Trigonometry       MAT 124       F/S/SU       3       MAT 123 or app	Composition I	ENG 101		-	Placement into college level English	123.		
Cell Biology       BIO 259       F/S       4       BIO 107 and CHM 105 or CHM 123       Transfer Services Advisor. See www.QCC.edu/transfer.         General Chemistry II       CHM 106       F/S/SU       3       ENG 101         Statistics       MAT 122       F/S/SU       3       ENG 101         Statistics       MAT 122       F/S/SU       3       MAT 095 with a grade of "C" or higher or approp place         Total       14       Total       14       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QC job board to ascent for internships, co-ops and jobs.         College Mathematics I: Pre-Calculus       MAT 123       F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Continue with/complete the transfer application process; or if seeking employment, meet with Career Scrueer readiness         General Microbiology       BIO 260       S       4       BIO 107       Confirm that MassTransfer general education transfer block can be completed.								
General Chemistry II       CHM 106       F/S/SU       4       CHM 105       www.QCC.edu/transfer.         Composition II       ENG 102       F/S/SU       3       ENG 101       ENG 101       www.QCC.edu/transfer.         Statistics       MAT 122       F/S/SU       3       ENG 101       ENG 101       www.QCC.edu/transfer.         Statistics       MAT 122       F/S/SU       3       ENG 101       ENG 101       endettion of the properties of the transfer or approp place       if considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to seen for internships, co-ops and jobs.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Continue with/complete the transfer application process; or if seeking environmentation process; or if seeking								
Composition II       ENG 102       F/S/SU       3       ENG 101         Statistics       MAT 122       F/S/SU       3       ENG 101         Statistics       MAT 122       F/S/SU       3       MAT 095 with a grade of "C" or higher or approp place         General Microbiology       BIO 231       F/S       4       BIO 107 and CHM 105 or CHM 123       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.         College Mathematics I: Pre- Calculus       MAT 123       F/S/SU       3       Placement into college level English       If considering transfer general education transfer general education transfer block can be completed.         History Elective        F/S/SU       3       MAT 123 or approp place score       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.         Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.       Submit an Intent to Graduate Form, located on The Q.         Centingues in Biotechnology								
Statistics       MAT 122       F/S/SU       3       MAT 095 with a grade of "C" or higher or approp place         Statistics       Total       14       Id         Semester 3       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.         College Mathematics I: Pre-Calculus       MAT 123       F/S/SU       3       MAT 100 or approp place score       If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Continue with Academic Advisor to discuss internship option.         College Mathematics II: Trigonometry       MAT 124       F/S/SU       3       MAT 123 or approp place score       Continue with Career Services for career readiness periodication process; or if seeking employment, meet with Career Services for career readiness for application process; or if seeking employment, meet with Career Services for career readiness for application and to learn more about QCC's job board.         Social Science Elective        F/S/SU       3 <t< td=""><td>General Chemistry II</td><td></td><td></td><td></td><td></td><td>www.QCC.edu/transfer.</td></t<>	General Chemistry II					www.QCC.edu/transfer.		
StatisticsMAT 122F/S/SU9or approp placeImage: Construct of the second se	Composition II	ENG 102	F/S/SU	-		-		
Image: Construct of the second seco	Statistics	<b>MAT 122</b>	F/S/SU	3				
Semester 3General MicrobiologyBIO 231F/S4BIO 107 and CHM 105 or CHM 123If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.College Mathematics I: Pre- CalculusMAT 123F/S/SU3MAT 100 or approp place scoreapplication process; or create an account on the QCC job board to search for internships, co-ops and jobs.Speech Communication SkillsSPH 101F/S/SU3Placement into college level Englishconfirm that MassTransfer general education transfer block can be completed.History ElectiveF/S/SU3Confirm that MassTransfer general education transfer block can be completed.Molecular BiologyBIO 260S4BIO 107Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Mumanities ElectiveF/S/SU3Continue with Career services for career readiness preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.			Total		or approp place	4		
General MicrobiologyBIO 231F/S4BIO 107 and CHM 105 or CHM 123Introduction graph of the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.College Mathematics I: Pre-CalculusMAT 123F/S/SU3MAT 100 or approp place scoreaccount on the QCC job board to search for internships, co-ops and jobs.Speech Communication SkillsSPH 101F/S/SU3Placement into college level Englishconfirm that MassTransfer general education transfer block can be completed.History ElectiveF/S/SU3Confirm that MassTransfer general education transfer block can be completed.Molecular BiologyBIO 260S4BIO 107Meet with Academic Advisor to discuss internship option.College Mathematics II: TrigonometryMAT 124F/S/SU3MAT 123 or approp place scoreContinue with/complete the transfer application process; or if seeking employment, meet with Career Sprices for career readiness preparation and to learn more about QCC's job board.Mumanities ElectiveF/S/SU3Sibio 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.		If considering transfer, most with						
General MicrobiologyBIO 231F/S4BIO 107 and CHM 105 or CHM 123to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.College Mathematics I: Pre- CalculusMAT 123F/S/SU3MAT 100 or approp place scoreaccount on the QCC job board to search for internships, co-ops and jobs.Speech Communication SkillsSPH 101F/S/SU3Placement into college level Englishconfirm that MassTransfer general education transfer block can be completed.History ElectiveF/S/SU3Confirm that MassTransfer general education transfer block can be completed.Molecular BiologyBIO 260S4BIO 107discuss internship option.College Mathematics II: TrigonmetryMAT 124F/S/SU3MAT 123 or approp place scoreContinue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Mumanities ElectiveF/S/SU3Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.		T						
Consider Mathematics I. Frie- Calculus       MAT 123       F/S/SU       3       MAT 100 or approp place score       account on the QCC job board to search for internships, co-ops and jobs.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       account on the QCC job board to search for internships, co-ops and jobs.         History Elective        F/S/SU       3       Placement into college level English       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Meet with Academic Advisor to discuss internship option.         College Mathematics II: Trigonometry       MAT 124       F/S/SU       3       MAT 123 or approp place score       Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.         Moter Sin Biotechnology I       BTT 211       SU       3       BIO 231, BIO 259, BIO 260       Submit an Intent to Graduate Form, located on <i>The Q</i> .	General Microbiology	BIO 231	<mark>F/S</mark>	<mark>4</mark>	BIO 107 and CHM 105 or CHM 123			
CalculusMAT 129F/S/SU3MAT 100 of appropriate scoreaccount of the GCC for board to search for internships, co-ops and jobs.Speech Communication SkillsSPH 101F/S/SU3Placement into college level Englishsearch for internships, co-ops and jobs.History ElectiveF/S/SU3Confirm that MassTransfer general education transfer block can be completed.Molecular BiologyBIO 260S4BIO 107Meet with Academic Advisor to discuss internship option.College Mathematics II: TrigonometryMAT 124F/S/SU3MAT 123 or approp place scoreContinue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Social Science ElectiveF/S/SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.	Collogo Mathematics I: Pro					application process; or create an		
Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       search for internships, co-ops and jobs.         History Elective        F/S/SU       3       Placement into college level English       jobs.         History Elective        F/S/SU       3       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Meet with Academic Advisor to discuss internship option.         College Mathematics II:       MAT 124       F/S/SU       3       MAT 123 or approp place score       Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.         Social Science Elective        F/S/SU       3       Submit an Intent to Graduate Form, located on <i>The Q</i> .         Techniques in Biotechnology II       BTT 211       SU       3       BIO 231, BIO 259, BIO 260       Submit an Intent to Graduate Form, located on <i>The Q</i> .		MAT 123	F/S/SU	<mark>3</mark>	MAT 100 or approp place score			
Speech Communication Skills       SPA 101       P/S/SU       3       Pracement into conlege level English         History Elective        F/S/SU       3       Confirm that MassTransfer general education transfer block can be completed.         Molecular Biology       BIO 260       S       4       BIO 107       Meet with Academic Advisor to discuss internship option.         College Mathematics II: Trigonometry       MAT 124       F/S/SU       3       MAT 123 or approp place score       Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness         Social Science Elective        F/S/SU       3       Contail       Submit an Intent to Graduate Form, located on <i>The Q</i> .         Techniques in Biotechnology II       BTT 211       SU       3       BIO 231, BIO 259, BIO 260       Submit an Intent to Graduate Form, located on <i>The Q</i> .								
History Elective        F/S/SU       3       education transfer block can be completed.         Image: Complete comp	Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	jobs.		
History Elective        F/S/SU       3       education transfer block can be completed.         Image: Complete comp				-		One form that Mana Transformer and		
Total13completed.Semester 4Molecular BiologyBIO 260S4BIO 107Meet with Academic Advisor to discuss internship option.College Mathematics II: TrigonometryMAT 124F/S/SU3MAT 123 or approp place scoreContinue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Social Science Elective TotalF/S/SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.	History Elective		F/S/SU	3				
Semester 4Meet with Academic Advisor to discuss internship option.Molecular BiologyBIO 260S4BIO 107Meet with Academic Advisor to discuss internship option.College Mathematics II: TrigonometryMAT 124F/S/SU3MAT 123 or approp place scoreContinue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Humanities ElectiveF/S/SU3Preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Graduate Form, located on The Q.				12				
Molecular BiologyBIO 260S4BIO 107discuss internship option.College Mathematics II: TrigonometryMAT 124F/S/SU3MAT 123 or approp place scoreContinue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Humanities ElectiveF/S/SU3Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Carduate Form, located on The Q.								
Nolecular BiologyBio 260S4Bio 107Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Social Science ElectiveF/S/SU3Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Graduate Form, located on The Q.				1				
TrigonometryMrt 124170000Mrt 120 of appropriate sectorapplication process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Humanities ElectiveF/S/SU3application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Social Science ElectiveF/S/SU3application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU <t< td=""><td>0,</td><td>BIO 260</td><td>S</td><td>4</td><td>BIO 107</td><td></td></t<>	0,	BIO 260	S	4	BIO 107			
TrigonometryMrt 124170000Mrt 120 of appropriate sectorapplication process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Humanities ElectiveF/S/SU3application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Social Science ElectiveF/S/SU3application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Techniques in Biotechnology IBTT 211SU3BIO 231, BIO 259, BIO 260Submit an Intent to Graduate Form, located on The Q.Techniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU3BIO 231, BIO 259, BIO 260Intent to Career Services for careerTechniques in Biotechnology IIBTT 212SU <t< td=""><td>College Mathematics II:</td><td></td><td></td><td>2</td><td>MAT 122 or opprop place coore</td><td>Continue with/complete the transfer</td></t<>	College Mathematics II:			2	MAT 122 or opprop place coore	Continue with/complete the transfer		
Humanities Elective      F/S/SU     3     employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.       Social Science Elective      F/S/SU     3     Generation and to learn more about QCC's job board.       Total     13     Submit an Intent to Graduate Form, located on The Q.       Techniques in Biotechnology I     BTT 211     SU     3     BIO 231, BIO 259, BIO 260       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260	Trigonometry		<mark>F/3/30</mark>	<mark>ی</mark>	MAT 123 OF approp place score	application process; or if seeking		
Social Science Elective      F/S/SU     3     Services for career readiness preparation and to learn more about QCC's job board.       Social Science Elective      F/S/SU     3     Control of the team more about QCC's job board.       Techniques in Biotechnology I     BTT 211     SU     3     BIO 231, BIO 259, BIO 260     Submit an Intent to Graduate Form, located on The Q.       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260     Control of team	Humanities Elective		F/S/SU	3		employment, meet with Career		
Total     13       Semester 5 (Summer)       Techniques in Biotechnology I     BTT 211     SU     3     BIO 231, BIO 259, BIO 260       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260			.,0,00	, J				
Total     13       Semester 5 (Summer)     Submit an Intent to Graduate Form,       Techniques in Biotechnology I     BTT 211     SU     3     BIO 231, BIO 259, BIO 260     Iocated on The Q.       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260     Iocated on The Q.       Techniques in Biotechnology II     BTT 212     SU     3     BIO 231, BIO 259, BIO 260     Iocated on The Q.	Social Science Elective		F/S/SU	3				
Semester 5 (Summer)         Submit an Intent to Graduate Form,           Techniques in Biotechnology I         BTT 211         SU         3         BIO 231, BIO 259, BIO 260         located on The Q.           Techniques in Biotechnology II         BTT 212         SU         3         BIO 231, BIO 259, BIO 260         located on The Q.           Techniques in Biotechnology II         BTT 212         SU         3         BIO 231, BIO 259, BIO 260         located on The Q.			Total	13		QCC's job board.		
Techniques in Biotechnology I         BTT 211         SU         3         BIO 231, BIO 259, BIO 260         located on The Q.           Techniques in Biotechnology II         BTT 212         SU         3         BIO 231, BIO 259, BIO 260         located on The Q.           Techniques in Biotechnology II         BTT 212         SU         3         BIO 231, BIO 259, BIO 260         located on The Q.		Sei			I	Submit an Intent to Graduate Form		
Techniques in Biotechnology II         BTT 212         SU         3         BIO 231, BIO 259, BIO 260           Total         6         6	Techniques in Biotechnology I	· · · · · · · · · · · · · · · · · · ·						
Total 6								
		511212						
	Total Credits Re	auired		-				

#### <u>Mathematics & Sciences</u> General Studies - Biotechnology Option - Associate in Arts (Program Code: GSBT)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1	•	Apply and get accepted to this
Introduction to Biotechnology	BTT 101	F/S/SU	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	program (Program Code: GSBT). Register for and successfully
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	complete all courses to graduate in five semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete CHM 105 and ENG 101.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	Complete prerequisite(s) for MAT
		Total	<mark>13</mark>		123.
Driver and Distance I		Semeste			If considering transfer, meet with a
Principles of Biology I General Chemistry II	BIO 107 CHM 106	F/S/SU F/S/SU	4 4	CHM 105 or CHM 123, ENG 101 CHM 105	Transfer Services Advisor. See www.QCC.edu/transfer.
Composition II	ENG 102	F/S/SU	4	ENG 101	www.QCC.edu/itansiei.
College Mathematics I: Pre- Calculus	MAT 123	F/S/SU	3 3	MAT 100 or approp place score	Complete BIO 107.
		Total	14		-
		Semeste	er 3		If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer
General Microbiology	BIO 231	F/S	<mark>4</mark>	BIO 107	
College Mathematics II: Trigonometry	MAT 124	F/S/SU	<mark>3</mark>	MAT 123 or approp place score	application process; or create an account on the QCC job board to search for internships, co-ops and
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	jobs.
History Elective		F/S/SU	3		Confirm that MassTransfer general education transfer block can be
		Total	13		completed.
		Semeste			Meet with Academic Advisor to
Cell Biology	BIO 259	<mark>F/S</mark>	<mark>4</mark>	BIO 107	discuss internship option.
Molecular Biology	BIO 260	S	4	BIO 107	Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.
Humanities Elective		F/S/SU	3		
Social Science Elective		F/S/SU	3		
		Total mester 5 (S	<mark>14</mark>		
Techniques in Biotechnology I	Submit an Intent to Graduate Form, located on <i>The Q</i> .				
Techniques in Biotechnology I	BTT 211 BTT 212	SU SU	3	BIO 231, BIO 259, BIO 260 BIO 231, BIO 259, BIO 260	located on The Q.
reeningues in Dioteenhology i	511212	Total	6		
Total Credits Re	auired		60		

# <u>Mathematics & Sciences</u> Biotechnology Technician Certificate (Program Code: BI)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones		
	Semester 1						
Principles of Biology I	BIO 107	F/S/SU	<mark>4</mark>	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	program (Program Code: BI). Register for and successfully complete all courses to graduate in		
Introduction to Biotechnology	BTT 101	F/S/SU	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	three semesters. Meet with Academic Advisor to discuss associate degree (Program		
General Chemistry I	CHM 105	F/S/SU	<mark>4</mark>	CHM 090 or one year of HS Chemistry, MAT 099 with a grade of "C" or higher or approp place score	Code: GSBT); or create an account on the QCC job board to search for internships, co-ops and jobs.		
		Total	<mark>11</mark>		Complete BIO 107.		
		Semeste	er 2	•	Apply to associate degree (Program		
General Microbiology	BIO 231	F/S	<mark>4</mark>	BIO 107 and CHM 105 or CHM 123	Code: GSBT); or if seeking		
Cell Biology	BIO 259	F/S	<mark>4</mark>	BIO 107 and CHM 105 or CHM 123	employment, meet with Career Services for career readiness		
Molecular Biology	BIO 260	S	4	BIO 107	preparation and to learn more about		
		Total	12		QCC's job board.		
	Se	mester 3 (S	Summer)	•	Submit an Intent to Graduate Form,		
Techniques in Biotechnology I	BTT 211	SU	3	BIO 231, BIO 259, BIO 260	located on The Q.		
Techniques in Biotechnology	BTT 212	SU	3	BIO 231, BIO 259, BIO 260			
Total			6				
Total Credits R	equired		<mark>29</mark>				

<u>Mathematics & Sciences</u> Biotechnology Technician Certificate (Program Code: BI)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1		Apply and get accepted to this
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	4	CHM 105 or CHM 123, ENG 101	program (Program Code: BI). CHM 105 or CHM 123 and ENG 101 must be completed prior to entering the program. Register for and successfully complete all courses to graduate in three semesters.
Introduction to Biotechnology	BTT 101	F/S/SU	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Meet with Academic Advisor to discuss associate degree (Program Code: GSBT); or create an account on the QCC job board to search for internships, co-ops and jobs.
		Total	7		Complete BIO 107.
		Semeste	er 2		Apply to associate degree (Program
General Microbiology	BIO 231	F/S	<mark>4</mark>	BIO 107	Code: GSBT); or if seeking
Cell Biology	BIO 259	F/S	<mark>4</mark>	BIO 107	employment, meet with Career Services for career readiness
Molecular Biology	BIO 260	S	4	BIO 107	preparation and to learn more about
		Total	12		QCC's job board.
	Se	mester 3 (S	Summer)		Submit an Intent to Graduate Form,
Techniques in Biotechnology I	BTT 211	SU	3	BIO 231, BIO 259, BIO 260	located on The Q.
Techniques in Biotechnology	BTT 212	SU	3	BIO 231, BIO 259, BIO 260	
		Total	6		1
Total Credits R	equired		2ť		

#### <u>Mathematics & Sciences</u> Liberal Arts - Mathematics Option - Associate in Arts (Program Code: LAMT)

#### CURRENT

Applications       CI S111       F/S/SU       3       Register for and successfully complete all courses to gradua for us sensative.         Principles of Microeconomics       ECO 215       F/S/SU       3       Coreq: ENG 101       Register for and successfully complete all courses to gradua for us sensative.         Composition 1       EXO 215       F/S/SU       3       Placement into college level English       Attend Transfer Services even For information see www.QCC.edu/transfer.         Computer Science 1       CSC 108       F/S       4       English, MAT 100 or approp place score       Complete MAT 233.         Computer Science 1       CSC 108       F/S       4       English, MAT 100 or approp place       Complete MAT 234.         Composition II       ENG 102       F/S/SU       3       ENG 101       Transfer Services events.         Composition II       ENG 102       F/S/SU       3       ENG 101       Complete MAT 234.         Calculus II       MAT 125       F/S       3       MAT 123 or approp place score       Complete MAT 234.         Calculus II       MAT 125       F/S/SU       3       ENG 101       Complete MAT 234.         Calculus III       MAT 125       F/S/SU       3       ENG 101       Concelse MAT 234.         Calculus III       MAT 235       F/S/SU	Course Title	Course #	Offered	Credits	Prerequisites	Milestones
Introduction to Microcomputer Applications         CIS 111         F/S/SU         3         priogram (Program Code: LAM Applications           Principles of Macroeconomics         ECO 216         F/S/SU         3         Coreq: ENG 101         Register for and successfully complete all courses to gradue for advectage score         Register for and successfully complete all courses to gradue for informations see www.QCC.edu/transfer           Composition I         ENG 101         F/S/SU         4         MAT 124 or approp place score         Attend Transfer Services even for information see www.QCC.edu/transfer           Introduction to Psychology OR (Principles)         SOC 101         F/S/SU         3         Placement into college level English           Introduction to Secondary (Principles)         SOC 101         F/S/SU         3         ENG 101         Complete MAT 233.           Composition II         ENG 102         F/S/SU         3         ENG 101         Transfer Services Averias.           Discrete Mathematics         MAT 235         F/S/SU         4         MAT 230         Matro 34         Complete science Elective         Complete MAT 235         Complete MAT 234           Introduction to Humanities         MAT 235         F/S/SU         4         MAT 234         Meet with Academic Advisor to review Lab Science Elective         Complete MAT 237         Complete MAT 236         Complete MAT 236			Semeste	er 1	•	Apply and get accepted to this
Applications     ECO 216     F/S/SU     3     Coreq: ENG 101     Register for and successfully complete all courses to gradua four senesters.       Principles of Microeconomics     ECO 216     F/S/SU     3     Placement into college level English (arc introaution see introduction to Psychology OR PSY 101     F/S/SU     3     Placement into college level English (arc introaution see introduction to Psychology OR PSY 101     F/S/SU     3     Placement into college level English (Art 124 or approp place score)     Artend Transfer Services even For information see introduction see introduction so college level English (Art 120 or approp place score)     Artend Transfer Services even For information see introduction see introduction see introaution see introduction see introduction see introaution see introduction see introduction see introaution see introaution see introduction see introaution see introautise introaution see introautis introaution see introaution	Introduction to Microcomputer					program (Program Code: LAMT).
OR         ECO 213 Finciples of Microeconomics         ECO 213 ECO 216 Fisciples         Fisciples AMT 233 Fisciple         Coreq: ENG 101 Fisciples         complete all courses to gradue four semesters.           Calculus 1         MAT 233 Fisciple         MAT 233 Fisciple         A MAT 124 or approp place score         Attend Transfer Services even For information see www.QCC.edu/transfer.           Chromosoftion 1         ENG 101 Fisciple         Fisciple         A MAT 233 Fisciple         MAT 234 Fisciple         MAT 233 Fisciple         Attend Transfer Services even For information see www.QCC.edu/transfer.           Computer Science 1         CSC 108 Fisciple         Fisciple         CIS 111, Placement into college level English. MAT 100 or approp place score         Complete MAT 233.           Calculus II         MAT 234 Fisciple         Fisciple         A MAT 234         MAT 234 reservices events.           Calculus II         MAT 235 Fisciple         Fisciple         A MAT 234         MAT 234         Complete MAT 234.           Calculus III         MAT 235 Fisciple         Fisciple         A MAT 234         MAT 234         Complete MAT 234.           Calculus III         MAT 235 Fisciple         Fisciple         A MAT 234         MAT 234         Complete MAT 235.           Calculus III         MAT 235 Fisciple         Fisciple         A MAT 234         MAT 234         Confine what Mastrasfer 5D G	Applications	05111	F/3/30	3		
Or     Findples of Microeconomics     ECO 216     Fissu     3     Correg: ENG 101     Composition 1     Composition 1     Composition 1     ECO 216     Sensets       Composition 1     ENG 101     F/S/SU     3     Placement into college level English     Attend Transfer Services even For information see       Introduction to Psychology OR     PSY 101     F/S/SU     3     Placement into college level English     Attend Transfer Services even For information see       Introductory Sociology     Soci 101     F/S/SU     3     ENG 101     Complete MAT 233.       Composition II     ENG 102     F/S/SU     4     MAT 233     Correct Mathematics       Composition II     ENG 102     F/S/SU     4     MAT 233     Correct Mathematics     MAT 234       Calculus II     MAT 234     F/S/SU     4     MAT 234     Complete MAT 234.     Complete MAT 234.       Calculus III     MAT 235     F/S/SU     4     MAT 234     Complete MAT 235.     Confirm that MassTransfer Athematics       Probability & Statistics for Engineers and Scientists     MAT 237     F/S/SU     3     ENG 101     Complete MAT 235.       Condition to Humanities     MAT 237     F/S/SU     3     ENG 101     Complete MAT 235.       Calculus III     MAT 237     F/S/SU     3     ENG		ECO 215				
Composition I       ENG 101       F/S/SU       3       Placement into college level English       Attend Transfer Services even For information see WWW.QCC.edu/transfer.         Introductory Sociology       SOC 101       F/S/SU       3       Placement into college level English       Attend Transfer Services even For information see WWW.QCC.edu/transfer.         (Principles)       Total       16       Complete MAT 233.       Complete MAT 233.         Computer Science I       CSC 108       F/S       4       English, MAT 100 or approp place score			F/S/SU	3	Coreq: ENG 101	
Calculus I     MAT 233     F/S/SU     4     MAT 124 or approp place score     Attend Transfer Services even For information see www.QCC.edu/transfer.       Introductory Sociology (Principles)     SOC 101     F/S/SU     3     Placement into college level English     For information see www.QCC.edu/transfer.       Computer Science I     CSC 108     F/S     4     CIS 111, Placement into college level English, MAT 100 or approp place score     Computer MAT 233.     Meet with a Transfer Services www.QCC.edu/transfer. Attend Transfer Services events.       Composition II     ENG 102     F/S/SU     3     ENG 101     Complete MAT 234.       Discrete Mathematics     MAT 124     F/S/SU     4     MAT 237     Complete MAT 234.       Calculus II     MAT 235     F/S/SU     3     ENG 101     Complete MAT 234.       Calculus III     MAT 235     F/S/SU     3     ENG 101     Recommended sequences: BI 107 and BIO 108; or CHM 105       Calculus III     MAT 235     F/S/SU     4     MAT 234     MAT 234     Complete MAT 235.       Calculus III     MAT 237     F/S/SU     4     MAT 234     MAT 234     Commended sequences: BI 107 and BIO 108; or CHM 105       Lab Science Elective      F/S/SU     4     MAT 234     Meet with representatives of for year schools to discus/begin transfer application process.       World History I: Be			= (0, (0) +			four semesters.
Conductor     Psychology OR     PSY101     Pice of pprop place sector     For information see       Introduction to Psychology OR     SOC 101     F/S/SU     3     Placement into college level English     For information see       Introductory Sociology     SOC 101     F/S     4     Complete MAT 233.     Complete MAT 233.       Computer Science I     CSC 108     F/S     4     Cli S111, Placement into college level English.     MAT 123.       Composition II     ENG 102     F/S/SU     3     ENG 101     Transfer Services Advisor. See Advisor. See Advisor. See Services events.       Calculus II     MAT 234     F/S/SU     4     MAT 123 or approp place score     Complete MAT 234.       Introduction to Humanities     HUM 105     F/S/SU     3     ENG 101     Meet with Academic Advisor tervices events.       Calculus III     MAT 235     F/S/SU     4     MAT 234     MAT 234.       Probability & Statistics for Engines and Scientists     MAT 237     F/S/SU     4     MAT 234       Lab Science Elective      F/S/SU     4     Complete MAT 235.       Vorid History I: Beginning to 1500 OW orld War1 100     HST 104     ENG 101     Complete MAT 235.       Vorid History II: World War1 100     HST 106     F/S/SU     3     ENG 101       Worid History II: Beginning to 1600 OW						Attend Transfer Services events
Introduction Sociology       IOI 101 (Principles)       F/S/SU       3       Placement into college level English       www.QCC.edu/transfer.         Computer Science I       CSC 108       F/S       4       CIS 111, Placement into college level English, MAT 100 or approp place score       Met with a Transfer Services avents.         Composition II       ENG 102       F/S/SU       3       ENG 101       Transfer Services avents.         Composition II       ENG 102       F/S/SU       3       ENG 101       Transfer Services avents.         Calculus II       MAT 125       F/S       3       MAT 123 or approp place score       Complete MAT 234.         Calculus III       MAT 234       F/S/SU       4       MAT 234       MAT 234       Concess Germeenters and 4). Recommended sequences: Bio         Calculus III       MAT 235       F/S/SU       4       MAT 234       MAT 234       MAT 234         Probability & Statistics for Engineers and Scientists       MAT 237       F/S/SU       4       MAT 234       MAT 235.         Lab Science Elective        F/S/SU       4       MAT 234       Complete MAT 235.         Vorid History I: Beginning to 150 OR       HST 104       HST 104       Semester 4       Confirm that MassTransfer ST general education transfer bloc cated on The Q.         W			F/S/SU	4	MAT 124 or approp place score	
Inductory Sociology     SOC 101     173/30     3     Problement into College rever English       (Principles)     Total     16     Complete MAT 233.       Semester 2     Computer Science I     CSC 108     F/S     4     CIS 111, Placement into college level score     Advisor. See       Composition II     ENG 102     F/S/SU     3     ENG 101     Complete MAT 233.       Discrete Mathematics     MAT 125     F/S     3     MAT 123 or approp place score     Complete MAT 234.       Calculus II     MAT 234     F/S/SU     4     MAT 233     Complete MAT 234.     Complete MAT 234.       Introduction to Humanities     HUM 105     F/S/SU     4     MAT 234     ENG 101     Complete MAT 234.       Calculus III     MAT 235     F/S/SU     3     ENG 101     Rev with Academic Advisor to review Lab Science Elective       Calculus III     MAT 235     F/S/SU     4     MAT 234     MAT 234     MAT 234       Probability & Statistics for Englisen     MAT 237     F/S/SU     4     MAT 234     MAT 234       Lab Science Elective      F/S/SU     4     MAT 234     Complete MAT 235.       Vorid History I: Beginning to 300 OR     HST 106     F/S/SU     4     Continue with Complete the trapiser place scols to discuss/begin transfer application process. <td></td> <td>PSY 101</td> <td>F/0/011</td> <td></td> <td></td> <td></td>		PSY 101	F/0/011			
Total         16         Complete MA1 233.           Computer Science I         CSC 108         F/S         4         Clis 111, Placement into college level English, MAT 100 or approp place score         Met with a Transfer Services Advisor. See www.QCC.edu/transfer, Attenct Transfer Services events.           Composition II         ENG 102         F/S/SU         3         ENG 101         Matr 230 rapprop place score         Complete MA1 234.         Complete MA1 234.         Complete MA1 234.         Matr 230 rapprop place score         Complete MA1 234.         Matr 230 rapprop place score         Complete MA1 234.         Matr 230 rapprop place score         Complete MA1 234.         Confinut at MassTransfer Strigera schools to discus/begin tran		SOC 101	F/S/SU	3	Placement into college level English	
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Discrete Mathematics     MAT 125     F/S     3     MAT 123 or approp place score     Complete MAT 234.       Calculus II     MAT 234     F/S/SU     4     MAT 233     MAT 234     Complete MAT 234.       Introduction to Humanities     HUM 105     F/S/SU     3     ENG 101     Meet with Academic Advisor to review Lab Science Elective choices (Semester 3 and 4).       Calculus III     MAT 235     F/S/SU     4     MAT 234     Meet with Academic Advisor to review Lab Science Elective choices (Semester 3 and 4).       Calculus III     MAT 235     F/S/SU     4     MAT 234     Meet with representatives of fo CHM 106; or PHY 105 and PH 107.       Probability & Statistics for Engineers and Scientists     MAT 237     F/S/SU     3     MAT 234       Lab Science Elective      F/S/SU     4     MAT 234     Weet with representatives of fo cyers schools to discuss/begin transfer application process.       Vorid History II: 1500 to World     HST 104     HST 104     4     Complete MAT 235.       World History II: 1500 to World     HST 106     F/S/SU     3     ENG 101       World History II: 1500 to World     HST 106     F/S/SU     3     ENG 102       World History II: 1600 to World     HST 106     F/S/SU     3     ENG 102       Differential Equations     MAT 238     F/S/SU     3     EN	Composition II	ENG 102	F/S/SU	3		
Calculus II     MAT 234     F/S/SU     4     MAT 233       Total     14       Total     14       Introduction to Humanities     HUM 105     F/S/SU     3     ENG 101       Calculus III     MAT 235     F/S/SU     4     MAT 234       Calculus III     MAT 235     F/S/SU     4     MAT 234     Met with Academic Advisor to review Lab Science Elective choices (Semesters 3 and 4). Recommended sequences: Bi 107 and BIO 108; or CHM 105 CHM 105 CHM 105 CHM 105 or PHY 105 and PH 107.       Probability & Statistics for Engineers and Scientists     MAT 237     F/S/SU     4     MAT 234       Lab Science Elective      F/S/SU     4     MAT 234     Met with representatives of for year schools to discuss/begin transfer application process.       Vorid History I: Beginning to 1500 OR     HST 104     F/S/SU     4     ENG 101       World History II: 1500 to World Mar 1 to Present     HST 106     F/S/SU     3     ENG 101       World History II: World War 1 to Present     HST 106     F/S/SU     3     ENG 102       World History II: World War 1 to Present     HUM 234     F/S/SU     3     ENG 102       Differential Equations     MAT 238     F/S/SU     3     ENG 102       Differential Equations     MAT 234     F/S/SU     3     Core; MAT 238     Core; MAT 238		MAT 125	F/S	3		Complete MAT 234.
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Semester 4       Continue with/complete the tra application process.         World History II: Beginning to 1500 OR       HST 104       F/S/SU       3       ENG 101       Continue with/complete the tra application process.         World History II: 1500 to World War I to Present       HST 106       F/S/SU       3       ENG 101       Submit an Intent to Graduate F located on The Q.         Mathematics and Science in the Humanities       HUM 234       F/S/SU       3       ENG 102       F/S/SU       F/S/SU         Differential Equations       MAT 238       F/S/SU       3       MAT 235       F/S/SU						
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Linear Algebra         MAT 243         F/S/SU         3         Coreq: MAT 238           Lab Science Elective          F/S/SU         4		MAT 238	F/S/SU	3	MAT 235	1
Lab Science Elective F/S/SU 4	Linear Algebra					1
				-		
			Total	16		
Total Credits Required 60	Total Credits Re	quired		-		

#### <u>Mathematics & Sciences</u> Liberal Arts - Mathematics Option - Associate in Arts (Program Code: LAMT)

#### PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1		Apply and get accepted to this
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		program (Program Code: LAMT).
Principles of Macroeconomics OR	ECO 215	F/S/SU	3	Coreq: ENG 101	Register for and successfully complete all courses to graduate in
Principles of Microeconomics	ECO 216				four semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Attend Transfer Services events.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	For information see
Introduction to Psychology <b>OR</b> Introductory Sociology	PSY 101	F/S/SU	2	Discovery intercelle se level English	www.QCC.edu/transfer.
(Principles)	SOC 101		3	Placement into college level English	Complete MAT 233.
		Total	16		•
		Semeste	er 2		Meet with a Transfer Services
Computer Science I	CSC 108	F/S	4	CIS 111, Placement into college level English, MAT 100 or approp place score	Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Composition II	ENG 102	F/S/SU	3	ENG 101	
Discrete Mathematics	MAT 125	F/S	3	MAT 123 or approp place score	Complete MAT 234.
Calculus II	MAT 234	F/S/SU	4	MAT 233	_
	l	Total Semeste	14		
		Semeste	er 3	Г	Meet with Academic Advisor to review Lab Science Elective
Introduction to Humanities	HUM 105	F/S/SU	3	ENG 101	choices (Semesters 3 and 4). Recommended sequences: BIO
Calculus III	MAT 235	F/S/SU	4	MAT 234	106 and BIO 107; or CHM 105 and CHM 106; or PHY 105 and PHY 107.
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	Meet with representatives of four- year schools to discuss/begin the transfer application process. Confirm that MassTransfer STEM
Lab Science Elective		F/S/SU	4		general education transfer block can be completed.
		Total	14		Complete MAT 235.
	•	Semeste	er 4		Continue with/complete the transfer
World History I: Beginning to 1500 <b>OR</b>	HST 104				application process.
World History II: 1500 to World War I <b>OR</b>	HST 105	F/S/SU	3	ENG 101	Submit an Intent to Graduate Form, located on <i>The Q</i> .
World History III: World War I to Present	HST 106				
Mathematics and Science in the Humanities	HUM 234	F/S/SU	3	ENG 102	
Differential Equations	MAT 238	F/S/SU	3	MAT 235	
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	
Lab Science Elective		F/S/SU	4		
		Total	16		
Total Credits Re	quired		60		

#### Engineering & Engineering Technology Engineering - Associate in Science (Program Code: ERG)

#### CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester 7	1 (Fall)		Apply and get accepted to this
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	program (Program Code: ERG).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in five semesters.
Engineering Graphics	ERG 101	F/S/SU	3	MAT 124	Meet with Program Coordinator.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Attend Transfer Services events. For information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	17		Complete ENG 101 and MAT 233.
	S	emester 2	(Spring)		Meet with a Transfer Services
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Engineering Computation and Modeling Calculus II	ERG 280 MAT 234	F/S/SU F/S/SU	3	MAT 233	-
	IVIA I 234	F/3/30	4	MAT 233	-
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU Total	4 15	MAT 233	4
	Se	mester 3 (			
				MAT 099 with a grade of "C" or higher	-
Principles of Biology I	BIO 107	F/S/SU	<mark>4</mark>	or approp place score, Coreq: ENG 101	
Composition II	ENG 102	F/S/SU	3	ENG 101	
		Total	7		-
		Semester 4	4 (Fall)		Meet with representatives of four-
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	year schools to discuss/begin the transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	4
		Total emester 5	17 (Spring)		Or a time with the second starting the second start
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	Continue with/complete the transfer application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form,
Differential Equations	MAT 238	F/S/SU	3	MAT 235	located on <i>The Q</i> .
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	
*		Total	16		
Total Credits R	equired		72		

#### Engineering & Engineering Technology Engineering - Associate in Science (Program Code: ERG)

#### PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester '	1 (Fall)	•	Apply and get accepted to this
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	program (Program Code: ERG).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in five semesters.
Engineering Graphics	ERG 101	F/S/SU	3	MAT 124	Meet with Program Coordinator.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Attend Transfer Services events. For information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	17		Complete ENG 101 and MAT 233.
	S	emester 2	(Spring)		Meet with a Transfer Services
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	
Calculus II	MAT 234	F/S/SU	4	MAT 233	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total mester 3 (	15		
	-				
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123, ENG 101	
Composition II	ENG 102	F/S/SU	3	ENG 101	_
Total 7					
Semester 4 (Fall)					Meet with representatives of four- year schools to discuss/begin the
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
		Total	17		
Semester 5 (Spring)		Continue with/complete the transfer			
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form,
Differential Equations	MAT 238	F/S/SU	3	MAT 235	located on The Q.
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	4
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	
	L	Total	16		
Total Credits R	equired		72		

Engineering & Engineering Technology Engineering - Biomedical Engineering Option - Associate in Science (Program Code: ERBM)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	•	Semeste	er 1	-	Apply and get accepted to this
Principles of Biology I	BIO 107	F/S/SU	<mark>4</mark>	MAT 099 with a grade of "C" or higher or approp place score, Coreq: ENG 101	program (Program Code: ERBM). Register for and successfully complete all courses to graduate in
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	five semesters.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Meet with Program Coordinator. Attend Transfer Services events. For
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	<mark>18</mark>		Complete ENG 101 and MAT 233.
		Semeste			Meet with a Transfer Services
Cell Biology	BIO 259	F/S	<mark>4</mark>	BIO 107 and CHM 105 or CHM 123	Advisor. See <u>www.QCC.edu/transfer</u> .
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	Attend Transfer Services events.
Calculus II	MAT 234	F/S/SU	4	MAT 233	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	16		
	Se	mester 3 (S			
Composition II	ENG 102	F/S/SU	3	ENG 101	
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
		Total	13		
		Semeste	-		Meet with representatives of four-
Molecular Biology	BIO 260	S	4	BIO 107	year schools to discuss/begin the
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	transfer application process.
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
		Total	_ <mark>14</mark>		
Semester 5		Continue with/complete the transfer			
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form,
Differential Equations	MAT 238	F/S/SU	3	MAT 235	located on The Q.
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	-
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	4
	<u> </u>	Total	16		
Total Credits R	equired		77		

Engineering & Engineering Technology Engineering - Biomedical Engineering Option - Associate in Science (Program Code: ERBM)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	er 1		Apply and get accepted to this
Principles of Chemistry for Engineers I	CHM 123	F/S/SU	4	Coreq: MAT 233	program (Program Code: ERBM). Register for and successfully
Composition I	ENG 101	F/S/SU	3	Placement into college level English	complete all courses to graduate in five semesters.
Calculus I	MAT 233	F/S/SU	4	MAT 124 or approp place score	Meet with Program Coordinator. Attend Transfer Services events. For information see
Social Science Elective		F/S/SU	3		www.QCC.edu/transfer.
		Total	<mark>14</mark>		Complete ENG 101 and MAT 233.
		Semest	er 2		Meet with a Transfer Services
Biology II: Introduction to Cells and Molecules	BIO 107	F/S/SU	<mark>4</mark>	CHM 105 or CHM 123, ENG 101	Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Principles of Chemistry for Engineers II	CHM 124	F/S/SU	4	CHM 123, MAT 233	
Calculus II	MAT 234	F/S/SU	4	MAT 233	
General Physics I: Newtonian Mechanics	PHY 105	F/S/SU	4	MAT 233	
		Total	16		
		emester 3 (S			
Composition II	ENG 102	F/S/SU	3	ENG 101	
Engineering Computation and Modeling	ERG 280	F/S/SU	3	MAT 233	
Probability & Statistics for Engineers and Scientists	MAT 237	F/S/SU	3	MAT 234	
General Physics II: Electricity & Magnetism	PHY 107	F/S/SU	4	MAT 234, PHY 105	
		Total	13		
		Semest			Meet with representatives of four-
Cell Biology	BIO 259	F/S	<mark>4</mark>	BIO 107	year schools to discuss/begin the
Molecular Biology	BIO 260	S	4	BIO 107	transfer application process.
Introduction to Materials Science	ERG 211	F/SU	3	CHM 123, PHY 105	
Statics	ERG 221	F/IN	3	Coreq: MAT 235, PHY 106 or PHY 107	
Calculus III	MAT 235	F/S/SU	4	MAT 234	
		Total	_ <mark>18</mark>		
		Semest	er o		Continue with/complete the transfer
Thermodynamics	ERG 223	S/SU	3	CHM 124, MAT 235, PHY 106 or PHY 107	application process.
Strength of Materials	ERG 225	S/SU	3	ERG 221, MAT 235, Coreq: MAT 238	Submit an Intent to Graduate Form,
Differential Equations	MAT 238	F/S/SU	3	MAT 235	located on The Q.
Linear Algebra	MAT 243	F/S/SU	3	Coreq: MAT 238	-
General Physics III: Optics & Modern Physics	PHY 207	F/S/SU	4	MAT 235, PHY 107, Coreq: MAT 238	_
		Total	16		
Total Credits R	equired		77		

## **COURSE REVISION PROPOSAL**

1.	Course Number and Name: BIO 101 Gene (from current AY22/23 catalog)	ral Biology: Core Concepts
2.	Originator: Lisa Antonelli	Date: 20 October 2022
3.	School Dean: Ben Benton	Date: 20 October 2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if appl	cable) Date:
1.	Recommended by the School of <u>Math and</u> Comments: Unanimously approved	<u>Science</u> Date: <u>01/19/2023</u>
2.	AA Leadership Team:	Date:
	Recommended: Not Rec Comments:	ommended:
3.	VP/Academic Affairs:	Date:
	Recommended: Not Rec Comments:	ommended:
4.	Learning Council:	Date:
	Recommended: Not Rec Comments:	ommended:
5.	VP/Academic Affairs:	Date:
	Approved: Not App Comments:	roved:

## **COURSE REVISION PROPOSAL**

Type of Revision:
Description X PrerequisiteOrequisiteNumberName# Credits
Elective TypeOther (explain) Course Discipline or Department: Natural Sciences School: Math and Science
Course Discipline of Department. Natural Sciences School. Math and Science
Current Course Name: General Biology: Core Concepts
Current Course Description (as it appears in the college catalog including course three letter designation
and number, title, credits, semesters offered and prerequisites/corequisites):
and number, the, creaks, semesters offered and prerequisites/corequisites/.
BIO 101 General Biology: Core Concepts
Students intending to major in the health sciences learn scientific method, basic chemistry (for the
understanding of biologic concepts), structure and function of basic cells and tissues, mitosis and
meiosis, genetics, and the basic principles of evolution. The laboratory component covers basic
techniques in observation, analysis, and interpretation of data relating to the topics discussed in lecture. The lab activities are investigative in nature with the students devising hypotheses, predictions, and
identifying independent and dependent variables.
Credits: 4
Prerequisite: Placement into college level English, MAT 095 with a grade of "C" or higher or
appropriate placement score Semester Offered: F/S/SU
Proposed Description (include all proposed changes):
roposed Description (metude an proposed enanges).
BIO 101 General Biology: Core Concepts
Students intending to major in the health sciences learn scientific method, basic chemistry (for the
understanding of biologic concepts), structure and function of basic cells and tissues, mitosis and
meiosis, genetics, and the basic principles of evolution. The laboratory component covers basic
techniques in observation, analysis, and interpretation of data relating to the topics discussed in lecture. The lab activities are investigative in nature with the students devising hypotheses, predictions, and
identifying independent and dependent variables.
Credits: 4
Prerequisite: Placement into college level English, MAT 095 with a grade of "C" or higher or
appropriate placement Semester Offered: F/S/SU
Rationale for the change:
Rationale for the change.
By removing the word "score" from the prerequisite, students can enroll in BIO 101 with multiple
measures for mathematics placement out of MAT 095 including the CAPM waiver. This will enable more
students to enroll in BIO 101 without needing to take the QMAT math placement examination.
Provide a description of any change in course content.
No change in course content.
List the programs that are affected by this change (list program names and program codes as they appear
in the college catalog): Please confer with the coordinator of the affected department.
Healthcare (HLC)
Healthcare-Medical Office Management Option (HCMO) Healthcare-Medical Sales/Marketing Option (HCSM)
Healthcare-Pre-Dental Hygiene Option (HCDH)
Healthcare-Pre-Nursing Option (HCNU)

Emergency Medical Technician Certificate (EMT) Nursing Assistant Certificate (NA) Pharmacy Technician Certificate (PT) Phlebotomy/EKG Technician Certificate (PEKG)

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all the revisions included.

## **COURSE REVISION PROPOSAL**

1.	Course Number and Name: BIO 232 Medical Microbiole (from current AY22/23 catalog)	ogy
2.	Originator: Lisa Antonelli	Date: 17 November 2022
3.	School Dean: Ben Benton	Date: 17 November 2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date:
1.	Recommended by the School of <u>Math and Science</u> Comments: Unanimously approved	Date: 01/19/2023
2.	AA Leadership Team:	Date:
	Recommended: Not Recommended: Comments:	
3.	VP/Academic Affairs:	Date:
	Recommended: Not Recommended: Comments:	
4.	Learning Council:	Date:
	Recommended: Not Recommended: Comments:	
5.	VP/Academic Affairs:	Date:
	Approved:      Comments:   Not Approved:	

## **COURSE REVISION PROPOSAL**

<b>T</b> (D : :				
Type of Revision				
	riptionPrerequisiteCorequisiteNumberName# Credits			
	re Type _X_ Other (explain): Revised course student learning outcomes			
	e or Department: Natural Sciences School: Math and Science			
Current Course N	Number: BIO 232			
Current Course N	Name: Medical Microbiology			
Current Course I	Description (as it appears in the college catalog including course three letter designation			
	e, credits, semesters offered and prerequisites/corequisites):			
,,	,,,			
BIO 232 Medica	l Microbiology			
	nines the major groups of pathogenic bacteria. Topics include microbial control,			
	d the physiological problems these microorganisms produce on body tissues. Student			
learn the general	structure and function of bacteria, viruses, molds, fungi, and rickettsiae; the factors			
which make thes	e microbes pathogenic, and how these factors induce the disease state; how the human			
	tion naturally; and, methods of natural and passive immunization.			
Credits: 4				
	O 112 or CHM 105 or CHM 123			
Semester Offere				
Proposed Descrip	ption (include all proposed changes):			
BIO 232 Medica				
	nines the structure, growth, and control of medically significant bacteria, viruses, fungi,			
	Iminths. Students learn about the transmission, pathogenesis, and clinical manifestations			
	course includes host defense mechanisms and types of immunity. Students also focus on			
	olation, identification, and control of bacteria.			
Credits: 4	O 112 or CHM 105 or CHM 122			
Prerequisite: BIO 112 or CHM 105 or CHM 123 Semester Offered: F/S/SU				
Rationale for the				
Rationale for the	change.			
This BIO 232 co	urse description corresponds more accurately to the revised Course Student Learning			
	ne content of the course.			
1. ]	Demonstrate competency in microbiology laboratory safety.			
	Apply proper laboratory techniques to isolate, identify, and classify microbes.			
	Differentiate the nutritional and environmental requirements for microbial growth.			
	Compare physical and chemical methods of microbial control.			
	Identify the reservoirs, modes of transmission, and virulence factors of medically			
	significant pathogens.			
L				
6. l	Describe the pathogenesis and manifestations of infectious diseases.			
6. l 7. l	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity.			
6. 1 7. 1 Provide a descrip	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity. ption of any change in course content: <b>No change in course content.</b>			
6. 1 7. 1 Provide a descrip List the program	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity.			
6. 1 7. 1 Provide a descrip List the programs in the college cat	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity. otion of any change in course content: <b>No change in course content.</b> s that are affected by this change (list program names and program codes as they appear ralog). Please confer with the coordinator of the affected department:			
6. 1 7. 1 Provide a descrip List the programs in the college cat <b>Course descript</b>	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity. otion of any change in course content: <b>No change in course content.</b> s that are affected by this change (list program names and program codes as they appear talog). Please confer with the coordinator of the affected department: <b>ion wording change only – no change to program grids.</b>			
6. 1 7. 1 Provide a descrip List the programs in the college cat <b>Course descript</b> Attach current ar	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity. Detion of any change in course content: <b>No change in course content.</b> Is that are affected by this change (list program names and program codes as they appear talog). Please confer with the coordinator of the affected department: <b>ion wording change only – no change to program grids.</b> Ind proposed academic maps (with changes in <b>bold</b> ) for all affected programs. You can			
6. 1 7. 1 Provide a descrip List the programs in the college cat Course descript Attach current ar obtain academic	Describe the pathogenesis and manifestations of infectious diseases. Explain host defense mechanisms and the types of immunity. otion of any change in course content: <b>No change in course content.</b> s that are affected by this change (list program names and program codes as they appear talog). Please confer with the coordinator of the affected department: <b>ion wording change only – no change to program grids.</b>			

## **NEW COURSE PROPOSAL**

1.	Course Number and Name: MAT 051 Topics in Mathema	tics Corequisite
2.	Originator: Sheiba Mas-Oud, Math Dept	<b>Date:</b> November 12, 2022
3.	School Dean: Ben Benton, School of Math & Science	<b>Date:</b> November 14, 2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date: November 7, 2022
1.	Recommended by the School of <u>Math and Science</u> Comments: Unanimously approved	Date: 01/19/2023
2.	AA Leadership Team:	Date:
	Recommended: Not Recommended: Comments:	
3.	VP/Academic Affairs:	
	Recommended: Not Recommended: Comments:	
4.	Learning Council:	Date:
	Recommended: Not Recommended: Comments:	
5.	VP/Academic Affairs:	Date:
	Approved:      Comments:   Not Approved:	

## **NEW COURSE PROPOSAL**

Course Discipline/Department: Mathematics School: Math & Science					
Course Number: MAT 051					
Course Name: Topics in Mathematics Corequisite					
Prerequisites and/or corequisites (confer with affected department coordinator): Corequisite: MAT 121					
CIP code (check with IRaP Office): 27.0101					
Effective Term/year: Fall 2023					
Give a rationale for the new course. Be sure to indicate whether this course replaces another course. Is the course transferable?					
<ul> <li>The sole purpose of this course is to cover remediation math topics in a just-in-time format towards the successful completion of MAT 121 Topics in Mathematics.</li> <li>This course must be taken as a corequisite with MAT 121 Topics in Mathematics.</li> <li>This is not a stand-alone course. Instead, it is integrated with the MAT 121 Topics in Mathematics content.</li> <li>This course is a developmental math course and is not transferable.</li> <li>This course does not replace any current (as of Spring 2023) math course.</li> <li>Two different "versions" of MAT 121 will be offered: <ul> <li>Version 1: 3-credit "traditional" course, which does not cover remediation topics</li> <li>Version 2: 3-credit + 2-credit corequisite course (MAT 051), which includes just-in-time remediation topics</li> </ul> </li> <li>Placement into MAT 121: <ul> <li>Students are eligible to take "Version 1" of MAT 121 (3 credits only) and are not required to take the corequisite course MAT 051 (but are allowed to if they so choose) if: <ul> <li>the student passes a college-level math course or</li> <li>the student meets the appropriate multiple-measure placement</li> </ul> </li> <li>Students who do not meet the criteria to take "Version 1" should register for "Version 2". These students must also register for MAT 051 Topics in Mathematics Corequisite and will pay for 2 extra credit hours of just-in-time remediation.</li> </ul></li></ul>					
Is the course content similar to other courses now offered? Yes $\underline{\checkmark}$ No If yes, attach a statement from the coordinator of the department offering the similar course.					
This course contains <i>some</i> mathematical topics/objectives currently covered in MAT 090, MAT 095, and MAT 099. To say that MAT 051 is equivalent to MAT 090, or MAT 095, or MAT 099 is not accurate. Instead, this course pulls targeted content from these developmental courses towards the goal of just-in- time remediation before MAT 121 Topics in Mathematics topics are covered. Please indicate if this course will serve as any of the following types of electives Elective (any college level course can serve as an elective) Specific Type (indicate Business, Multiple Perspectives*, Liberal Arts, Humanities, Foreign Language, Social Science, Behavioral Science, Mathematics, Science, Lab Science, Social Science Foundational*, Literature, Philosophy or Language*, Creative Arts* ) Program specific (name the program)					
*confer with the Liberal Arts Coordinator					
N/A					

Is this course required for a program? If yes, submit a separate DEGREE OR CERTIFICATE REVISION PROPOSAL. If the course is required for a new program, submit a separate NEW DEGREE, OPTION OR CERTIFICATE PROPOSAL. Please list all affected programs here.

N/A

Expected enrollment per term: 100s	Expected enrollment per year: 100s
Will any of the following be required:	

Additional staff _____ Additional space_____Additional equipment______Additional library resources ____

Provide a rationale for any needs indicated above and include approximate cost of equipment.

Students taking this course require remediation in high school level math concepts that support the MAT 121 Topics in Mathematics course. Student support for this course is critical. Embedded (peer) tutors in the classroom will be an important contribution towards the type of support these students will need. The plan is to incorporate Math Center tutors as embedded tutors in each corequisite section of MAT 121 Topics in Mathematics. We estimate that staffing for embedded tutors to be approximately \$600 per section offered. Initially we will offer 4-6 sections for a total cost of \$2400-\$3000.

## **Course Materials**

Lecture Hours: 2 hours	Lab Hours:	Clinic Hours:				
		the college catalog (including <b>course</b>				
three letter designation and number, title, credits, semesters offered and prerequisites/corequisites):						
MAT 051 Topics in Mathematic		e to ourport students enrolled in MAT				
121. Students apply remedial ma		s to support students enrolled in MAT				
		equations to strengthen comprehension				
of college level topics in MAT 12						
Credits: 2	·					
Corequisite: MAT 121						
Semester Offered: F/S/SU	<b>x</b> 1 <b>x</b>					
Lecture Hours per semester:	Lab Hours per semester:	Clinic Hours or Internship Hours				
(e.g., 45 hr. for 3 credit course) <b>30 hours</b>		per semester:				
	mution colocted from the E 2	checklist for course materials. Provide				
your dean with a syllabus that inc						
your deall with a synabus that his	endes an of the checklist cours	se materials.				
• All required course rea	dings (whether written or elect	ronic), includinginformation on				
*	used or website address or link	rome), merualigniformation on				
<ul> <li>Student Learning Outc</li> </ul>						
<ul> <li>Teaching procedures (briefly describe)</li> </ul>						
U I	ssignments and/or required and	l/or supplemental reading				
-	assignment(s) schedule	of supplemental feating				
	e v	le as well as criteria for evaluating				
student performance	ing and calculation of third grad	te us went us ententa for evaluating				
Statem Perior						
This course is not a stand-alone	math course. Instead, it must be	e taken concurrently with MAT 121				
		corporated directly into a MAT 121				
Topics in Mathematics syllabus (	Topics in Mathematics syllabus (see below for an example).					
-	-					
Note: Students will receive a fin	nal course grade of "Q" for <b>N</b>	AT 051, which will not affect a				

Note: Students will receive a final course grade of "Q" for MAT 051, which will not affect a student's GPA.

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome. NA – Not Applicable: This is not a learning outcome for this course.

CONNECTION TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I, M, E,
	NA
Civic Learning & Engagement: Students will develop civic knowledge, skills and dispositions	NA
through learning and practice.	
Communication Skills: Students will read, write, and speak effectively to build knowledge and	NA
convey meaning.	
Information and Digital Literacy: Students will engage in a reflective process of information	NA
discovery, use information responsibly and employ digital technologies to learn, communicate and	
collaborate.	
Intercultural Knowledge and Competence: Students will demonstrate intercultural knowledge	NA
within a variety of cultural contexts and with culturally different ideas and individuals.	
Quantitative and Scientific Reasoning: Students will apply concepts and methods of mathematics	NA
and science to acquire knowledge and solve problems.	
(C - E + C + 1 + (-1) 2020)	

(Gen. Ed. Goals adopted 2022).

#### ****CIVIC LITERACY**

If civic learning or civic literacy is a component of this course (within the course description, course topics and/or student learning outcomes), please consult the "Guide for Designating Civic Learning Courses" from the Department of Higher Education, available on Frequently Used Forms (with the other Academic Governance Forms). Utilizing the DHE definitions, please indicate whether this course can be designated as one of the following:

____Civic Learning (CL)

____Civic Learning with Engagement Required (CLER)

Civic Learning with Engagement Optional (CLEO)

<u>X</u> Civic Learning is not a component of this course (NA)

# Quinsigamond Community College School of Math and Science

## Instructor's Information

Instructor:	Professor XX (she/her/hers)
Office:	403A
Email:	xxxxx@qcc.mass.edu
Telephone:	508-854-xxxx

### Course Information

Course:	MAT 121 Topics in Mathematics – Section XX
	<ul> <li>MAT 051 Topics in Mathematics Corequisite</li> </ul>
Meets:	Tuesdays, Thursdays from 11:00am – 12:20pm and
	Fridays from 11:00am – 12:30pm
Room:	178A
Credits:	3 credits for MAT 121 + 2 credits of MAT 051 corequisite remediation
Semester:	Spring 2023

### **Course Descriptions**

MAT 121: This course explores a variety of topics in contemporary mathematics. These topics include problem solving and critical thinking, personal finance, numeration systems, set theory, counting principles and probability theory, and voting methods.

MAT 051: This course covers various topics in developmental mathematics to support students enrolled in MAT 121 Topics in Mathematics. Students apply remedial mathematics topics such as fractions, decimals, percent, order of operations, scientific notation, exponential notation, and solving equations to strengthen comprehension of college-level topics in MAT 121. This course requires co-enrollment with MAT 121 Topics in Mathematics.

## MAT 121 Prerequisite or Corequisite

Prerequisite: College-level mathematics course or QMAT placement score > 21 or appropriate multiple measures placement OR Corequisite: MAT 051 Topics in Mathematics Corequisite

## Required Textbook/Materials/Website

Textbook:Thinking Mathematically, Blitzer, 7th Edition, Pearson Education, © 2019.Materials:Graphing calculator (recommended) or scientific calculatorWebsite:MyLabMath (required)

## Student Learning Outcomes

Students will be able to:

- 1. Apply deductive or inductive reasoning appropriately to solve mathematical problems.
- 2. Apply set theory to perform operations with sets and model them using Venn diagrams.
- 3. Convert numbers from one base to another and perform operations with numbers in different bases.
- 4. Evaluate factorial expressions, permutations, combinations, and compute probabilities.
- 5. Determine present value, future value, value of an annuity and apply them to real-life situations like finding mortgage payments, car payments, and pension plans.
- 6. Apply different voting methods to determine an election's winner.

## Corequisite Model

This particular course contains college-level math topics along with just-in-time remediation of particular developmental math topics to support the necessary learning of these math topics. For example, before probability is covered, students will spend time learning/reviewing how to appropriately round decimals, simplify fractions, and perform math operations with fractions. The remediation topics are specifically chosen to help students be successful in the college-level math material. To cover these remediation topics, extra time is required in class. Therefore, two (2) extra credit hours are required as a corequisite to the 3-credit Topics in Mathematics course.

## Just-in-Time Remediation Topics Include:

- Rounding decimals
- Simplify fractions
- Change fractions to decimals and vice versa
- Learn the relationship between percents, decimals, and fractions
- Slope as rate of change
- Number sense
- Exponential notation
- Order of operations
- Solve an equation for an unknown variable
- Inequality notation
- Discrete phrasing, specifically regarding phrases such as
  - o "at least two"
  - o "at most two"

## Course Topics & Required Assignments/Readings

#### Problem Solving and Critical Thinking

- Inductive and Deductive Reasoning
- Estimation, Graphs, and Mathematical Models
- Problem Solving

#### <u>Set Theory</u>

- Basic Set Concepts
- Subsets
- Venn Diagrams and Set Operations
- Set Operations and Venn Diagrams with Three Sets

#### • Survey Problems

Counting Methods and Probability Theory

- The Fundamental Counting Principle
- Permutations
- Combinations
- Fundamentals of Probability
- Probability with the Fundamental Counting Principle, Permutations, and Combinations
- Events Involving Not and Or; Odds

#### Personal Finance

- Percent, Sales Tax, and Discounts
- Simple Interest
- Compound Interest
- Annuities, Methods of Saving, and Investments
- Cars
- The Cost of Home Ownership
- Credit Cards

#### Number Representation and Calculation

- Number Bases in Positional Systems
- Computation in Positional Systems

#### Voting and Apportionment

- Voting Methods
- Apportionment Methods

#### **Teaching Procedures**

Most classes will be a combination of lecture, group activities, and in-class assignments. You will be given homework assignments to be completed outside of class, with due dates/times. There will occasionally be a quiz or exam given in class.

#### Grading Breakdown

- 20% Homework
- 10% Quizzes
- 5% Attendance
- 40% Exams
- 25% Final Exam

Grade	Range	Grade	Range	Grade	Range
А	95 – 100	В —	80 - 82	D +	67 – 69
A –	90 – 94	C +	77 – 79	D	63 – 66
B +	87 – 89	С	73 – 76	D –	60 - 62
В	83 - 86	C –	70 – 72	F	0 – 59

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**Contact Information for Student Accessibility Services (SAS):** Call: 508-854-4471

Sorenson Video Phone: 508-502-7647 Email: <u>disabilityservices@qcc.mass.edu</u>

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The School of Math and Science is motivated to teach and learn from the diverse community we have at QCC. In Science, Technology, Engineering, and Mathematics (STEM), it is advantageous to approach problems from multiple perspectives. The power of diversity, equity and inclusion allows us to persevere and overcome challenges.

The faculty of the School of Math and Science pledge to help students meet the demands of STEM regardless of race/ethnicity, gender identity and expression, sexual orientation, faith, abilities/disabilities, age, socioeconomic background, political leaning, ancestry, national origin, home language and all other identities. We are dedicated to nurturing a culture of collaboration, mutual respect and understanding; and to empowering members of our community to embrace their full potential.

## Academic Honesty and Plagiarism

Our purpose of education is to seek the truth; this work requires trust and honesty between teacher and student. If we are not honest about what we know and don't know, our learning will always be impaired. Because our teaching and learning depends on this honest communication, we expect all students to understand what plagiarism is and why it is unacceptable.

Plagiarism means taking someone else's ideas or words and presenting them as one's own. The offense can take many forms including cheating on a test, passing in a paper taken from the Internet or from another student, or failing to properly use and credit sources in an essay. Sometimes the issue is subtle, involving

getting too much help on an assignment from someone else. In every instance, plagiarism means cheating both oneself and the owner of the source. Since cheating sabotages a student's learning experience, consequences range from no credit for the assignment to failure for the course and possible expulsion from the college.

The penalty for getting caught cheating in this course is a failure of the quiz or test, or failure of the entire course. This is solely at the discretion of the instructor.

For further information concerning plagiarism, refer to the QCC Student Handbook.

## Math Center & QCC Math YouTube Channel

The Math Center provides free, drop-in tutoring assistance for students in any QCC mathematics course. Located on the second floor of the Harrington Learning Center (HLC), the Math Center is a welcoming place where students have the opportunity to work collaboratively with tutors and classmates. Students can work intensively to improve their mathematical skills or simply drop by to ask a few questions. In addition to tutoring, the Math Center houses various math-related resources, and computers and software for math coursework. Visit their website for details and the semester schedule: <u>https://www.qcc.edu/services/tutoring/math-center</u>

For further help, visit the QCC Math YouTube channel. This channel has a playlist specifically for this course, with many short videos created with students like you in mind, covering many of the topics in this course: <u>https://www.youtube.com/user/QCCmath</u>

## MAT 121 Topics in Mathematics (w/ Coreq Topics) – Assignment and Test Schedule

Week 1 & 2:	Syllabus Review Growth Mindset Class expectations	MyLab introduction Embedded tutor Course management – anxiety, time management, support
Maak 2	MAT 121	MAT 051 (just-in-time remediation)
Week 3:	Sections 1.1, 1.2 Sections 1.2, 1.3	Rounding decimals Slope as Rate of Change
Week 4:	Quiz 1 Sections 2.1, 2.2	Inequality notation Determine intersection, union, and complement of two sets
Week 5:	Sections 2.3, 2.4 Section 2.5 Quiz 2	Discrete Phrasing
Week 6:	Exam Review Exam 1 (Ch 1, 2)	
	Section 4.2	Exponential notation and scientific notation
Week 7:	Section 4.3	Inequality symbols and notation

	Quiz 3 Section 13.1	Review rounding decimals
Week 8:	Section 13.2 Exam Review <b>Exam 2 (Ch 4, 13)</b>	Change fractions to decimals
Week 9:	Sections 8.1, 8.3 Sections 8.4, 8.5 Section 8.6	Reading/understanding/plugging values into financial formulas Order of operations Solving an equation for an unknown
Week 10:	Quiz 5 Section 8.7, 8.8 Exam Review	
Week 11:	Exam 3 (Ch 8) Sections 11.1, 11.2	Relationship between decimals and fractions
Week 12:	Sections 11.3, 11.4 Sections 11.5, 11.6	Simplifying fractions Review plugging values into formulas and solving for an unknown
Week 13:	Quiz 6 Exam Review	
Week 14:	<b>Exam 4 (Ch 11)</b> Final Exam Review	
Week 15:	Final Exam	

## **NEW COURSE PROPOSAL**

1.	Course Number and Name: MAT 052 Statistics Corequisite		
2.	Originator: Ulises Poyser, Math Dept	Date: Sept 12, 2022	
3.	School Dean: Ben Benton, School of Math & Science	<b>Date:</b> October 1, 2022	
4.	Effective Date: Fall 2023		
5.	Reviewed by Program and Process (if applicable)	Date: November 7, 2022	
6.	Recommended by the School of Comments:	Date:	
7.	AA Leadership Team:	Date:	
	Recommended: Not Recommended: Comments:		
8.	VP/Academic Affairs:	Date:	
	Recommended: Not Recommended: Comments:		
9.	Learning Council: Recommended: Not Recommended:		
10.	Comments: VP/Academic Affairs:	Date:	
	Approved:      Comments:   Not Approved:		

## **NEW COURSE PROPOSAL**

Course Discipline/Department: Mathematics School: Math & Science
Course Number: MAT 052
Course Name: Statistics Corequisite
Prerequisites and/or corequisites (confer with affected department coordinator):
Corequisite: MAT 122
CIP code (check with IRaP Office): 27.0501
Effective Term/year: Fall 2023
Give a rationale for the new course. Be sure to indicate whether this course replaces another course. Is the
course transferable?
• The sole purpose of this course is to cover remediation math topics in a just-in-time format
towards the successful completion of MAT 122 Statistics.
• This course <b>must</b> be taken as a corequisite with MAT 122 Statistics.
• This is <b>not</b> a stand-alone course. Instead, it is integrated with the MAT 122 Statistics content.
• This course is a developmental math course and is not transferable.
• This course does not replace any current (as of Spring 2023) math course.
• Two different "versions" of MAT 122 will be offered:
• Version 1: 3-credit "traditional" course, which does not cover remediation topics
<ul> <li>Version 2: 3-credit + 2-credit corequisite course (MAT 052), which includes just-in-time remediation topics</li> </ul>
<ul> <li>Placement into MAT 122:</li> </ul>
• Students are eligible to take "Version 1" of MAT 122 (3 credits only) and are not
required to take the corequisite course MAT 052 (but are allowed to if they so choose) if:
• the student passes a college-level math course <i>or</i>
the student has a QMAT placement score > 21
• Students who do not meet the criteria to take "Version 1" should register for "Version 2".
These students must also register for MAT 052 Statistics Corequisite and will pay for 2
extra credit hours of just-in-time remediation.
Is the course content similar to other courses now offered? Yes $\underline{\checkmark}$ No
If yes, attach a statement from the coordinator of the department offering the similar course.
This source contains new mothematical tanics (chiesting summaths sourced in MAT 000, MAT 005, and
This course contains <i>some</i> mathematical topics/objectives currently covered in MAT 090, MAT 095, and MAT 099. To say that MAT 052 is equivalent to MAT 090, or MAT 095, or MAT 099 is not accurate.
Instead, this course draws targeted content from these developmental courses, as well as developmental
material that is <i>not</i> specifically covered in any of these courses, towards the goal of just-in-time
remediation before MAT 122 Statistics topics are covered.
Please indicate if this course will serve as any of the following types of electives
Elective (any college level course can serve as an elective)
Specific Type (indicate Business, Multiple Perspectives*, Liberal Arts, Humanities, Foreign
Language, Social Science, Behavioral Science, Mathematics, Science, Lab Science, Social Science
Foundational*, Literature, Philosophy or Language*, Creative Arts*)
Program specific (name the program)
*confer with the Liberal Arts Coordinator
N/A

Is this course required for a program? If yes, submit a separate DEGREE OR CERTIFICATE REVISION PROPOSAL. If the course is required for a new program, submit a separate NEW DEGREE, OPTION OR CERTIFICATE PROPOSAL. Please list all affected programs here.

N/A

Expected enrollment per term: 100s	Expected enrollment per year: 100s

Will any of the following be required:

Additional staff _____ Additional space _____ Additional equipment ______ Additional library resources _____

Provide a rationale for any needs indicated above and include approximate cost of equipment.

Students taking this course are assumed to be mathematically non-college ready, since this course serves as a remedial corequisite for MAT 122 Statistics. With this assumption, student support is critical. Embedded (peer) tutors in the classroom will be an important contribution towards the type of support these students will need. The plan is to incorporate Math Center tutors as embedded tutors in each corequisite section of MAT 122 Statistics.

## **Course Materials**

Lecture Hours: 2 hours	Lab Hours:	Clinic Hours:
	erequisites as it will appear in the col	
three letter designation and number, title, credits, semesters offered and prerequisites/corequisites):		
MAT 052 Statistics Corequisite	in developmental mathematics to su	poort students enrolled in MAT
122. Students apply remedial math	nematics topics such as fractions, de	cimals, percent, proportion,
	of statistics concepts. This course r	
Credits: 2		
Corequisite: MAT 122		
Semester Offered: F/S/SU Lecture Hours per semester:	Lab Hours per semester:	Clinic Hours or Internship Hours
(e.g., 45 hr. for 3 credit course)	Lab Hours per semester.	per semester:
30 hours		per semester.
Provide the following course infor	mation selected from the E-2 checkl	ist for course materials. Provide
your dean with a syllabus that incl	udes all of the checklist course mate	rials.
<ul> <li>publisher and edition us</li> <li>Student Learning Outco</li> <li>Teaching procedures (bi</li> <li>Course topics and/or ass</li> <li>Tentative test schedule/a</li> </ul>	iefly describe) ignments and/or required and/or sup	plemental reading
	ath course. Instead, it must be taken terial will be incorporated directly in	•

Note: Students will receive a final course grade of "Q" for MAT 052, which will not affect a student's GPA.

syllabus (see below for an example).

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome. NA – Not Applicable: This is not a learning outcome for this course.

CONNECTION TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I, M, E,
	NA
Civic Learning & Engagement: Students will develop civic knowledge, skills and dispositions	NA
through learning and practice.	
Communication Skills: Students will read, write, and speak effectively to build knowledge and	NA
convey meaning.	
Information and Digital Literacy: Students will engage in a reflective process of information	NA
discovery, use information responsibly and employ digital technologies to learn, communicate and	
collaborate.	
Intercultural Knowledge and Competence: Students will demonstrate intercultural knowledge	NA
within a variety of cultural contexts and with culturally different ideas and individuals.	
Quantitative and Scientific Reasoning: Students will apply concepts and methods of mathematics	NA
and science to acquire knowledge and solve problems.	

(Gen. Ed. Goals adopted 2022).

#### ****CIVIC LITERACY**

If civic learning or civic literacy is a component of this course (within the course description, course topics and/or student learning outcomes), please consult the "Guide for Designating Civic Learning Courses" from the Department of Higher Education, available on Frequently Used Forms (with the other Academic Governance Forms). Utilizing the DHE definitions, please indicate whether this course can be designated as one of the following:

___Civic Learning (CL)

Civic Learning with Engagement Required (CLER)

____Civic Learning with Engagement Optional (CLEO)

<u>X</u> Civic Learning is not a component of this course (NA)

## SAMPLE SYLLABUS for a <u>Corequisite</u> Section of MAT 122

# Quinsigamond Community College School of Math and Science

## Instructor's Information

Instructor:	Professor XX (she/her/hers)
Office:	200A
Email:	xxxxx@qcc.mass.edu
Telephone:	508-854-xxxx

## **Course Information**

Course:	MAT 122 Statistics – Section XX + MAT 052 Statistics Corequisite
Meets:	Mondays, Wednesdays from 9:30am – 10:50am and
	Fridays from 9:10am – 10:40am
Room:	180A
Credits:	3 credits for MAT 122 + 2 credits of MAT 052 corequisite remediation
Semester:	Spring 2023

## **Course Descriptions**

MAT 122: This introductory statistics course covers descriptive statistics, probability, and inferential statistics. Statistical content includes sampling, graphical summaries of data, measures of center and variability, probability theory and distributions, standard and non-standard normal distributions, the Central Limit Theorem, confidence intervals, one-sample hypothesis tests, linear correlation and regression. Statistical technology is used.

MAT 052: This course covers various topics in developmental mathematics to support students enrolled in MAT 122 Statistics. Students apply remedial mathematics topics such as fractions, decimals, percent, proportion, scientific notation, coordinates, slope, graphing of linear equations, and mathematical phrasing just-in-time to strengthen comprehension of statistics concepts. This course requires co-enrollment with MAT 122 Statistics.

## Prerequisite or Corequisite

Prerequisite: College-level math or appropriate MAT 122 placement score or Corequisite: MAT 052 Statistics Corequisite

## Required Textbook/Materials/Website

Textbook: *Elementary Statistics*, by Navidi and Monk, McGraw Hill Publishing, 4th edition © 2022

Materials:Graphing calculator or MS Excel or Statistical softwareWebsite:Access to ALEKS: www.aleks.com

## Student Learning Outcomes

Students will be able to:

- 1. Accurately differentiate between population and sample.
- 2. Use graphs to summarize data.
- 3. Apply measures of center, spread, and position to describe data.
- 4. Interpret the linear relationship between bivariate data.
- 5. Describe and interpret a discrete probability distribution.
- 6. Use the Central Limit Theorem to estimate a confidence interval of a population mean or proportion.
- 7. Use the Central Limit Theorem to test a hypothesis of a population mean or proportion.

## Corequisite Model

This particular course contains the college-level Statistics course along with just-in-time remediation of particular developmental math topics to support the necessary learning of Statistics. For example, before probability is covered in Statistics, students will spend time learning/reviewing how to appropriately round decimals, or how to convert values in scientific notation to their equivalent non-scientific notation decimals. The topics of remediation are specifically chosen to help students be successful in Statistics. To cover these remediation topics, extra time is required in class. Therefore, two (2) extra credit hours are required as a corequisite to the 3-credit Statistics course.

## Just-in-Time Remediation Topics Include, but are not limited to:

- Relationship between Decimals, Percents, Fractions, Proportions
- Rounding Decimals
- Scientific Notation
- Simplifying Fractions
- Order of Operations
- Reading/Understanding/Plugging Values into and Using Statistical Formulas
- Solving an Equation for an Unknown
- Evaluating Factorials
- Determine Intersection, Union, and Complement of Two Sets
- Inequality symbols and notation
- Reading Comprehension, specifically regarding phrases such as
  - "at least two"
  - o "at most two"
  - complement of none
  - o complement of at most three
- Find the distance from the middle value of an interval to its endpoints
- Interpret ± notation
- Graph ordered pairs (coordinates)
- Find and interpret slope
- Graph a line from ordered pairs and/or from a linear equation

## Course Topics & Required Assignments/Readings

## Basic Ideas

- Sampling
- Types of Data
- Design of Experiments

## Graphical Summaries of Data

- Graphical Summaries for Qualitative Data
- Frequency Distributions and Their Graphs
- More Graphs for Quantitative Data
- Graphs Can Be Misleading

## Numerical Summaries of Data

- Measures of Center
- Measures of Spread
- Measures of Position

## Summarizing Bivariate Data

- Correlation
- The Least-Squares Regression Line

## <u>Probability</u>

- Basic Concepts of Probability
- The Addition Rule and the Rule of Complements
- Conditional Probability and the Multiplication Rule
- Counting

## **Discrete Probability Distributions**

- Random Variables
- The Binomial Distribution
- The Poisson Distribution (if time permits)

## The Normal Distribution

- The Standard Normal Curve
- Applications of the Normal Distribution
- Sampling Distributions and the Central Limit Theorem
- The Central Limit Theorem for Proportions.

## Confidence Intervals

- Confidence Intervals for a Population Mean, Standard Deviation Known
- Confidence Intervals for a Population Mean, Standard Deviation Unknown
- Confidence Intervals for a Population Proportion
- Confidence Intervals for a Standard Deviation (if time permits)
- Determining Which Method to Use

## Hypothesis Testing

- Basic Principles of Hypothesis Testing
- Hypothesis Tests for a Population Mean, Standard Deviation Known
- Hypothesis Tests for a Population Mean, Standard Deviation Unknown
- Hypothesis Tests for Proportions
- Hypothesis Tests for a Standard Deviation (if time permits)

## **Teaching Procedures**

Most classes will be a combination of lecture, group activities, and in-class assignments. You will be given homework assignments to be completed outside of class, with due dates/times. There will occasionally be a quiz or exam given in class. This course contains a statistics project and presentation.

## Grading Breakdown for MAT 122 Statistics

- 20% Homework
- 10% Quizzes
- 10% Stats Project & Presentation
- 35% Exams
- 25% Final Exam

Grade	Range	Grade	Range	Grade	Range
А	95 – 100	В —	80 - 82	D +	67 – 69
A –	90 – 94	C +	77 – 79	D	63 – 66
B +	87 – 89	С	73 – 76	D –	60 - 62
В	83 - 86	C –	70 – 72	F	0 – 59

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Plagiarism means taking someone else's ideas or words and presenting them as one's own. The offense can take many forms including cheating on a test, passing in a paper taken from the Internet or from another student, or failing to properly use and credit sources in an essay. Sometimes the issue is subtle, involving getting too much help on an assignment from someone else. In every instance, plagiarism means cheating both oneself and the owner of the source. Since cheating sabotages a student's learning experience, consequences range from no credit for the assignment to failure for the course and possible expulsion from the college.

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## MAT 122 Statistics (w/ Stats Coreq) – Assignment and Test Schedule

Week 1 & 2:	Syllabus Review Growth Mindset Class expectations	ALEKS introduction Embedded tutor Course management – anxiety, time management, support
Week 3:	MAT 122 Sections 1.1, 1.2 Sections 2.1, 2.2 Sections 2.3, 3.1	MAT 052 (just-in-time remediation) Rounding decimals Change decimals to/from fractions, percents, proportions
Week 4:	Quiz 1 Sections 3.2, 3.3 Exam Review	Order of operations Solving simple equations
Week 5:	Exam 1 (Ch 1, 2, 3) Sections 5.1, 5.2	Review fractions, decimals, proportions, percents Simplify fractions, Scientific Notation
Week 6:	Quiz 2 Section 5.4 Sections 6.1, 6.2	Evaluate factorials Discrete phrasing Review scientific notation
Week 7:	Quiz 3 Sections 7.1, 7.2 Exam Review	Inequality symbols and notation
Week 8:	Exam 2 (Ch 5, 6, 7) Sections 7.3, 7.4	Interpret $\pm$ notation, Interval distance
Week 9:	Quiz 4 Sections 8.1, 8.2, 8.3	
Week 10:	Quiz 5 Sections 9.1, 9.2, 9.3	
Week 11:	Quiz 6 Section 9.4 Exam Review <b>Exam 3 (Ch 7, 8, 9)</b>	
Week 12:	Section 4.1 Section 4.2	Ordered pairs (coordinates) Slope and graphing lines
Week 13:	Quiz 7 Stats Projects	
Week 14:	Stats Projects Final Exam Review	

Week 15: Final Exam

## **COURSE REVISION PROPOSAL**

1.	Course Number and Name: (from current AY22/23 cata	alog) MAT 121 Topics in Mathematics
2.	Originator: Sheiba Mas-Oud, Math Dept.	Date: November 12, 2022
3.	School Dean: Ben Benton, Math & Science	Date: November 14, 2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date: November 7, 2022
1.	Recommended by the School of <u>Math and Science</u> Comments: Unanimously approved	Date: 01/19/2023
2.	AA Leadership Team:	Date:
	Recommended: Not Recommended: Comments:	
3.	VP/Academic Affairs:	Date:
	Recommended: Not Recommended: Comments:	
4.	Learning Council:	Date:
	Recommended: Not Recommended: Comments:	
5.	VP/Academic Affairs:	Date:
	Approved:Not Approved:Comments:	

## **COURSE REVISION PROPOSAL**

Type of Devision
Type of Revision: <u>Description</u> $\checkmark$ Prerequisite $\checkmark$ Corequisite Number Name # Credits
Elective Type Other (explain)
Course Discipline or Department: Math School: Math & Science
Current Course Number: MAT 121
Current Course Name: Topics in Mathematics
Current Course Description (as it appears in the college catalog including course three letter designation
and number, title, credits, semesters offered and prerequisites/corequisites):
MAT 121 Topics in Mathematics
This course explores a variety of topics in contemporary mathematics. These topics include problem solving and critical thinking, personal finance, numeration systems, set theory, counting principles and probability theory, and voting methods. <b>Credits: 3</b>
Prerequisite: MAT 095 with a grade of "C" or higher or appropriate placement Semester Offered: F/S/SU
Proposed Description (include all proposed changes):
r
MAT 121 Topics in Mathematics
This course explores a variety of topics in contemporary mathematics. These topics include problem
solving and critical thinking, personal finance, numeration systems, set theory, counting principles and
probability theory, and voting methods. Credits: 3
Prerequisite: College level mathematics course or QMAT placement score > 21 or appropriate
multiple measures placement or Corequisite: MAT 051
Semester Offered: F/S/SU
Rationale for the change:
• The prerequisite/corequisite change is necessary to reflect the removal of the stand-alone course
of MAT 095 as a prerequisite and to reflect the addition of a corequisite modality for students
who do not place into the non-corequisite MAT 121 course.
• Two different "versions" of MAT 121 will be offered:
<ul> <li><i>Version 1</i>: 3-credit "traditional" course, which does not cover remediation topics</li> <li><i>Version 2</i>: 3-credit + 2-credit corequisite course (MAT 051), which includes just-in-time</li> </ul>
remediation topics
• Placement into MAT 121:
• Students are eligible to take "Version 1" of MAT 121 (3 credits only) and are not
required to take the corequisite course MAT 051 (but are allowed to if they so choose) if:
<ul> <li>the student passes a college-level math course or</li> </ul>
the student has a QMAT placement score > 21or
<ul> <li>the student has a QMAT placement score &gt; 21or</li> <li>the student meets the appropriate multiple-measure placement</li> </ul>
<ul> <li>the student has a QMAT placement score &gt; 21or</li> <li>the student meets the appropriate multiple-measure placement</li> <li>Students who do not meet the criteria to take "Version 1" should register for "Version 2".</li> </ul>
<ul> <li>the student has a QMAT placement score &gt; 21or</li> <li>the student meets the appropriate multiple-measure placement</li> <li>Students who do not meet the criteria to take "Version 1" should register for "Version 2". These students must also register for MAT 051 Topics in Mathematics Corequisite and</li> </ul>
<ul> <li>the student has a QMAT placement score &gt; 21or</li> <li>the student meets the appropriate multiple-measure placement</li> <li>Students who do not meet the criteria to take "Version 1" should register for "Version 2". These students must also register for MAT 051 Topics in Mathematics Corequisite and will pay for 2 extra credit hours of just-in-time remediation.</li> </ul>
<ul> <li>the student has a QMAT placement score &gt; 21or</li> <li>the student meets the appropriate multiple-measure placement</li> <li>Students who do not meet the criteria to take "Version 1" should register for "Version 2". These students must also register for MAT 051 Topics in Mathematics Corequisite and</li> </ul>

• The course content of MAT 121 does *not* change. However, if a student takes a corequisite section of MAT 121 (concurrent with MAT 051 Topics in Mathematics Corequisite), then

remediation topics will be provided in a just-in-time modality in addition to the course content of MAT 121.

- Students taking the corequisite "Version 2" of this course will cover the following remediation topics:
  - Rounding decimals
  - Simplify fractions
  - Change fractions to decimals and vice versa
  - Learn the relationship between percents, decimals, and fractions
  - Slope as rate of change
  - Number sense
  - Exponential notation
  - Order of operations
  - Solve an equation for an unknown variable
  - o Inequality notation
  - Discrete phrasing
- For example:
  - o inequality notation and discrete phrasing will be covered immediately before set theory
  - rounding decimals and simplifying fractions will be covered immediately before probability
  - order of operations and solving equations will be covered immediately before personal finance
  - number sense and exponential notation will be covered immediately before number bases and computation in positional systems
  - rounding decimals and changing fractions to decimals will be covered/review immediately before apportionment methods

List the programs that are affected by this change (list program names and program codes as they appear in the college catalog):

Programs that specifically mention MAT 121 as part of their curriculum:

GS General Studies

- GSDS General Studies Deaf Studies Option
- LASO Liberal Arts Sociology Option
- RT Radiologic Technology
- CJTR Criminal Justice Transfer Option (mentioned only in Milestones as MAT Elective recommendation)

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (with changes in **bold**) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

# Quinsigamond Community College School of Math and Science

Instructor's Information

Instructor:	Professor XX (she/her/hers)
Office:	403A
Email:	xxxxx@qcc.mass.edu
Telephone:	508-854-xxxx

#### **Course Information**

Course:	MAT 121 Topics in Mathematics – Section XX
	+ MAT 051 Topics in Mathematics Corequisite
Meets:	Tuesdays, Thursdays from 11:00am – 12:20pm and
	Fridays from 11:00am – 12:30pm
Room:	178A
Credits:	3 credits for MAT 121 + 2 credits of MAT 051 corequisite remediation
Semester:	Spring 2023

#### **Course Descriptions**

MAT 121: This course explores a variety of topics in contemporary mathematics. These topics include problem solving and critical thinking, personal finance, numeration systems, set theory, counting principles and probability theory, and voting methods.

MAT 051: This course covers various topics in developmental mathematics to support students enrolled in MAT 121 Topics in Mathematics. Students apply remedial mathematics topics such as fractions, decimals, percent, order of operations, scientific notation, exponential notation, and solving equations to strengthen comprehension of college-level topics in MAT 121. This course requires co-enrollment with MAT 121 Topics in Mathematics.

## MAT 121 Prerequisite or Corequisite

Prerequisite: College-level mathematics course or QMAT placement score > 21 or appropriate multiple measures placement OR Corequisite: MAT 051 Topics in Mathematics Corequisite

#### Required Textbook/Materials/Website

Textbook:	Thinking Mathematically, Blitzer, 7 th Edition, Pearson Education, © 2019.
Materials:	Graphing calculator (recommended) or scientific calculator
Website:	MyLabMath (required)

## Student Learning Outcomes

#### Students will be able to:

- 1. Apply deductive or inductive reasoning appropriately to solve mathematical problems.
- 2. Apply set theory to perform operations with sets and model them using Venn diagrams.
- 3. Convert numbers from one base to another and perform operations with numbers in different bases.
- 4. Evaluate factorial expressions, permutations, combinations, and compute probabilities.
- 5. Determine present value, future value, value of an annuity and apply them to real-life situations like finding mortgage payments, car payments, and pension plans.
- 6. Apply different voting methods to determine an election's winner.

### Corequisite Model

This particular course contains college-level math topics along with just-in-time remediation of particular developmental math topics to support the necessary learning of these math topics. For example, before probability is covered, students will spend time learning/reviewing how to appropriately round decimals, simplify fractions, and perform math operations with fractions. The remediation topics are specifically chosen to help students be successful in the college-level math material. To cover these remediation topics, extra time is required in class. Therefore, two (2) extra credit hours are required as a corequisite to the 3-credit Topics in Mathematics course.

#### Just-in-Time Remediation Topics Include:

- Rounding decimals
- Simplify fractions
- Change fractions to decimals and vice versa
- Learn the relationship between percents, decimals, and fractions
- Slope as rate of change
- Number sense
- Exponential notation
- Order of operations
- Solve an equation for an unknown variable
- Inequality notation
- Discrete phrasing, specifically regarding phrases such as
  - o "at least two"
  - o "at most two"

## Course Topics & Required Assignments/Readings

#### Problem Solving and Critical Thinking

- Inductive and Deductive Reasoning
- Estimation, Graphs, and Mathematical Models
- Problem Solving

#### Set Theory

- Basic Set Concepts
- Subsets
- Venn Diagrams and Set Operations
- Set Operations and Venn Diagrams with Three Sets
- Survey Problems

Counting Methods and Probability Theory

- The Fundamental Counting Principle
- Permutations
- Combinations
- Fundamentals of Probability
- Probability with the Fundamental Counting Principle, Permutations, and Combinations
- Events Involving Not and Or; Odds

#### Personal Finance

- Percent, Sales Tax, and Discounts
- Simple Interest
- Compound Interest
- Annuities, Methods of Saving, and Investments
- Cars
- The Cost of Home Ownership
- Credit Cards

Number Representation and Calculation

- Number Bases in Positional Systems
- Computation in Positional Systems

Voting and Apportionment

- Voting Methods
- Apportionment Methods

#### **Teaching Procedures**

Most classes will be a combination of lecture, group activities, and in-class assignments. You will be given homework assignments to be completed outside of class, with due dates/times. There will occasionally be a quiz or exam given in class.

#### Grading Breakdown

20%	Homework
10%	Quizzes
5%	Attendance
40%	Exams
25%	Final Exam

Grade	Range	Grade	Range	Grade	Range
А	95 – 100	В —	80 - 82	D +	67 – 69
A –	90 – 94	C +	77 – 79	D	63 – 66
B +	87 – 89	С	73 – 76	D –	60 - 62
В	83 - 86	C –	70 – 72	F	0 – 59

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The School of Math and Science is motivated to teach and learn from the diverse community we have at QCC. In Science, Technology, Engineering, and Mathematics (STEM), it is advantageous to approach problems from multiple perspectives. The power of diversity, equity and inclusion allows us to persevere and overcome challenges.

The faculty of the School of Math and Science pledge to help students meet the demands of STEM regardless of race/ethnicity, gender identity and expression, sexual orientation, faith, abilities/disabilities, age, socioeconomic background, political leaning, ancestry, national origin, home language and all other identities. We are dedicated to nurturing a culture of collaboration, mutual respect and understanding; and to empowering members of our community to embrace their full potential.

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	•	
Week 1 & 2:	Syllabus Review	MyLab introduction
	Growth Mindset	Embedded tutor
	Class expectations	Course management – anxiety, time management, support
	<u>MAT 121</u>	MAT 051 (just-in-time remediation)
Week 3:	Sections 1.1, 1.2	Rounding decimals
	Sections 1.2, 1.3	Slope as Rate of Change
Week 4:	Quiz 1	Inequality notation
	Sections 2.1, 2.2	Determine intersection, union, and complement of two sets
Week 5:	Sections 2.3, 2.4 Section 2.5 Quiz 2	Discrete Phrasing
Week 6:	Exam Review <b>Exam 1 (Ch 1, 2)</b> Section 4.2	Exponential notation and scientific notation
	Jection 4.2	
Week 7:	Section 4.3 Quiz 3	Inequality symbols and notation
	Section 13.1	Review rounding decimals
Week 8:	Section 13.2 Exam Review <b>Exam 2 (Ch 4, 13)</b>	Change fractions to decimals
Week 9:	Sections 8.1, 8.3 Sections 8.4, 8.5 Section 8.6	Reading/understanding/plugging values into financial formulas Order of operations Solving an equation for an unknown

Week 10:	Quiz 5 Section 8.7, 8.8 Exam Review	
Week 11:	Exam 3 (Ch 8)	
	Sections 11.1, 11.2	Relationship between decimals and fractions
Week 12:	Sections 11.3, 11.4	Simplifying fractions
	Sections 11.5, 11.6	Review plugging values into formulas and solving for an unknown
Week 13:	Quiz 6	
	Exam Review	
Week 14:	Exam 4 (Ch 11)	
	Final Exam Review	
Week 15:	Final Exam	

## Quinsigamond Community College School of Math and Science

#### Instructor's Information

Instructor:	Professor XX (she/her/hers)
Office:	403A
Email:	xxxxx@qcc.mass.edu
Telephone:	508-854-xxxx

#### Course Information

Course:	MAT 121 Topics in Mathematics – Section XX
Meets:	Mondays and Wednesdays from 11:00am – 12:15pm
Room:	179A
Credits:	3 credits
Semester:	Spring 2023

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#### Prerequisite or Corequisite

Prerequisite: College-level mathematics course or QMAT placement score > 21 or appropriate multiple measures placement OR Corequisite: MAT 051 Topics in Mathematics Corequisite

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- Venn Diagrams and Set Operations
- Set Operations and Venn Diagrams with Three Sets
- Survey Problems

#### Counting Methods and Probability Theory

- The Fundamental Counting Principle
- Permutations
- Combinations
- Fundamentals of Probability
- Probability with the Fundamental Counting Principle, Permutations, and Combinations.

#### Personal Finance

- Percent, Sales Tax, and Discounts
- Simple Interest
- Compound Interest
- Annuities, Methods of Saving, and Investments
- Cars
- The Cost of Home Ownership
- Credit cards

Number Representation and Calculation

- Number Bases in Positional Systems
- Computation in Positional Systems

#### Voting and Apportionment

- Voting Methods
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#### MAT 121 Topics in Mathematics – Assignment and Test Schedule

Week 1:	Syllabus Review	MyLab introduction Growth Mindset
	Class expectations	Course management – anxiety, time management, support
Week 2:	Sections 1.1, 1.2, 1.3	
Week 3:	Quiz 1 Sections 2.1, 2.2	
Week 4:	Sections 2.3, 2.4, 2.5 Quiz 2	
Week 5:	Exam Review <b>Exam 1 (Ch 1, 2)</b> Section 4.2	
Week 6:	Section 4.3 Quiz 3 Section 13.1	

Week 7:	Section 13.2 Exam Review <b>Exam 2 (Ch 4, 13)</b>
Week 8:	Sections 8.1, 8.3, 8.4
Week 9:	Quiz 5 Sections 8.5, 8.6, 8.7
Week 10:	Section 8.8 Quiz 6 Exam Review
Week 11:	$E_{\text{Yam}} 2 (Ch 8)$
Week 11.	Exam 3 (Ch 8) Sections 11.1, 11.2
Week 12:	
	Sections 11.1, 11.2
Week 12:	Sections 11.1, 11.2 Sections 11.3, 11.4, 11.5 Section 11.6 Quiz 6

#### 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

### **COURSE REVISION PROPOSAL**

1.	<b>Course Number and Name:</b> MAT 122 Statistics (from current AY22/23 catalog)	
2.	Originator: Ulises Poyser, Math Dept.	Date: Sept. 23, 2022
3.	School Dean: Ben Benton, Math & Science	<b>Date:</b> October 1, 2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date: November 7, 2022
1.	Recommended by the School of <u>Math and Science</u> Comments: Unanimously approved	Date: <u>01/19/2023</u>
2.	AA Leadership Team:	Date:
	Recommended: Not Recommended: Comments:	
3.	VP/Academic Affairs:	Date:
	Recommended: Not Recommended: Comments:	
4.	Learning Council:	Date:
	Recommended: Not Recommended: Comments:	
5.	VP/Academic Affairs:	Date:
	Approved: Not Approved: Comments:	

#### **2022 - 2023** QUINSIGAMOND COMMUNITY COLLEGE

### **COURSE REVISION PROPOSAL**

Type of Revision:		
$\underline{\checkmark}$ Description $\underline{\checkmark}$ Prerequisite $\underline{\checkmark}$ Corequisite Number Name # Credits		
Elective TypeOther (explain)		
Course Discipline or Department: Math School: Math & Science		
Current Course Number: MAT 122		
Current Course Name: Statistics		
Current Course Description (as it appears in the college catalog including course three letter designation		
and number, title, credits, semesters offered and prerequisites/corequisites):		
MAT 122 Statistics		
This course covers the essentials of statistics. Students learn descriptive and inferential statistics; charts		
(histograms, frequency polygons, ogives, and pie charts); measures of central tendency (mean, median,		
mode, and weighted mean); and measures of dispersion (range, variance, and standard deviation).		
Additional areas of study include discrete and continuous random variables; basic probability theory; the		
binomial distribution and its application in binomial experiments; standard and non-standard normal		
distributions; the Central Limit Theorem; confidence intervals for means, proportions, and variances; linear correlation and regression; and the one sample hypotheses test for mean (large and small sample),		
proportions, and variances.		
Credits: 3		
Prerequisite: MAT 095 with a grade of "C" or higher or appropriate placement		
Semester Offered: F/S/SU		
Proposed Description (include all proposed changes):		
MAT 122 Statistics		
This introductory statistics course covers descriptive statistics, probability, and inferential statistics.		
Statistical content includes sampling, graphical summaries of data, measures of center and variability,		
probability theory and distributions, standard and non-standard normal distributions, the Central Limit		
Theorem, confidence intervals, one-sample hypothesis tests, linear correlation and regression. Statistical		
technology is used.		
Credits: 3		
Prerequisite: College level mathematics course or QMAT placement score > 21 or Corequisite: MAT 052		
Semester Offered: F/S/SU		
Rationale for the change:		
• The course description for MAT 122 needs updating. Portions of it are too specific, forcing the		
offering of the course to cover outdated topics.		
• The new course description is in line with the recommended topics outlined by the MA Board of Higher Education in 2018 (see attached document), ensuring its transferability.		
<ul> <li>The new course description allows for consistency of the use of statistical technology across all</li> </ul>		
sections of the course.		
• The prerequisite/corequisite change is necessary to reflect the removal of the stand-alone course		
of MAT 095 as a prerequisite and to reflect the addition of a corequisite modality for students		
who do not place into the non-corequisite MAT 122 course.		
<ul> <li>Two different "versions" of MAT 122 will be offered:</li> </ul>		

- Version 1: 3-credit "traditional" course, which does not cover remediation topics
- *Version 2*: 3-credit + 2-credit corequisite course (MAT 052), which includes just-in-time remediation topics
- Placement into MAT 122:

0	Students are eligible to take "Version 1" of MAT 122 (3 credits only) and are not
	required to take the corequisite course MAT 052 (but are allowed to if they so choose) if:
	<ul> <li>the student passes a college-level math course or</li> </ul>
	• the student has a QMAT placement score $> 21$
0	Students who do not meet the criteria to take "Version 1" should register for "Version 2".
	These students must also register for MAT 052 Statistics Corequisite and will pay for 2
	extra credit hours of just-in-time remediation.
Provide a desc	ription of any change in course content.
• The or	burse content of MAT 122 does <i>not</i> change. However, if a student takes a corequisite MAT
	ction (with MAT 052 Statistics Corequisite), then remediation topics will be provided in a
	-time modality in addition to the course content of MAT 122.
-	the taking the corequisite "Version 2" of this course will cover the following remediation
topics:	
0	Rounding decimals
0	Simplify fractions
0	Change fractions to decimals and vice versa
0	Learn the relationship between percents, decimals, fractions, and proportions
0	Order of operations
0	Solve a simple linear equation
0	Graphing ordered pairs (coordinates) and graphing linear equations
0	Scientific notation
0	Inequality notation
0	Discrete phrasing
0	Interpret $\pm$ notation and interval distance
• For ex	ample:
0	rounding decimals will be covered immediately before finding a mean and/or a standard
	deviation
0	simplifying fractions and scientific notation will be covered immediately before probability
0	graphing coordinates and linear equations will be covered immediately before linear correlation and regression
0	discrete phrasing will be covered immediately before discrete probability distributions
0	scientific notation will be reviewed before covering discrete and normal probabilities
0	proportions will be covered/reviewed immediately before confidence intervals and
	hypothesis testing
0	$\pm$ notation will be covered immediately before confidence intervals
List the progra	ms that are affected by this change (list program names and program codes as they appear
in the college of	catalog):
-	<i>mention</i> MAT 122 as a recommendation to meet the Mathematics Elective requirement, but
	d by the proposed changes to MAT 122.
Code	Program Name
BB BBAP	Business Administration Career Business Administration Career – Administrative Professional Option
BAC	Business Administration Career – Administrative Professional Option Business Administration Certificate
CJTR	Criminal Justice – Transfer Option
MP	Manufacturing Technology
	specifically mention MAT 122 as part of their curriculum:
Code	Program Name
BT	Business Administration Transfer
CIES	Computer Information Systems – Career – Enterprise Information Systems
CIHI	Computer Information Systems – Health Information Option

DS	Data Science Certificate (new certificate, eff. FA23 – see Academic
	Matters 11/08/2022)
GS	General Studies
GSBT	General Studies – Biotechnology Option
GSDS	General Studies – Deaf Studies Option
GSPH	General Studies – Pre-Pharmacy Option
HLC	Healthcare
HCPN	Healthcare – Practical Nursing
HCNU	Healthcare – Pre-Nursing Option
HCPL	Healthcare – Public Health Option
LABI	Liberal Arts – Biology Option
LAES	Liberal Arts – Environmental Science Option
LAPY	Liberal Arts – Psychology Option
LASO	Liberal Arts – Sociology Option
LOGC	Logistics/Supply Chain Management Certificate
MPQ	Manufacturing Technology – Quality Control Option
MSMA	Medical Support Specialist – Medical Assisting Option
RT	Radiologic Technology
Please confer	r with the coordinator of the affected department.
Attach curren	nt and proposed academic maps (with changes in <b>bold</b> ) for all affected programs. You can
obtain acada	mic maps from Barh Zahka

obtain academic maps from Barb Zabka. Please submit a generic syllabus to your dean with all of the revisions included.

# Quinsigamond Community College School of Math and Science

### Instructor's Information

Instructor:	Professor XX (she/her/hers)
Office:	200A
Email:	xxxxx@qcc.mass.edu
Telephone:	508-854-xxxx

#### **Course Information**

Course:	MAT 122 Statistics – Section XX + MAT 052 Statistics Corequisite
Meets:	Mondays, Wednesdays from 9:30am – 10:50am and
	Fridays from 9:10am – 10:40am
Room:	180A
Credits:	3 credits for MAT 122 + 2 credits of MAT 052 corequisite remediation
Semester:	Spring 2023
Credits:	180A 3 credits for MAT 122 + 2 credits of MAT 052 corequisite remediation

#### **Course Descriptions**

MAT 122: This introductory statistics course covers descriptive statistics, probability, and inferential statistics. Statistical content includes sampling, graphical summaries of data, measures of center and variability, probability theory and distributions, standard and non-standard normal distributions, the Central Limit Theorem, confidence intervals, one-sample hypothesis tests, linear correlation and regression. Statistical technology is used.

MAT 052: This course covers various topics in developmental mathematics to support students enrolled in MAT 122 Statistics. Students apply remedial mathematics topics such as fractions, decimals, percent, proportion, scientific notation, coordinates, slope, graphing of linear equations, and mathematical phrasing just-in-time to strengthen comprehension of statistics concepts. This course requires co-enrollment with MAT 122 Statistics.

#### Prerequisite or Corequisite

Prerequisite: College-level math or appropriate MAT 122 placement score or Corequisite: MAT 052 Statistics Corequisite

#### Required Textbook/Materials/Website

Textbook: © <b>2022</b>	<i>Elementary Statistics,</i> by Navidi and Monk, McGraw Hill Publishing, 4 th edition
Materials:	Graphing calculator or MS Excel or Statistical software
Websi <b>te:</b>	Access to ALEKS: www.aleks.com

#### Student Learning Outcomes

Students will be able to:

- 1. Accurately differentiate between population and sample.
- 2. Use graphs to summarize data.
- 3. Apply measures of center, spread, and position to describe data.
- 4. Interpret the linear relationship between bivariate data.
- 5. Describe and interpret a discrete probability distribution.
- 6. Use the Central Limit Theorem to estimate a confidence interval of a population mean or proportion.
- 7. Use the Central Limit Theorem to test a hypothesis of a population mean or proportion.

#### Corequisite Model

This particular course contains the college-level Statistics course along with just-in-time remediation of particular developmental math topics to support the necessary learning of Statistics. For example, before probability is covered in Statistics, students will spend time learning/reviewing how to appropriately round decimals, or how to convert values in scientific notation to their equivalent non-scientific notation decimals. The topics of remediation are specifically chosen to help students be successful in Statistics. To cover these remediation topics, extra time is required in class. Therefore, two (2) extra credit hours are required as a corequisite to the 3-credit Statistics course.

#### Just-in-Time Remediation Topics Include, but are not limited to:

- Relationship between Decimals, Percents, Fractions, Proportions
- Rounding Decimals
- Scientific Notation
- Simplifying Fractions
- Order of Operations
- Reading/Understanding/Plugging Values into and Using Statistical Formulas
- Solving an Equation for an Unknown
- Evaluating Factorials
- Determine Intersection, Union, and Complement of Two Sets
- Inequality symbols and notation
- Reading Comprehension, specifically regarding phrases such as
  - "at least two"
  - o "at most two"
  - o complement of none
  - o complement of at most three
- Find the distance from the middle value of an interval to its endpoints
- Interpret ± notation
- Graph ordered pairs (coordinates)
- Find and interpret slope
- Graph a line from ordered pairs and/or from a linear equation

### Course Topics & Required Assignments/Readings

#### Basic Ideas

- Sampling
- Types of Data
- Design of Experiments

#### Graphical Summaries of Data

- Graphical Summaries for Qualitative Data
- Frequency Distributions and Their Graphs
- More Graphs for Quantitative Data
- Graphs Can Be Misleading

#### Numerical Summaries of Data

- Measures of Center
- Measures of Spread
- Measures of Position
- Summarizing Bivariate Data
  - Correlation
  - The Least-Squares Regression Line

#### Probability

- Basic Concepts of Probability
- The Addition Rule and the Rule of Complements
- Conditional Probability and the Multiplication Rule
- Counting

#### **Discrete Probability Distributions**

- Random Variables
- The Binomial Distribution
- The Poisson Distribution (if time permits)

#### The Normal Distribution

- The Standard Normal Curve
- Applications of the Normal Distribution
- Sampling Distributions and the Central Limit Theorem
- The Central Limit Theorem for Proportions.

#### Confidence Intervals

- Confidence Intervals for a Population Mean, Standard Deviation Known
- Confidence Intervals for a Population Mean, Standard Deviation Unknown
- Confidence Intervals for a Population Proportion
- Confidence Intervals for a Standard Deviation (if time permits)
- Determining Which Method to Use

#### Hypothesis Testing

- Basic Principles of Hypothesis Testing
- Hypothesis Tests for a Population Mean, Standard Deviation Known
- Hypothesis Tests for a Population Mean, Standard Deviation Unknown
- Hypothesis Tests for Proportions
- Hypothesis Tests for a Standard Deviation (if time permits)

#### **Teaching Procedures**

Most classes will be a combination of lecture, group activities, and in-class assignments. You will be given homework assignments to be completed outside of class, with due dates/times. There will occasionally be a quiz or exam given in class. This course contains a statistics project and presentation.

#### Grading Breakdown for MAT 122 Statistics

87 – 89

83 - 86

20%	Hom	ework				
10%	Quiz	zes				
10%	Stats	Project & Presentation				
35%	Exam	IS				
25%	Final	Exam				
25%	Final Grade	Exam Range	Grade	Range	Grade	Range
25% - -		-	<b>Grade</b> B –	<b>Range</b> 80 – 82	<b>Grade</b> D +	<b>Range</b> 67 – 69

С

С-

#### **Attendance Policy**

B +

В

Students are expected to attend all classes, for the entire period. Attendance will be taken during every class and counts towards your final course grade. If you are absent from class, proper documentation will excuse your absence.

73 – 76

70 - 72

D –

F

60 - 62

0 - 59

#### Accessibility Statement

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Contact Information for Student Accessibility Services (SAS): Call: 508-854-4471

Sorenson Video Phone: 508-502-7647 Email: <u>disabilityservices@qcc.mass.edu</u>

#### Services for Veterans

If you are a veteran of the US Armed Forces, please visit the Veteran Affairs Office located in 258A (Administration Building) or contact them at <u>veteranaffairs@qcc.mass.edu</u>.

### Diversity, Equity, and Inclusion Statement for the School of Math & Science

The School of Math and Science is motivated to teach and learn from the diverse community we have at QCC. In Science, Technology, Engineering, and Mathematics (STEM), it is advantageous to approach problems from multiple perspectives. The power of diversity, equity and inclusion allows us to persevere and overcome challenges.

The faculty of the School of Math and Science pledge to help students meet the demands of STEM regardless of race/ethnicity, gender identity and expression, sexual orientation, faith, abilities/disabilities, age, socioeconomic background, political leaning, ancestry, national origin, home language and all other identities. We are dedicated to nurturing a culture of collaboration, mutual respect and understanding; and to empowering members of our community to embrace their full potential.

#### Academic Honesty and Plagiarism

Our purpose of education is to seek the truth; this work requires trust and honesty between teacher and student. If we are not honest about what we know and don't know, our learning will always be impaired. Because our teaching and learning depends on this honest communication, we expect all students to understand what plagiarism is and why it is unacceptable.

Plagiarism means taking someone else's ideas or words and presenting them as one's own. The offense can take many forms including cheating on a test, passing in a paper taken from the Internet or from another student, or failing to properly use and credit sources in an essay. Sometimes the issue is subtle, involving getting too much help on an assignment from someone else. In every instance, plagiarism means cheating both oneself and the owner of the source. Since cheating sabotages a student's learning experience, consequences range from no credit for the assignment to failure for the course and possible expulsion from the college.

The penalty for getting caught cheating in this course is a failure of the quiz or test, or failure of the entire course. This is solely at the discretion of the instructor.

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### MAT 122 Statistics (w/ Stats Coreq) – Assignment and Test Schedule

Week 1 & 2:	Syllabus Review Growth Mindset	ALEKS introduction Embedded tutor
	Class expectations	Course management – anxiety, time management, support
March 2.	MAT 122	MAT 052 (just-in-time remediation)
Week 3:	Sections 1.1, 1.2 Sections 2.1, 2.2 Sections 2.3, 3.1	Rounding decimals Change decimals to/from fractions, percents, proportions
Week 4:	Quiz 1 Sections 3.2, 3.3 Exam Review	Order of operations Solving simple equations
Week 5:	Exam 1 (Ch 1, 2, 3) Sections 5.1, 5.2	Review fractions, decimals, proportions, percents Simplify fractions, Scientific Notation
Week 6:	Quiz 2	Evaluate factorials
	Section 5.4 Sections 6.1, 6.2	Discrete phrasing Review scientific notation
Week 7:	Quiz 3 Sections 7.1, 7.2 Exam Review	Inequality symbols and notation
Week 8:	Exam 2 (Ch 5, 6, 7) Sections 7.3, 7.4	Interpret $\pm$ notation, Interval distance
Week 9:	Quiz 4 Sections 8.1, 8.2, 8.3	
Week 10:	Quiz 5 Sections 9.1, 9.2, 9.3	
Week 11:	Quiz 6 Section 9.4 Exam Review <b>Exam 3 (Ch 7, 8, 9)</b>	
Week 12:	Section 4.1 Section 4.2	Ordered pairs (coordinates) Slope and graphing lines
Week 13:	Quiz 7 Stats Projects	
Week 14:	Stats Projects	

Final Exam Review

Week 15: Final Exam

# Quinsigamond Community College School of Math and Science

#### Instructor's Information

Instructor:	Professor XX (she/her/hers)
Office:	200A
Email:	xxxxx@qcc.mass.edu
Telephone:	508-854-xxxx

#### **Course Information**

Course:	MAT 122 Statistics – Section XX
Meets:	Mondays and Wednesdays from 9:30am – 10:45am
Room:	174A
Credits:	3 credits
Semester:	Spring 2023

#### **Course Description**

This introductory statistics course covers descriptive statistics, probability, and inferential statistics. Statistical content includes sampling, graphical summaries of data, measures of center and variability, probability theory and distributions, standard and non-standard normal distributions, the Central Limit Theorem, confidence intervals, one-sample hypothesis tests, linear correlation and regression. Statistical technology is used.

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0							
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10%	Quizz	zes					
10%	Stats	Project & Presentation					
35%	Exam	IS					
25%	Final	Exam					
_							
	Grade	Range	Grade	Range	Grade	Range	
_	А	95 – 100	В —	80 - 82	D +	67 – 69	
	A –	90 – 94	C +	77 – 79	D	63 – 66	

С

С-

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B +

В

87 – 89

83 - 86

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73 – 76

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F

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0 - 59

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#### MAT 122 Statistics – Assignment and Test Schedule

IVIAL 122 .	
Week 1 & 2:	Syllabus Review ALEKS introduction Growth Mindset Class expectations Course management – anxiety, time management, support Sections 1.1, 1.2
Week 3:	Sections 2.1, 2.2, 2.3, 3.1
Week 4:	Quiz 1 Sections 3.2, 3.3 Exam Review
Week 5:	Exam 1 (Ch 1, 2, 3) Sections 5.1, 5.2
Week 6:	Quiz 2 Section 5.4, 6.1, 6.2
Week 7:	Quiz 3 Sections 7.1, 7.2 Exam Review
Week 8:	Exam 2 (Ch 5, 6, 7) Sections 7.3, 7.4
Week 9:	Quiz 4 Sections 8.1, 8.2, 8.3
Week 10:	Quiz 5 Sections 9.1, 9.2, 9.3
Week 11:	Quiz 6 Section 9.4 Exam Review
Week 12:	Exam 3 (Ch 7, 8, 9) Section 4.1
Week 13:	Section 4.2 Quiz 7 Stats Projects
Week 14:	Stats Projects Final Exam Review
Week 15:	Final Exam

Business. Financial & Hospitality Management Business Administration Transfer - Associate in Science (Program Code: BT)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	er 1	•	Apply and get accepted to this
Financial Accounting I	ACC 101	F/S/SU	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	program (Program Code: BT). Register for and successfully
Introduction to Microcomputer Applications <b>OR</b>	CIS 111				complete all courses to graduate in four semesters.
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Attend Transfer Services events. For information see
Principles of Macroeconomics	ECO 215	F/S/SU	3	Coreq: ENG 101	www.QCC.edu/transfer.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete ENG 101.
College Mathematics I: Pre- Calculus <b>OR</b>	MAT 123	F/S/SU	3	MAT 100 or approp place score	Complete MAT 123 or MAT 231.
Applied Calculus	MAT 231	S		MAT 123 or approp place score	
		Total	15		
	400 400	Semest			Meet with Academic Advisor to
Financial Accounting II	ACC 102	F/S/SU	3	ACC 101, CIS 111	choose Program Electives
Principles of Microeconomics	ECO 216	F/S/SU	3	Coreq: ENG 101	(Semesters 3 and 4); must be selected from ACC, BSL, FIN, MGT,
Composition II	ENG 102	F/S/SU	3	ENG 101	or MRK course designations.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	Meet with a Transfer Services
Humanities Elective		F/S/SU	3		Advisor. See www.QCC.edu/transfer.
		Total	15		Attend Transfer Services events.
		Semest	er 3	•	Meet with representatives of four-
Managerial Accounting	ACC 222	F/S/SU	3	ACC 102	year schools to discuss/begin the transfer application process.
Humanities Elective		F/S/SU	3		Students planning to transfer to WSU
Lab Science Elective		F/S/SU	4		should choose MGT 211 as one of the Program Electives.
Program Elective		F/S/SU	3		Students in the Commonwealth
Program Elective		F/S/SU	3		Commitment program should choose MRK 201 as one of the Program
		Total	16		Electives.
	1	Semest			Continue with/complete the transfer
Elective		F/S/SU	3		application process.
Humanities Elective		F/S/SU	3		Submit on Intent to Ore dusts From
Program Elective		F/S/SU	3		Submit an Intent to Graduate Form,
Science Elective or Lab Science Elective		F/S/SU	3-4		located on The Q.
Social Science Elective		F/S/SU	3		
		Total	15-16		
Total Credits R	equired		61-62		

Business. Financial & Hospitality Management Business Administration Transfer - Associate in Science (Program Code: BT)

PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	er 1		Apply and get accepted to this
Financial Accounting I	ACC 101	F/S/SU	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	program (Program Code: BT). Register for and successfully
Introduction to Microcomputer Applications <b>OR</b>	CIS 111				complete all courses to graduate in four semesters.
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Attend Transfer Services events. For information see
Principles of Macroeconomics	ECO 215	F/S/SU	3	Coreq: ENG 101	www.QCC.edu/transfer.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete ENG 101.
College Mathematics I: Pre- Calculus <b>OR</b>	MAT 123	F/S/SU	3	MAT 100 or approp place score	Complete MAT 123 or MAT 231.
Applied Calculus	MAT 231	S		MAT 123 or approp place score	
		Total	15		
<b>F</b> ' <b>' ' '</b>	400 400	Semest	-		Meet with Academic Advisor to
Financial Accounting II	ACC 102	F/S/SU	3	ACC 101, CIS 111	choose Program Electives
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Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	Meet with a Transfer Services
Humanities Elective		F/S/SU	3		Advisor. See www.QCC.edu/transfer.
		Total	15		Attend Transfer Services events.
		Semest	er 3		Meet with representatives of four-
Managerial Accounting	ACC 222	F/S/SU	3	ACC 102	year schools to discuss/begin the transfer application process.
Humanities Elective		F/S/SU	3		Students planning to transfer to WSU
Lab Science Elective		F/S/SU	4		should choose MGT 211 as one of the Program Electives.
Program Elective		F/S/SU	3		Students in the Commonwealth
Program Elective		F/S/SU	3		Commitment program should choose MRK 201 as one of the Program
		Total	16		Electives.
	1	Semest		I I I I I I I I I I I I I I I I I I I	Continue with/complete the transfer
Elective		F/S/SU	3		application process. Submit an Intent to Graduate Form, located on <i>The</i> Q.
Humanities Elective		F/S/SU F/S/SU	3		
Program Elective		F/3/3U	3		
Science Elective or Lab Science Elective		F/S/SU	3-4		
Social Science Elective		F/S/SU	3		-
T- (-1 0 11/- D	a annina d	Total	15-16		
Total Credits R	equired		61-62		

#### Business. Financial & Hospitality Management Logistics/Supply Chain Management Certificate (Program Code: LOGC) CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1		Apply and get accepted to this
Financial Accounting I OR	ACC 101	F/S/SU	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	program (Program Code: LOGC). Register for and successfully complete all courses to graduate in
Principles of Macroeconomics	ECO 215	175/50	5	Coreq: ENG 101	two semesters. If choosing BUS 299 for one of the Program Electives (Semester 2), meet with Career Services to
Introduction to Microcomputer Applications <b>OR</b>	CIS 111				discuss the co-op process and leads for co-op placements.
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	If choosing BUS 299 for one of the Program Electives (Semester 2), contact Career Services to complete all requirements of CPS
Composition I	ENG 101	F/S/SU	3	Placement into college level English	298 (required prior to registration for BUS 299). See www.QCC.edu/career-services.
Introduction to Business Logistics	LOG 105	F	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	Meet with Academic Advisor to discuss associate degree (Program Code: BB); or create an account on the QCC job board to search for
Principles of Management	MGT 211	F/S/SU	3	Placement into college level English	internships, co-ops and jobs. Complete prerequisite(s) for MAT
		Total	15		122.
		Semeste	er 2		For the Program Electives, choose:
Integrated Communications for Business	BUS 201	F/S/SU	3	CIS 111, Placement into college level English	BUS 299, LOG 106, LOG 107, LOG 208, or MNT 100 (see individual course descriptions for semester offerings and prerequisites).
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	Apply to associate degree (Program Code: BB); or if seeking
Program Elective		F/S/SU	3		employment, meet with Career Services for career readiness preparation and to learn more about
Program Elective		F/S/SU	3		QCC's job board. Submit an Intent to Graduate Form,
		Total	12		located on The Q.
Total Credits R	equired		27		

#### Business. Financial & Hospitality Management Logistics/Supply Chain Management Certificate (Program Code: LOGC)

#### PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest			Apply and get accepted to this
Financial Accounting I <b>OR</b>	ACC 101	F/S/SU	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	program (Program Code: LOGC). Register for and successfully complete all courses to graduate in
Principles of Macroeconomics	ECO 215	170,00	0	Coreq: ENG 101	two semesters. If choosing BUS 299 for one of the Program Electives (Semester 2), meet with Career Services to
Introduction to Microcomputer Applications <b>OR</b>	CIS 111				discuss the co-op process and leads for co-op placements.
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	If choosing BUS 299 for one of the Program Electives (Semester 2), contact Career Services to complete all requirements of CPS
Composition I	ENG 101	F/S/SU	3	Placement into college level English	298 (required prior to registration for BUS 299). See www.QCC.edu/career-services.
Introduction to Business Logistics	LOG 105	F	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	Meet with Academic Advisor to discuss associate degree (Program Code: BB); or create an account on the QCC job board to search for
Principles of Management	MGT 211	F/S/SU	3	Placement into college level English	internships, co-ops and jobs. Complete prerequisite(s) for MAT
		Total	15		122.
	•	Semeste	er 2	•	For the Program Electives, choose:
Integrated Communications for Business	BUS 201	F/S/SU	3	CIS 111, Placement into college level English	BUS 299, LOG 106, LOG 107, LOG 208, or MNT 100 (see individual course descriptions for semester offerings and prerequisites).
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	Apply to associate degree (Program Code: BB); or if seeking
Program Elective		F/S/SU	3		employment, meet with Career Services for career readiness preparation and to learn more about
Program Elective		F/S/SU	3		QCC's job board. Submit an Intent to Graduate Form,
	<u> </u>	Total	12		located on The Q.
Total Credits R	equired		27		

# <u>Computer & Information Technology</u> Computer Information Systems - Career - Enterprise Information Systems - Associate in Science (Program Code: CIES)

Management of Data AnalyticsCIS 206F/S3CIS 105 of CIS 111 of CIS 243, MAT 122.NET Programming IICIS 232F3CIS 223Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 241CIS 241F3CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 299). See www.QCC.edu/career-services.Pre Cooperative Education SeminarCPS 298F/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 241.Total15Total15Complete CIS 232 and CIS 241.	Course Title	Course #	Offered	Credits	Prerequisites	Milestones
Technology OR Applications         Cls 101         F/S         3           Introduction to Microcomputer Applications         Cls 111         F/S/SU         3         Placement into college level English, MAT OBS with a grade of "C or higher or approp place score. Core Cls 103 or Cls 111         Register for and successfully complete all courses to graduate in five semesters.           Web Page Development I         Cls 112         F/S         3         Placement into college level English, MAT Disce score. Core Cls 103 or Cls 111           Composition I         ENG 101         F/S/SU         3         Placement into college level English MAT 035 with a grade of "C" or higher or approp place         Complete Cls 121, Cls 134, ENG 101, and MAT 122.           NET Programming I         ClS 222         S         3         ClS 105 or Cls 111, Placement into college level English, MAT 056 with a grade of "C" or higher or approp place score.         Complete ClS 121, ClS 134, ENG 101, and MAT 122.           Sub Page Development II         ClS 223         S         3         ClS 105 or ClS 111, Placement into college level English, MAT 056 with a grade of "C" or higher or approp place score.         Complete ClS 223 and ENG 102.           Database Management Application Development I         ClS 243         S         3         ENS 105         Complete ClS 111.           Complete I brow English, MAT 056 with a grade of "C" or higher or approp place score.         Coreq, ClS 104 or ClS 111.         ClS 104 or ClS 111. </td <td>Introduction to Information</td> <td></td> <td></td> <td>ster 1</td> <td></td> <td></td>	Introduction to Information			ster 1		
Introduction to Microcomputer Applications         CIS 111         F/S/SU         Introduction to Programming with C++         Introduction to Programming with C++         Cus 121         F/S         3         Placement into college level English. MAT place score. Core: CIS 105 or CIS 1111         Complete CIS 105 or CIS 1111           Web Page Development I         CIS 134         F/S         3         Placement into college level English. MAT place score. Core; CIS 105 or CIS 1111         Complete CIS 105 or CIS 1111           Statistics         WAT 122         F/S/SU         3         MAT 035 with a grade of 'C' or higher or place score. Core; CIS 105 or CIS 1111         Complete CIS 121, CIS 134, ENCT Or CIS 1112         Complete CIS 121, CIS 134, ENCT Or CIS 111         Complete CIS 121, CIS 134, ENCT Programming         CIS 122         S         3         CIS 105 or CIS 111, Placement into college level English. MAT 095 with a grade of 'C' or higher or approp place score. Core place score.         Core placement leads for Core op placement.           SQL Programming         CIS 223         S         3         CIS 105 or CIS 111, Placement into college or higher or approp place score.         Core op placement.         Complete CIS 223 and ENG 102           Application Development II         CIS 243         S         3         CIS 105 or CIS 111, Placement into college or higher or approp place score. Core; CIS 105 or CIS 111         Complete CIS 223 and ENG 102           Compation Date         CIS 141         S		CIS 105	F/S	3		
Introduction to Programming with C++ web Page Development I     CIS 121     F/S     3     065 with a grade of 'C' or higher or approp place score, Creer, CIS 105 or CIS 111     Contact Program Coordinator for laptice score, Creer, CIS 105 or CIS 111       Xeb Page Development I     CIS 134     F/S     3     MAT 122     F/SSU     3     Contact Program Coordinator for place score, Creer, CIS 105 or CIS 111     Contact Program Coordinator for laptice CIS 105 or CIS 111.       Statistics     MAT 122     F/SSU     3     MAT 005 with a grade of 'C' or higher or approp place score, Creer, CIS 105 or CIS 111.     Contact Program Coordinator for laptice CIS 121, CIS 124, CIS 124       NET Programming     CIS 223     S     3     CIS 105 or CIS 111, Placement into college level English, MAT 055 with a grade of 'C' or higher or approp place score     Meet with Career Services to discuss the co-op process and level English, MAT 055 with a grade of 'C' or higher or approp place score       Subtabase Management Application Development II     CIS 243     S     3     CIS 105 or CIS 111, Placement into college level English, MAT 055 with a grade of 'C' or higher or approp place score     Complete CIS 223 and ENG 102       Torduct no Data Composition II     ENG 102     F/S/SU     3     CIS 105 or CIS 111 or CIS 243, MAT 122     Complete CIS 123 and ENG 102       Torduct no Data Composition II     ENG 102     F/S/SU     3     CIS 105 or CIS 111 or CIS 243, MAT 122     Meet with Program Coordinator to discuss reachines for CIS 290		CIS 111	F/S/SU			complete all courses to graduate
with C++         Chi Izi         Fr/s         3         originar and group of Cis 105 or Cis 111, Cis 105 or Cis 110, Placement into college level English, MAT         Contact Program Coordinator for lapto prequirements.           Web Page Development I         ClS 134         F/S         3         Placement into college level English, MAT         Complete CIS 105 or CIS 111, Complete CIS 105 or CIS 111, CIS 120 or CIS 111, CIS 221 or CIS 220 or CIS 111, CIS 221 or CIS 220 or CIS 111, CIS 121 or CIS 220 or CIS 120, Contact Crearer Services to complete all requirements or CIS 220, or CIS 110 or CIS 120 or CIS 220, Create an account on the CCC pb beard to search for Contact Crearer Services to complete CIS 220 are CIS 221, Contact Crearer Services to complete CIS 222 are CIS 221, Contact Crearer Services to cordinator or CIS 220, Sea 11, CIS 121 or CIS 108 or CIS 134, CIS 121 or CIS 108 or CIS 134, CIS 121 or CIS 108 or CIS 134, CIS 121 or C		CIS 121	E/Q	3	Placement into college level English, MAT	in five semesters.
Web Page Development I         CIS 134         F/S         3         005 with a grade of 'C' or higher or approp place score. CIS 105 or CIS 111.         Complete CIS 105 or CIS 111.           Composition I         ENG 101         F/S/SU         3         Placement into college level English         Complete CIS 105 or CIS 111.         CIS 105 or CIS 111.         CIS 105 or CIS 111.         F/S         CIS 105 or CIS 111.         F/S         CIS 105 or CIS 111.         CIS	with C++	013 121	1/3	5	place score, Coreq: CIS 105 or CIS 111	
Composition I         ENG 101         F/S/SU         3         Placement into college level English and to college level English         Complete CIS 105 or CIS 111.         Complete CIS 121 or CSC 108           Statistics         MAT 122         F/S/SU         3         MAT 035 with a grade of CC or higher or approp place score         CIS 105 or CIS 111, CIS 121 or CSC 108         CIS 105 or CIS 111, CIS 121 or CSC 108         CIS 105 or CIS 111, CIS 121 or CSC 108         Meet with Career Services to discuss the co-op process and leads for co-op placements.           SQL Programming         CIS 223         S         3         CIS 110 or CIS 111, CIS 121 or CSC 108, CIS 134         Complete CIS 223 and ENG 102           Database Management         CIS 243         S         3         CIS 110 or CIS 111, Placement into college level English, MAT 055 with a grade of CC or higher or approp place score         Complete CIS 223 and ENG 102           Database Management         CIS 121 or CIS 111, Placement into college level English, MAT 122         CIS 111, Placement into college level English, MAT 122         Complete CIS 223 and ENG 102           Composition II         ENG 102         F/S/SU 3         CIS 105 or CIS 111, Placement into college level English, MAT 122         Complete CIS 223 and ENG 102           Composition II         ENG 102         F/S/SU 3         CIS 105 or CIS 111, Placement into college level English, MAT 122         Complete CIS 224 and CIS 245         Complete CIS 224, CIS 246		010 404	F/0	0		laptop requirements.
Composition I         ENG 101         F/S/SU         3         Placament into college level English. MAT 005 with a grade of °C' or higher or semester 2         Complete CIS 121, CIS 134, CIS 105 or CIS 111, CIS 121 or CSC 108, CIS 105 or CIS 111, CIS 121 or CSC 108, CIS 105 or CIS 111, Placement into college level English. Met with Career Services to discuss the co-op place score or higher or approp place score         Complete CIS 223 and ENG 102           Web Page Development II         CIS 224         S         3         CIS 105 or CIS 111, Placement into college level English, MAT 105 with a grade of °C' or higher or approp place score         Complete CIS 223 and ENG 102           Web Page Development II         CIS 234         S         3         CIS 105 or CIS 111, Placement into college level English, MAT 105 with a grade of °C' or higher or approp place score         Composition I         ENG 102           Composition II         ENG 102         F/S/SU         3         ENG 101         Composition I         ENG 102           Liberal Ans Elective          F/S/SU         3         CIS 105 or CIS 111 or CIS 243, MAT 122         Complete CIS 224         F/S/SU         3         CiS 105 or CIS 111 or CIS 243, MAT 122         Contact Career Services to odiscuss readinates for CIS 299.           Networking Technologies         CIS 241         F         3         CIS 105 or CIS 2111 or CIS 243, MAT 122         Contact Career Services to or CIS 290. (Cequided prior to registraton or CIS 290. Contact Career Services to core	Web Page Development I	CIS 134	F/S	3		Complete CIS 105 or CIS 111.
Statistics         MAT 122         Fixed in the second seco	Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete CIS 121 CIS 121
Semester 2         Meet with Career Services to discuss the coop process and leads for co-op placements.           SQL Programming         CIS 223         S         3         CIS 105 or CIS 111, CIS 121 or CSC 108 discuss the coop process and leads for co-op placements.         discuss the coop process and leads for co-op placements.           Web Page Development II         CIS 224         S         3         CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score         Complete CIS 223 and ENG 102           Database Management Application Development         CIS 124         S         3         CIS 105 or CIS 111, Placement into or higher or approp place score         Complete CIS 223 and ENG 102           Deratabase Management Application Development         CIS 102         F/S/SU         3         ENG 101         Complete cis 223 and ENG 102           Composition II         ENG 102         F/S/SU         3         Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Crerg: CIS 105 or CIS 111         Contact Career Services to complete all requirements of CIS 249           Networking Technologies         CIS 232         F         3         CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108         Cis 229, See www.QCC:edu/career-services to complete all requirements of CIS 249           Systems Analysis & Design         CIS 241         F         3         CIS 121 or CSC 108 or CIS 234	Statistics	MAT 122	F/S/SU			
INET Programming I       CIS 223       S       3       CIS 105 or CIS 111, CIS 121 or CSC 108       discuss the co-op process and leads for co-op places some leads for co-op placements.         SQL Programming       CIS 228       S       3       CIS 105 or CIS 111, Placement into college level English. MAT 095 with a grade of "C" or higher or approp place score       CIS 105 or CIS 111, Placement into college level English. MAT 095 with a grade of "C" or higher or approp place score       CIS 105 or CIS 111, Placement into college level English. MAT 095 with a grade of "C" or higher or approp place score       Composition II       ENG 101         Liberal Arts Elective        F/S/SU       3       ENG 101       ENG 101       ENG 102         Introduction to Data Control to Data Control to Totat       S/SU       3       CIS 121 or CIS 111 or CIS 243, MAT 105       Meet with Program Coordinator to discuss readiness for CIS 299.         Networking Technologies       CIS 223       F       3       CIS 121 or CIS 223 or CIS 226 or CIS 210       Contact Career Services to complete all requirements of CP2 298 (required prior to registration for CIS 299). See minar       CIS 121 or CIS 128 or CIS 124       Contact Career Services to complete all requirements of CP2 298 (required prior to registration for CIS 299). See minar       CIS 121 or CIS 123 or CIS 226 or CIS 290       Contact Career Services to complete all requirements of CP2 298 (require revivoes for career services to complete all requirements of CP2 298 (require revivoes for career services to complete all requirements of CP2 298 (requi				-		
SQL Programming         CIS 228         S         3         Ievel English, MAT 066 with a grade of "C" or higher or approp place score         Ieads for co-op placements.           SQL Programming         CIS 228         S         3         Ievel English, MAT 066 with a grade of "C" or higher or approp place score         Complete CIS 223 and ENG 102           Database Management Application Development         CIS 243         S         3         Ievel English, MAT 066 with a grade of "C" or higher or approp place score         Complete CIS 223 and ENG 102           Database Management Application Development         CIS 141         SISU         3         Ievel English, MAT 065 with a grade of "C" or higher or approp place score         Composition II         ENG 101           Introduction to Data Communication & Networks OR         CIS 141         S/SU         3         Ievel English, MAT 025         Velocities (SC 141           Networking Technologies         CSC 234         F/S/SU         3         CIS 105 or CIS 111 or CIS 243, MAT 122         Velocities for CS 290, See training         Velocities for CIS 290, See training         CIS 124         F         3         CIS 124 or CIS 223 or CIS 226 or CIS 230         Contact Career Services to complete all requirements of CPS 298, F/S         0         Contact Career Services 10         208 (required prior to registration or CSC 108         Conder to search for internships, co-ops and jobs.         298 (required prior to registration or CS	NET Programming I	(16.000			CIS 105 or CIS 111, CIS 121 or CSC 109	
SQL Programming     CIS 228     S     3     level English, MAT 095 with a grade of "C" or higher or approp place score     Complete CIS 223 and ENG 102       Web Page Development III     CIS 234     S     3     CIS 121 or CSC 106, CIS 134     Complete CIS 223 and ENG 102       Database Management Application Development     CIS 243     S     3     CIS 105 or CIS 111, Placement into college for approp place score     Complete CIS 223 and ENG 102       Composition II     ENG 102     F/S/SU     3     ENG 101       Liberal Arts Elective      F/S/SU     3     Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score       OR      F/S/SU     3     CIS 105 or CIS 111 or CIS 243, MAT 1025     CIS 105 or CIS 111       Introduction to Data     CIS 141     S/SU     3-4     Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreg: CIS 105 or CIS 111     Coreg: CIS CI 111       Networking Technologies     CIS 206     F/S     3     CIS 105 or CIS 111 or CIS 243, MAT 122     Contact Career Services to complete all requirements of CPS 298       Net with Programming II     CIS 223     F     3     CIS 121 or CIS 223 or CIS 226 or CIS 220     Contact Career Services to complete all requirements of CPS 298       Systems Analysis & Design     CIS 241     F     3     CIS 121 or CIS 226 or CIS 220     <	.iv∟ i Fi0granniniling i	013 223	3	<u> </u>		
Web Page Development II       CIS 234       S       3       CIS 121 or CSC 108, CIS 1314         Database Management Application Development       CIS 243       S       3       CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score         Composition II       ENG 102       F/S/SU       3       ENG 101         Liberal Arts Elective	SQL Programming	CIS 228	S	3	level English, MAT 095 with a grade of "C"	
Database Management Application Development     CIS 243     S     3     CIS 105 or CIS 111, Placement into college or higher or approp place score or higher or approp place score or higher or approp place score       Composition II     ENG 102     F/S/SU     3     ENG 101       Iberal Arts Elective      F/S/SU     3     ENG 101       Introduction to Data     CIS 141     S/SU     3-4     Placement into college level English, MAT       OR     CS 224     F/S/SU     3     Placement into college level English, MAT       OR     CS 243     F/S/SU     3-4     Placement into college level English, MAT       OR     CS 244     F/S/SU     3     Crear; CSC 141     Crear; CSC 141       Liberal Arts Elective      F/S/SU     3     CIS 105 or CIS 111 or CIS 243, MAT 122       Networking Technologies     CIS 226     F/S     3     CIS 121 or CIS 223 or CIS 226 or CIS 230       NET Programming II     CIS 232     F     3     CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108     Create an account on the QCC job board to search for internships, co-ops and jobs.       CIS Elective (200-level)      F/S/SU     3     CIS 121 or CSC 108 or CSC 201     Create services to complete all requirements of CSC 294.       Tect Programming II     CIS 245     S     1     CIS 121 or CIS 232 or CIS 226 or CIS 230	Web Dage Development II			2	or higher or approp place score	Complete CIS 223 and ENG 102.
Database Management Application Development       CIS 243       S       3       level English, MAT 095 with a grade of "C ² or higher or approp place score Total       or higher or approp place score or higher or approp place score         Composition II       ENG 102       F/S/SU       3       ENG 101         Liberal Arts Elective        F/S/SU       3       ENG 101         Introduction to Data Communication & Networks       CIS 141       S/SU       3-4       Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, CIS 105 or CIS 111         Networking Technologies       CSC 234       F/S/SU       3       CIS 105 or CIS 111       Coreq; CIS 105 or CIS 111         Networking Technologies       CSC 234       F/S/SU       3       CIS 105 or CIS 111 or CIS 243, MAT 122       Meet with Program Coordinator to discuss readiness for CIS 299.         NET Programming II       CIS 232       F       3       CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108       Cortact Career Services to complete all requirements of CPS 298.         Systems Analysis & Design       CIS 241       F       3       CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108       Create an account on the QCC lob board to search for internships, co-ops and jobs.         CIS Elective (200-level)        F/S/SU 3       Complete CIS 232       Career Services for career readiness preparation and t	Web Page Development II	CIS 234	S	3		-
Composition II       ENG 102       F/S/SU       3       ENG 101       End 101 <thend 101<="" th=""></thend>		CIS 243	S	3	level English, MAT 095 with a grade of "C"	
Total         18           Semester 3 (Summer)           Introduction to Data Communication & Networks         CIS 141         S/SU         3-4         Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreg: CIS 105 or CIS 111           Networking Technologies         CSC 234         F/S/SU         3         Oreage: CSC 141         Oreage: CSC 141           Liberal Arts Elective          F/S/SU         3         Cis 105 or CIS 111 or CIS 243, MAT 122         Meet with Program Coordinator to discuss readiness for CIS 299.           .NET Programming II         CIS 241         F         3         CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108         Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 299. See www.QCC.edu/career-services.           Pre Cooperative Education Seminar         CPS 298         F/S         0         Create an account on the QCC job board to search for internships, co-ops and jobs.           CIS Elective (200-level)          F/S/SU         3         Cis 121 or CSC 108 or CSC 201         If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.           NET Programming III         CIS 251         S         1         CIS 121 or CSC 108 or CSC 201         If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job boa	Composition II	ENG 102		3		
Semester 3 (Summer)           Introduction to Data Communication & Networks         CIS 141         S/SU         3-4         Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq; CIS 105 or CIS 111           Networking Technologies         CSC 234         F/S/SU         3           Ibberal Arts Elective          F/S/SU         3           Management of Data Analytics         CIS 206         F/S         3         CIS 105 or CIS 111 or CIS 243, MAT 122           NET Programming II         CIS 232         F         3         CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108         Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 299). See www.QCC.edu/career-services.           Pre Cooperative Education Seminar         CPS 298         F/S         0         Create an account on the QCC iob board to search for internships, co-ops and jobs.           NET Programming II         CIS 251         S         1         CIS 121 or CSC 108 or CSC 201         If seeking employment, meet with Career Services for career readiness preparation and to lear more about QCC's job board.           MET Programming III         CIS 252         S         1         CIS 121 or CSC 108, CIS 134         Submit a ninere with Career Services for career readiness preparation and to lear more about QCC's job board.           Meter with Programming III         CIS 252	Liberal Arts Elective			-		
Introduction to Data Communication & Networks     CIS 141     S/SU     3-4     Placement into college level English, MAT 095 with a grade of C* or higher or approp place score, Coreq: CIS 105 or CIS 111       Networking Technologies     CSC 234     F/S/SU      F/S/SU        Management of Data Analytics     CIS 206     F/S     3     CIS 105 or CIS 111 or CIS 243, MAT 122     Ketworks       NET Programming II     CIS 232     F     3     CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108     Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 299). See       Pre Cooperative Education Seminar     CPS 298     F/S     0     Create an account on the QCC job board to search for internships, co-ops and jobs.       CIS Elective (200-level)      F/S/SU     3     CIS 134, CIS 232     Complete CIS 232 and CIS 224.       NET Programming III     CIS 246     S     3     CIS 134, CIS 232     Create an account on the QCC job board to search for internships, co-ops and jobs.       CIS Elective (200-level)      F/S/SU     3     CIS 121 or CSC 108 or CSC 201       NET Programming III     CIS 246     S     3     CIS 134, CIS 232     Complete CIS 232 and CIS 241.       Total     15     Total     15     Complete CIS 232     Complete CIS 232 and CIS 241.       NET Programming III     CIS 246				-		
Communication & Networks       CIS 141       S/SU       3-4       095 with a grade of "C" or higher or appropiate score, Coreq: CIS 105 or CIS 111         Networking Technologies       CSC 234       F/S/SU       3       Coreq: CIS 105 or CIS 111       Metworking Technologies       Metworking Technol	Introduction to Data	1	Semester 3	s (Summer)		-
OR         cs         3-4         place score, Coreg: CIS 105 or CIS 111           Networking Technologies         CSC 234         F/S/SU         3           Liberal Arts Elective          F/S/SU         3           Management of Data Analytics         CIS 206         F/S         3         CIS 105 or CIS 111 or CIS 243, MAT 122         Meet with Program Coordinator to discuss readiness for CIS 299.           NET Programming II         CIS 232         F         3         CIS 120 or CIS 210 or CIS 223 or CIS 226 or CIS 230 or CIS 230 or CSC 108         Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CSC 108           Pre Cooperative Education Seminar         CPS 298         F/S         0         Cis 121 or CIS 232 or CIS 230 or CIS 226 or CIS 230 or CIS 290, See www.QCC.edu/career-services.           CIS Elective (200-level)          F/S/SU         3         Cis 121 or CIS 232 or CIS 230 or CIS 232 or CIS 232 or CIS 232 and CIS 241.           Total         Total         15         Cooperative Education         CPS 298         F/S         0         Create an account on the QCC job board to search for internships, co-ops and jobs.           CIS Elective (200-level)          F/S/SU         3         CIS 121 or CSC 108 or CSC 201         If seeking employment, meet with Programming III           NET Programming III         CIS		CIS 141	S/SU			
Liberal Arts Elective        F/S/SU       3        Total       6-7         Management of Data Analytics       CIS 206       F/S       3       CIS 105 or CIS 111 or CIS 243, MAT 122       Meet with Program Coordinator to discuss readiness for CIS 299.         .NET Programming II       CIS 232       F       3       CIS 121 or CIS 223 or CIS 226 or CIS 230 or CIS 226 or CIS 230 or CIS 299.       Contact Career Services to complete all requirements of CPS 298.         Systems Analysis & Design       CIS 241       F       3       CIS 121 or CIS 223 or CIS 226 or CIS 230 or CIS 230 or CIS 299.       See www.QCC.edu/career-services.         Pre Cooperative Education Seminar       CPS 298       F/S       0       Create an account on the QCC job board to search for internships, co-ops and jobs.         CIS Elective (200-level)        F/S/SU       3       CIS 134, CIS 232       Complete CIS 232 and CIS 241.         NET Programming III       CIS 246       S       3       CIS 121 or CSC 108 or CSC 201       If seeking employment, meet with Career Services for career readiness preparation and to fearmer about QCC's job board.         Security Techniques in Programming       CIS 252       S       1       CIS 121 or CSC 108, CIS 134       Submit an Intent to Graduate Form, located on The Q.         Sepecht Communication Skills       SPH 101       F/S/SU       3	OR			3-4	place score, Coreq: CIS 105 or CIS 111	
Total6-7Semester 4Management of Data AnalyticsCIS 206F/S3CIS 105 or CIS 111 or CIS 243, MAT 122Meet with Program Coordinator to discuss readiness for CIS 299NET Programming IICIS 232F3CIS 223Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 210 or CIS 210 or CIS 223 or CIS 226 or CIS 230 or CSC 108Contact Career Services to complete all requirements of CPS 298 (required prior to registration for CIS 299. See www.QCC.edu/career-services.Pre Cooperative Education SeminarCPS 298F/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Cis 121 or CSC 108 or CSC 201Total15S1CIS 121 or CSC 108 or CSC 201If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.NET Programming IIICIS 252S1CIS 121 or CSC 108, CIS 134Career Services for career readiness preparation and to learn more about QCC's job board.NET ProgrammingCIS 252S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate form, located on The Q.Net ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate form, located on The Q.Net ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate form, located on The Q.Speech Communication Skills </td <td></td> <td></td> <td></td> <td></td> <td>Coreq: CSC 141</td> <td></td>					Coreq: CSC 141	
Semester 4Met with Program Coordinator to discuss readiness for CIS 299NET Programming IICIS 232F3CIS 105 or CIS 111 or CIS 243, MAT 122Contact Career Services to complete all requirements of CPS 298Systems Analysis & DesignCIS 241F3CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108Contact Career Services. 298 (required prior to registration for CIS 299). See www.QCC.edu/career-services.Pre Cooperative Education SeminarCPS 298F/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Create an account on the QCC job board to search for internships, co-ops and jobs.NET Programming IIICIS 246S3CIS 134, CIS 232Complete CIS 232 and CIS 241.NET Programming IIICIS 251S1CIS 121 or CSC 108 or CSC 201Complete CIS 232 and CIS 241.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on The Q.Security Techniques in ProgrammingCIS 253S1CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.Rechnical and Workplace WritingENG 205F/S/SU3ENG 102, Computer LiteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English	Liberal Arts Elective			-		
Management of Data AnalyticsCIS 206F/S3CIS 105 or CIS 111 or CIS 243, MAT 122to discuss readiness for CIS 299.NET Programming IICIS 232F3CIS 223Contact Career Services to complete all requirements of CPS 298 or CIS 200 or CSC 108Contact Career Services.Systems Analysis & DesignCIS 241F3CIS 121 or CIS 223 or CIS 226 or CIS 230 or CIS 230 or CIS 226 or CIS 230 or CIS 290.Contact Career Services.Pre Cooperative Education SeminarCPS 298F/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 241.Total15Total15Complete CIS 232 and CIS 241.NET Programming IIICIS 246S3CIS 121 or CSC 108 or CSC 201Information Architecture/User FoundationsCIS 251S1CIS 121 or CSC 108 or CSC 201Information Architecture/User interface FoundationsCIS 253S1CIS 121 or CSC 108, CIS 134Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Cooperative Work ExperienceCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorVertingSpeech Communication SkillsSPH 101F/S/SU3Placement into college level English				-		Meet with Program Coordinator
Internet rogramming inOrd ES2IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII </td <td>Management of Data Analytics</td> <td>CIS 206</td> <td>1</td> <td></td> <td>CIS 105 or CIS 111 or CIS 243, MAT 122</td> <td>to discuss readiness for CIS 299.</td>	Management of Data Analytics	CIS 206	1		CIS 105 or CIS 111 or CIS 243, MAT 122	to discuss readiness for CIS 299.
Systems Analysis & DesignCIS 241F3CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108298 (required prior to registration for CIS 299). See www.QCC.edu/career-services.Pre Cooperative Education SeminarCPS 298F/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 232CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 241.Total15Complete CIS 232 and CIS 241.If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Security Techniques in ProgrammingCIS 253S1CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.Writing WritingENG 205F/S/SU3ENG 102, Computer LiteracySubmit an Intent to Graduate Form, located on The Q.	.NET Programming II	CIS 232	F	3	CIS 223	
Pre Cooperative Education SeminarCPS 298F/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 241.Total15Semester 5If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108 or CSC 201Submit an Intent to Graduate Form, located on The Q.Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on The Q.Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.Technical and Workplace WritingENG 205F/S/SU3ENG 102, Computer LiteracyFireface Set 102, Computer LiteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English	Systems Analysis & Design	CIS 241	F	3		298 (required prior to registration for CIS 299). See
SeminarCPS 298P/S0Create an account on the QCC job board to search for internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3internships, co-ops and jobs.CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 241.Total15Complete CIS 232 and CIS 241.If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Outling Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form located on The Q.Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.Technical and Workplace WritingENG 205F/S/SU3Placement into college level English	Pre Cooperative Education	CD6 000	E/0	_		
CIS Elective (200-level)F/S/SU3Complete CIS 232 and CIS 241.Total 15Semester 5If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job loard.Quality Assurance FoundationsCIS 251S1CIS 121 or CSC 108 or CSC 201If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Information Architecture/User Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate ForgrammingSecurity Techniques in ProgrammingCIS 253S1CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.Cooperative Work Experience & SeminarENG 205F/S/SU3ENG 102, Computer LiteracyWritingSPH 101F/S/SU3Placement into college level English	Seminar	CPS 298		-		job board to search for
Total15Complete CIS 232 and CIS 241.Semester 5If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Quality Assurance FoundationsCIS 251S1CIS 121 or CSC 108 or CSC 201If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on The Q.Security Techniques in ProgrammingCIS 253S1CIS 211 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on The Q.Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.WritingENG 205F/S/SU3ENG 102, Computer LiteracyVitteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English						internships, co-ops and jobs.
Semester 5If seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.Quality Assurance FoundationsCIS 251S1CIS 121 or CSC 108 or CSC 201Career Services for career readiness preparation and to learn more about QCC's job board.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Cis 134Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on The Q.Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on The Q.VritingENG 205F/S/SU3ENG 102, Computer LiteracyVitieracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English				_		Complete CIS 232 and CIS 241.
.NET Programming IIICIS 246S3CIS 134, CIS 232Career Services for career readiness preparation and to learn more about QCC's job board.Quality Assurance FoundationsCIS 251S1CIS 121 or CSC 108 or CSC 201Career Services for career readiness preparation and to learn more about QCC's job board.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Career Services for career readiness preparation and to learn more about QCC's job board.Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on <i>The Q</i> .Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on <i>The Q</i> .WritingENG 205F/S/SU3ENG 102, Computer LiteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English		1				If seeking employment, meet with
FoundationsCIS 251S1CIS 121 of CSC 108 of CSC 201learn more about QCC's job board.Information Architecture/User Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134learn more about QCC's job board.Security Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on <i>The Q</i> .Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on <i>The Q</i> .Technical and Workplace WritingENG 205F/S/SU3ENG 102, Computer LiteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English		CIS 246	S	3	CIS 134, CIS 232	
Interface FoundationsCIS 252S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate ForgrammingSecurity Techniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Submit an Intent to Graduate Form, located on <i>The Q.</i> Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorSubmit an Intent to Graduate Form, located on <i>The Q.</i> Technical and Workplace WritingENG 205F/S/SU3ENG 102, Computer LiteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English	Foundations	CIS 251	S	1	CIS 121 or CSC 108 or CSC 201	learn more about QCC's job
Occounty rechniques in ProgrammingCIS 253S1CIS 121 or CSC 108, CIS 134Form, located on The Q.Cooperative Work Experience & SeminarCIS 299S3CIS 241, CPS 298, Approval of Program CoordinatorForm, located on The Q.Technical and Workplace WritingENG 205F/S/SU3ENG 102, Computer LiteracySpeech Communication SkillsSPH 101F/S/SU3Placement into college level English	Interface Foundations	CIS 252	S	1	CIS 121 or CSC 108, CIS 134	
& Seminar         Cls 299         S         S         Coordinator           Technical and Workplace         ENG 205         F/S/SU         3         ENG 102, Computer Literacy           Writing         Speech Communication Skills         SPH 101         F/S/SU         3         Placement into college level English	Programming	CIS 253	S	1		
Writing         ENG 205         F/S/SU         3         ENG 102, Computer Literacy           Speech Communication Skills         SPH 101         F/S/SU         3         Placement into college level English	& Seminar	CIS 299	S	3		
	Writing					
I otal 15	Speech Communication Skills	SPH 101		-	Placement into college level English	
Total Credits Required 69-70	Tatal One d' D		Total			

Suggested CIS Electives Course Sequence								
Semester	Semester Database Focus Programming Focus Web Design Focus							
4	CIS 229 and CIS 244	CIS 225 and CIS 226 or CIS 229	CIS 226 and CIS 230					

<u>Computer & Information Technology</u> Computer Information Systems - Career - Enterprise Information Systems - Associate in Science (Program Code: CIES)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Seme	ster 1		Apply and get accepted to this
Introduction to Information Technology <b>OR</b>	CIS 105	F/S	3		program (Program Code: CIES).
Introduction to Microcomputer Applications	CIS 111	F/S/SU	Ű		Register for and successfully complete all courses to graduate
Introduction to Programming with C++	CIS 121	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	in five semesters. Contact Program Coordinator for
Web Page Development I	CIS 134	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	laptop requirements. Complete CIS 105 or CIS 111.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete CIS 121, CIS 134,
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	ENG 101, and MAT 122.
		Total	15 ster 2		Marta ille Orman Ormánia a ta
.NET Programming I	CIS 223	Seme	3	CIS 105 or CIS 111, CIS 121 or CSC 108	Meet with Career Services to discuss the co-op process and
SQL Programming	CIS 228	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	leads for co-op placements. Complete CIS 223 and ENG 102.
Web Page Development II	CIS 234	S	3	CIS 121 or CSC 108, CIS 134	4
Database Management Application Development	CIS 243	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	
Composition II Liberal Arts Elective	ENG 102	F/S/SU F/S/SU	3	ENG 101	4
		Total	् <u></u> 18		4
			3 (Summer)		
Introduction to Data Communication & Networks OR	CIS 141	S/SU	3-4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	
Networking Technologies Liberal Arts Elective	CSC 234	F/S/SU	0	Coreq: CSC 141	-
		F/S/SU Total	3 6-7		4
			ester 4		Meet with Program Coordinator
Management of Data Analytics	CIS 206	F/S	3	CIS 105 or CIS 111 or CIS 243, MAT 122	to discuss readiness for CIS 299.
.NET Programming II	CIS 232	F	3	CIS 223	Contact Career Services to complete all requirements of CPS
Systems Analysis & Design	CIS 241	F	3	CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108	298 (required prior to registration for CIS 299). See www.QCC.edu/career-services.
Pre Cooperative Education Seminar	CPS 298	F/S	0		Create an account on the QCC job board to search for
CIS Elective (200-level)		F/S/SU	3		internships, co-ops and jobs.
CIS Elective (200-level)		F/S/SU	3		Complete CIS 232 and CIS 244
		Total Seme	15 ester 5		Complete CIS 232 and CIS 241.
.NET Programming III	CIS 246	Seine	3	CIS 134, CIS 232	If seeking employment, meet with Career Services for career
Quality Assurance Foundations	CIS 251	S	1	CIS 121 or CSC 108 or CSC 201	readiness preparation and to learn more about QCC's job
Information Architecture/User Interface Foundations	CIS 252	S	1	CIS 121 or CSC 108, CIS 134	board.
Security Techniques in Programming	CIS 253	S	1	CIS 121 or CSC 108, CIS 134	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Cooperative Work Experience & Seminar	CIS 299	S	3	CIS 241, CPS 298, Approval of Program Coordinator	
Technical and Workplace Writing	ENG 205	F/S/SU	3	ENG 102, Computer Literacy	
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
		Total	15		
Total Credits Re	equired		69-70		

	Suggested CIS Electives Course Sequence								
Semest	Semester Database Focus Programming Focus Web Design Focus								
4	CIS 229 and CIS 244	CIS 225 and CIS 226 or CIS 229	CIS 226 and CIS 230						

# <u>Computer & Information Technology</u> Computer Information Systems - Health Information Option - Associate in Science (Program Code: CIHI)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
Introduction to Madical		Semeste	er 1		Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: CIHI). Register for and successfully
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		complete all courses to graduate in
Composition I	ENG 101	F/S/SU	3	Placement into college level English	five semesters.
College Algebra	MAT 100	F/S/SU	3	MAT 099 with a grade of "C" or higher or approp place score	Complete ALH 102, CIS 111, ENG
Liberal Arts Elective		F/S/SU	3		101, and MAT 100.
		Total	15		
Medical Law and Ethics	ALH 106	Semeste F/S	er 2 3	Placement into college level English	Meet with Career Services to
Introduction to Programming with C++	CIS 121	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	discuss the co-op process and leads for co-op placements. Complete CIS 121 and ENG 102.
Web Page Development I	CIS 134	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	
Introduction to Data Communication & Networks <b>OR</b>	CIS 141	S/SU	3-4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	
Networking Technologies	CSC 234	F/S/SU		Coreq: CSC 141	
Composition II	ENG 102	F/S/SU Total	3 15-16	ENG 101	-
	Se	mester 3 (S			
Principles of Human Biology	BIO 100	F/S/SU	4	Placement into college level English	
Liberal Arts Elective		F/S/SU	3		
		Total Semeste	7	<u> </u>	
Medical/Dental Billing and	1		er 4		Meet with Program Coordinator to discuss readiness for CIS 299.
Insurance	BSS 112	F/S	3	ALH 102	
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Contact Career Services to complete all requirements of CPS 298 (required prior to registration for
Electronic Health Records	CIS 212	F/S	3	ALH 102, CIS 111	CIS 299). See
Systems Analysis & Design	CIS 241	F	3	CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108	www.QCC.edu/career-services.
Pre Cooperative Education Seminar	CPS 298	F/S	0		Create an account on the QCC job board to search for internships, co-
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	ops and jobs.
		Total	15		Complete CIS 241.
	T	Semeste	er 5		If seeking employment, meet with
SQL Programming	CIS 228	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Career Services for career readiness preparation and to learn more about QCC's job board.
Database Management Application Development	CIS 243	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Database Management Concepts	CIS 244	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	
Cooperative Work Experience	CIS 299	S	3	CIS 241, CPS 298, Approval of Program Coordinator	
& Seminar					
	ENG 205	F/S/SU Total	3 15	ENG 102, Computer Literacy	

# <u>Computer & Information Technology</u> Computer Information Systems - Health Information Option - Associate in Science (Program Code: CIHI)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1		Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: CIHI).
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Register for and successfully complete all courses to graduate in
Composition I	ENG 101	F/S/SU	3	Placement into college level English	five semesters.
College Algebra	MAT 100	F/S/SU	3	MAT 099 with a grade of "C" or higher or approp place score	Complete ALH 102, CIS 111, ENG
Liberal Arts Elective		F/S/SU	3		101, and MAT 100.
		Total	15		
		Semeste	er 2	•	Meet with Career Services to
Medical Law and Ethics	ALH 106	F/S	3	Placement into college level English	discuss the co-op process and
Introduction to Programming with C++	CIS 121	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	leads for co-op placements. Complete CIS 121 and ENG 102.
Web Page Development I	CIS 134	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	
Introduction to Data Communication & Networks OR	CIS 141	S/SU	3-4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	
Networking Technologies	CSC 234	F/S/SU	•	Coreq: CSC 141	
Composition II	ENG 102	F/S/SU	3	ENG 101	
		Total	15-16		
		mester 3 (S	Summer)		
Principles of Human Biology	BIO 100	F/S/SU	4	Placement into college level English	
Liberal Arts Elective		F/S/SU	3		
		Total	7		
		Semeste	er 4	Ι	Meet with Program Coordinator to
Medical/Dental Billing and Insurance	BSS 112	F/S	3	ALH 102	discuss readiness for CIS 299.
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Contact Career Services to complete all requirements of CPS 298 (required prior to registration for
Electronic Health Records	CIS 212	F/S	3	ALH 102, CIS 111	CIS 299). See <u>www.QCC.edu/career-services</u> .
Systems Analysis & Design	CIS 241	F	3	CIS 121 or CIS 223 or CIS 226 or CIS 230 or CSC 108	Create an account on the QCC job
Pre Cooperative Education Seminar	CPS 298	F/S	0		board to search for internships, co- ops and jobs.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	
		Total	15		Complete CIS 241.
		Semeste	er 5	1	If seeking employment, meet with
SQL Programming	CIS 228	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Career Services for career readiness preparation and to learn more about QCC's job board.
Database Management Application Development	CIS 243	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Submit an Intent to Graduate Form, located on <i>The Q</i> .
Database Management Concepts	CIS 244	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	
Cooperative Work Experience & Seminar	CIS 299	S	3	CIS 241, CPS 298, Approval of Program Coordinator	
Technical and Workplace Writing	ENG 205	F/S/SU	3	ENG 102, Computer Literacy	
		Total	15		
Total Credits R	equired		67-68		

# Computer & Information Technology (New certificate, eff. Fall 2023, approved via Academic Matters 11/08/2022) Data Science Certificate (Program Code: DS) CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	er 1		Apply and get accepted to this
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		program (Program Code: DS).
Introduction to Programming with C++	CIS 121	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	Register for and successfully complete all courses to graduate in two semesters.
Introduction to Programming Using Python	CSC 101	F/S	3	MAT 099 with a grade of "C" or higher or approp place score	Complete CIS 111 and CIS 121.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	
		Total	12		
		Semest	er 2		If seeking employment, meet with
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Career Services for career readiness preparation and to learn more about QCC's job board.
Management of Data Analytics	CIS 206	F/S	3	CIS 105 or CIS 111 or CIS 243, MAT 122	Submit an Intent to Graduate Form,
.NET Programming I	CIS 223	S	3	CIS 105 or CIS 111, CIS 121 or CSC 108	located on The Q.
SQL Programming	CIS 228	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	
Database Management Concepts	CIS 244	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	
		Total	15		
Total Credits R	equired		27		

#### <u>Computer & Information Technology</u> (New certificate, eff. Fall 2023, approved via Academic Matters 11/08/2022) Data Science Certificate (Program Code: DS) PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones		
	Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		program (Program Code: DS).		
Introduction to Programming with C++	CIS 121	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score, Coreq: CIS 105 or CIS 111	Register for and successfully complete all courses to graduate in two semesters.		
Introduction to Programming Using Python	CSC 101	F/S	3	MAT 099 with a grade of "C" or higher or approp place score	Complete CIS 111 and CIS 121.		
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052			
		Total	12				
		Semest	er 2		If seeking employment, meet with		
Advanced Microcomputer Applications	CIS 112	F/S/SU	3	CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Career Services for career readiness preparation and to learn more about QCC's job board.		
Management of Data Analytics	CIS 206	F/S	3	CIS 105 or CIS 111 or CIS 243, MAT 122	Submit an Intent to Graduate Form,		
.NET Programming I	CIS 223	S	3	CIS 105 or CIS 111, CIS 121 or CSC 108	located on The Q.		
SQL Programming	CIS 228	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score			
Database Management Concepts	CIS 244	S	3	CIS 105 or CIS 111, Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score			
		Total	15				
Total Credits R	equired		27				

Engineering & Engineering Technology CURRENT Manufacturing Technology - Quality Control Option - Associate in Science (Program Code: MPQ)

Introduction to Microcomputer Applications Composition 1     CIS 111     F/S/SU     3     Program (Program Code: MI Program Code: MI Program (Program Code: MI Program	<ul> <li>Apply and get accepted to this program (Program Code: MPQ).</li> <li>Register for and successfully complete all courses to graduate in four semesters.</li> <li>Complete MNT 101.</li> <li>Complete MNT 108 (includes certification exam).</li> <li>Meet with Career Services to discuss the co-op process and leads for co-op placements.</li> <li>If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career-services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about</li> </ul>	Introduction to Microcomputer Applications Composition 1 College Algebra Mechanical CAD 1 Basic Machine Operation College Mathematics I: Pre- Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	CIS 111 ENG 101 MAT 100 MNT 101 MNT 108 MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	duction to Microcomputer ications position I age Algebra nanical CAD I c Machine Operation age Mathematics I: Pre- ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	Semeste F/S/SU F/S/SU F/S/SU F/S F/S Total Semeste F/S/SU F/S S S	er 1 3 3 3 3 3 15 er 2 3 3 3 3	Placement into college level English MAT 099 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 100 or approp place score ERG 101 or MNT 101	Apply and get accepted to this program (Program Code: MPQ). Register for and successfully complete all courses to graduate in four semesters. Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
Introduction to Microcomputer Applications Composition I     CIS 111     F/S/SU     3     Placement into college level English or approp place score     program (Program Code: Mf AT 098 with a grade of 'C' or higher or approp place score       Mechanical CAD I     MNT 101     F/S     3     Placement into college level English or approp place score     complete ANT 101       Basic Machine Operation     MNT 108     F/S     3     MAT 095 with a grade of 'C' or higher or approp place score     complete ANT 103       College Mathematics I: Pre- College Mathematics I: Pre- College Mathematics I: Pre- Mart 123     MAT 103     MAT 100 or approp place score     or optices and teads or approp place score     or optices and teads or approp place score       College Mathematics I: Pre- College Mathematics I: Pre- Mart 123     MAT 103     MAT 105 with a grade of 'C' or higher or approp place score     If considering transfer, meet transfer Sanvices Advisor. S www.QCC.edu/transfer.       Mart 124     F/S/SU     3     MAT 095 with a grade of 'C' or higher or approp place score     Complete MNT 103 and MN martification in Mart 112     F/S/SU     3       Pre Cooperative Education Seminar     MAT 122     F/S/SU     3     MAT 095 with a grade of 'C' or higher or approp place score     Contact Career Services to advicus' exploration readings of MNT 100       Speech Communication Skills     SPH 101     F/S/SU     3     MAT 095 with a grade of 'C' or higher or approp place score     Contact Career Services to advicus' exploration	<ul> <li>program (Program Code: MPQ).</li> <li>Register for and successfully complete all courses to graduate in four semesters.</li> <li>Complete MNT 101.</li> <li>Complete MNT 108 (includes certification exam).</li> <li>Meet with Career Services to discuss the co-op process and leads for co- op placements.</li> <li>If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	Applications Composition I College Algebra Mechanical CAD I Basic Machine Operation College Mathematics I: Pre- Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	ENG 101 MAT 100 MNT 101 MNT 108 MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	ications position I age Algebra hanical CAD I c Machine Operation age Mathematics I: Pre- ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	F/S/SU F/S/SU F/S/SU F/S F/S Total Semeste F/S/SU F/S S S S	3 3 3 3 3 3 <b>15</b> er 2 3 3 3	MAT 099 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 100 or approp place score ERG 101 or MNT 101	<ul> <li>program (Program Code: MPQ).</li> <li>Register for and successfully complete all courses to graduate in four semesters.</li> <li>Complete MNT 101.</li> <li>Complete MNT 108 (includes certification exam).</li> <li>Meet with Career Services to discuss the co-op process and leads for co- op placements.</li> <li>If considering transfer, meet with a</li> </ul>
Applications         ENG 101         F/S/SU         3         Placement into college level English or approp place score or port place score         Register for and successfully complete all courses to grad or approp place score         Register for and successfully complete all courses to grad or approp place score         Register for and successfully complete all courses to grad or approp place score         Register for and successfully complete all courses to grad or approp place score         Register for and successfully complete MNT 108 (include or approp place score         Register for and successfully complete MNT 108 (include or approp place score         Complete MNT 108 (include or approp place score         Register for and successfully complete MNT 108 (include or approp place score         Complete MNT 108 (include or approp place score         Complete MNT 108 (include or placements.           Solid Modeling         MNT 106         F/S         3         MAT 100 or approp place score         Meet with Carser Services to or or approp place score         If considering transfer, meet for approp place           Precesses         MAT 1122         F/S/S/U         3         MAT 095 with a grade of °C' or higher or approp place         If considering transfer, meet for approp place         Constel Carser for approp place         Constel Carser for approp place           Precesses         MAT 122         F/S/S/U         3	complete all courses to graduate in four semesters. Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Complete MNT 103 and MNT 106. Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Composition I College Algebra Mechanical CAD I Basic Machine Operation College Mathematics I: Pre- Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	ENG 101 MAT 100 MNT 101 MNT 108 MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	ications position I age Algebra nanical CAD I c Machine Operation age Mathematics I: Pre- ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	F/S/SU F/S/SU F/S F/S Total Semeste F/S/SU F/S S S	3 3 3 3 15 er 2 3 3 3	MAT 099 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 100 or approp place score ERG 101 or MNT 101	complete all courses to graduate in four semesters. Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
College Algebra         MAT 100         F/S/SU         3         MAT 099 with a grade of "C" or higher or approp place score or approp place score         complete all courses to grad for approp place score         complete MNT 101.         Complete MNT 103.         Complet	complete all courses to graduate in four semesters. Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Complete MNT 103 and MNT 106. Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	College Algebra Mechanical CAD I Basic Machine Operation College Mathematics I: Pre- Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MAT 100 MNT 101 MNT 108 MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	ege Algebra nanical CAD I c Machine Operation ege Mathematics I: Pre- ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	F/S/SU F/S F/S Total Semeste F/S/SU F/S S S S	3 3 15 er 2 3 3 3	MAT 099 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 100 or approp place score ERG 101 or MNT 101	complete all courses to graduate in four semesters. Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
Considering transfer     Considering transfer       Basic Machine Operation     MNT 108     F/S     3     MAT 108 with a grade of "C" or higher or approp place score     Complete MNT 108 (include certification exam).       College Mathematics I: Pre- College Mathematics I: Pre- College Mathematics I: Pre- Man 123     MAT 103     F/S     3     MAT 103 with a grade of "C" or higher or approp place score     Meet with Career Services to the coor process and leads op placements.       College Mathematics I: Pre- College Mathematics I: Pre- College Mathematics I: Pre- Manufacturing Materials and MNT 106     S     3     MAT 095 with a grade of "C" or higher or approp place score     Meet with Career Services to transfer Services Advisor. S www.QCC.edu/ca services Advisor. S       Precesses     MNT 110     S     3     MAT 095 with a grade of "C" or higher or approp place score     Complete MNT 103 and NN www.QCC.edu/ca services to the services of Cur. Pro- services to the transfer or approp place     Complete MNT 103 and NN mathematication in manufacturing       Statistics     MAT 122     F/S SU     8     MAT 095 with a grade of "C" or higher or approp place     Considering transfer, meet representations for MNT 20 services to four-services to all requirements of CPE 208 (F/S)       Pre Cooperative Education Seminar     MAT 122     F/S SU     8     MAT 095 with a grade of "C" or higher or approp place     Complete MNT 103 and NN manufacturing Safety       MAT 122     F/S SU     3     MAT 095 with a grade of "C" or higher or approp place score	Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Complete MNT 103 and MNT 106. Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Mechanical CAD I Basic Machine Operation College Mathematics I: Pre- Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MNT 101 MNT 108 MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	anical CAD I c Machine Operation ege Mathematics I: Pre- ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	F/S F/S Total Semeste F/S/SU F/S S S	3 3 15 er 2 3 3 3	MAT 095 with a grade of "C" or higher or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 100 or approp place score ERG 101 or MNT 101	Complete MNT 101. Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
Medicinatical CAD I     MMT 101     F/S     3     or approp place score     Complete MNT 101.       Basic Machine Operation     MNT 108     F/S     3     MAT 105 with a grade of C° or higher or approp place score     Complete MNT 101.       College Mathematics I: Pir- Calculus     MAT 102     F/S     3     MAT 100 or approp place score     Met with Career Services to or approp place score     Met with Career Services to or approp place score     Met with Career Services to or approp place score       College Mathematics I: Pir- Calculus     MNT 106     S     3     ERG 101 or MNT 101     If considering transfer Services to or approp place score       Maunfacturing Materials and Instrumentation in Manufacturing     MNT 110     S     3     MAT 005 with a grade of "C" or higher or approp place score     Complete MNT 103 and MN Manufacturing       Fre Cooperative Education Seminar     CPS 298     F/S     0     Contact Career Services to or approp place     Contact Career Services to discuss readiness for MNT 2       Manufacturing Safety     MAT 100     F/S     3     MAT 095 with a grade of "C" or higher or approp place     Contact Career Services to discuss readiness for MNT 2       Nor Coregoramming     MNT 100     F/S     3     MAT 095 with a grade of "C" or higher or approp place     Contact Career Services to discuss readiness for MNT 2       Speech Communication Skills     SPH 101     F/S     3     Placement into co	Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Complete MNT 103 and MNT 106. Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Basic Machine Operation         College Mathematics I: Pre-Calculus         Solid Modeling         Quality         Manufacturing Materials and Processes         Maintenance and Instrumentation in Manufacturing         Pre Cooperative Education Seminar         Statistics         Manufacturing Safety         CNC Programming         Speech Communication Skills	MNT 108 MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	c Machine Operation	F/S Total Semeste F/S/SU F/S S S	3 15 er 2 3 3 3	or approp place score MAT 095 with a grade of "C" or higher or approp place score MAT 100 or approp place score ERG 101 or MNT 101	Complete MNT 108 (includes certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
Basic Machine Operation     WMT 108     Pros     3     or approp place score     Complete MNT 108 (include calculus       College Mathematics I: Pre- Calculus     MAT 123     F/S/SU     3     MAT 100 or approp place score     Met with Career Services to complete MNT 101       College Mathematics I: Pre- Calculus     MNT 103     F/S     3     ERG 101 or MNT 101     If considering transfer services and leads or approp place score     If considering transfer services and leads or approp place score       Manufacturing Materials and MNT 110     S     3     MAT 095 with a grade of "C" or higher or approp place score     If considering transfer services to www.QCC.edu/tansfer.       Manufacturing Materials and Instrumentation in Manufacturing Safety     MNT 110     S     3     MAT 095 with a grade of "C" or higher or approp place     Met with Program Coordina discuss readiness for MNT 2       Statistics     MAT 122     F/S     0     Contact Career Services to or approp place     Contact Career Services to or approp place     Contact Career Services to or approp place       Manufacturing Safety     MNT 100     F/S     3     Placement into college level English, or approp place score     Complete MNT 200     Complete MNT 200       Speech Communication Skills     SPH 101     F/S/SU     3     Placement into college level English, or approp place score     Complete MNT 200     Complete MNT 200       Program Elective      F/S/SU	<ul> <li>certification exam).</li> <li>Meet with Career Services to discuss the co-op process and leads for co- op placements.</li> <li>If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	College Mathematics I: Pre- Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MAT 123 MNT 103 MNT 106 MNT 110 MNT 115	ege Mathematics I: Pre- ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	Total Semeste F/S/SU F/S S S	15 er 2 3 3 3	or approp place score MAT 100 or approp place score ERG 101 or MNT 101	certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
Total         15         Orgene price body         certification exam).           College Mathematics I: Pre- Catculus         MAT 123         F/S/SU         3         MAT 100 or approp place score         op placements.           Galaxius         MNT 100         F/S         3         ERG 101 or MNT 101         He co-op process and leads op placements.           Manufacturing Materials and Processes         MNT 110         S         3         MAT 095 with a grade of 'C' or higher or approp place score         Considering transfer, meet Transfer Services Advisor. S www.QCC.edu/transfer.           Matritorance and Instrumentation in Manufacturing         MNT 115         S         3         MAT 095 with a grade of 'C' or higher or approp place         Complete MNT 103 and MN Marufacturing           Statistics         MAT 122         F/S/SU         8         MAT 095 with a grade of 'C' or higher or approp place         Contact Career Services to Contact Career Services to Contact Career Services to Sources of Sources required protor to registration or approp place score         If considering transfer, mee	<ul> <li>certification exam).</li> <li>Meet with Career Services to discuss the co-op process and leads for co- op placements.</li> <li>If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MNT 103 MNT 106 MNT 110 MNT 115	ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	Semeste F/S/SU F/S S S	er 2 3 3 3	MAT 100 or approp place score ERG 101 or MNT 101	certification exam). Meet with Career Services to discuss the co-op process and leads for co- op placements. If considering transfer, meet with a
College Mathematics I: Pre- Calculus       MAT 123       F/S/SU       3       MAT 100 or approp place score or approp place score       the co-op process and leads op placements.         Solid Modeling       MNT 103       F/S       3       ERG 101 or MNT 101       the co-op process and leads op placements.         Marufacturing Materials and Processes       MNT 110       S       3       MAT 095 with a grade of "C" or higher or approp place score       the co-approcess advisor. Swww.QCC.edu/transfer.         Maufacturing       Total       15       Swww.QCC.edu/transfer.       Swww.QCC.edu/transfer.         Pre Cooperative Education Seminar       CPS 298       F/S       0       MAT 095 with a grade of "C" or higher or approp place       Meet with Program Coordina discuss readiness for MNT 2         Maufacturing Safety       MNT 100       F/S       3       MAT 095 with a grade of "C" or higher or approp place       If considering transfer, meet representatives of four-year of approp place         Maufacturing Safety       MNT 100       F/S       3       Placement into college level English, MAT 095 with a grade of "C" or higher or approp place       If considering transfer, meet representatives of four-year or approp place       Complete MNT 100 (include certification exam).         CNC Programming       MNT 210       F       4       Coreq: MNT 101, MNT 108       Complete MNT 20.       Complete MNT 20.       Complete MNT 20.	<ul> <li>the co-op process and leads for co-op placements.</li> <li>If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career-services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MNT 103 MNT 106 MNT 110 MNT 115	ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	F/S/SU F/S S S	3 3 3	ERG 101 or MNT 101	the co-op process and leads for co- op placements. If considering transfer, meet with a
Calculus       MAT 123       P/S/SU       3       IMAT 100 of approp place score       op placements:         Quality       MNT 106       S       3       ERG 101 or MNT 101       ronsidering transfer, meet         Quality       MNT 106       S       3       ERG 101 or MNT 101       ronsidering transfer, meet         Maintacturing Materials and Processes       MNT 110       S       3       MAT 095 with a grade of "C" or higher       Transfer Services Advisors. Swww.QCC.edu/transfer.         Maintacturing       Total       15       Swmw.QCC.edu/transfer.       Complete MNT 103 and MN         Mart 122       F/S. SU       S       MAT 095 with a grade of "C" or higher       Contact Career Services to a lal requirements of CPS 288 (requirements of CPS 28	<ul> <li>op placements.</li> <li>If considering transfer, meet with a Transfer Services Advisor. See www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career-services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> </ul>	Calculus Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MNT 103 MNT 106 MNT 110 MNT 115	ulus I Modeling ity ufacturing Materials and esses tenance and umentation in	F/S S S	3 3	ERG 101 or MNT 101	op placements. If considering transfer, meet with a
Solid Modeling       MNT 103       F/S       3       ERG 101 or MNT 101       It considering transfer, meet manufacturing Materials and Processes       It considering transfer, meet manufacturing         Maintenance and Instrumentation in Manufacturing       MNT 110       S       3       MAT 095 with a grade of "C" or higher or approp place score       It considering transfer, meet Transfer Services Advisor. S www.QCC.edu/transfer.         Manufacturing       MNT 110       S       3       MAT 095 with a grade of "C" or higher or approp place       Contact Career Services to or all requirements of CPS 298       Contact Career Services to or all requirements of CPS 298       Meet with Program Coordina discuss readiness for MNT 2         Statistics       MAT 122       F/S/SU       g       MAT 095 with a grade of "C" or higher or approp place       Contact Career Services to or all requirements of CPS 298       If considering transfer, meet representatives of four-year to discuss readiness; or creat account on the QCC job boa services; or mack dermification exam).       Complete MNT 100 (Include certification exam).         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English Program Elective       For the Program Elective Semester 4       Consplete MNT 100, (Include certification exam).         Program Elective        F/S/	If considering transfer, meet with a Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Complete MNT 103 and MNT 106. Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career- services</u> . If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Solid Modeling Quality Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MNT 106 MNT 110 MNT 115	I Modeling ity ufacturing Materials and esses tenance and umentation in	S S	3		If considering transfer, meet with a
Manufacturing Materials and Processes       MNT 110       S       3       MAT 095 with a grade of "C" or higher or approp place score       Transfer Services Advisor. S www.QCC.edu/transfer.         Manufacturing       MNT 115       S       3       Complete MNT 103 and MN manufacturing         Manufacturing       Total       15       Complete MNT 103 and MN manufacturing       MNT 115       S       3       Complete MNT 103 and MN manufacturing         Pre Cooperative Education Seminar       CPS 298       F/S       0       MAT 095 with a grade of "C" or higher or approp place       Meet with Program Coordina discuss readiness for MNT 2         Statistics       MAT 122       F/S/SU       §       MAT 095 with a grade of "C" or higher or approp place       If considering transfer.meet representatives of four-year to discuss/begin the tra	Transfer Services Advisor. See www.QCC.edu/transfer. Complete MNT 103 and MNT 106. Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Manufacturing Materials and Processes Maintenance and Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	MNT 110 MNT 115	tracturing Materials and esses tenance and umentation in	S		MAT 095 with a grade of "C" or higher	
Processes Maintenance and Instrumentation in Manufacturing         MNT 110         S         3         Improcesses or approp place score         www.QCC.edu/transfer.           Maintenance and Instrumentation in Manufacturing         MNT 115         S         3         Complete MNT 103 and MN Manufacturing           Pre Cooperative Education Seminar         CPS 298         F/S         0         MAT 095 with a grade of "C" or higher or approp place         Meet with Program Coordina discuss readiness for MNT 2           Statistics         MAT 122         F/S/SU         3         MAT 095 with a grade of "C" or higher or approp place         Contact Career Services to a all requirements of CPS 298         F/S         0           Manufacturing Safety         MNT 100         F/S         3         MAT 095 with a grade of "C" or higher or approp place         If considering transfer, meet representatives of four-year to discuss/begin the transfer account on the QCC job boa account on the QCC job boa contact Career Sand (), for an alternative professional optic choose from ACC, BUS, ELI LOG, MGT, MNT, SOC, or a 200-level course.         Complete MNT 210.         For the Program Elective choose from ACC, BUS, ELI LOG, MGT, MNT, SOC, or a 200-level course.         Continue with/complete the t application process; or if is de services for career readines for career readines services for career readines for career readines services for career readines for career readines for career readines         Continue with/complete the t application process; or if is de services for career readines for career readines	<ul> <li>www.QCC.edu/transfer.</li> <li>Complete MNT 103 and MNT 106.</li> <li>Meet with Program Coordinator to discuss readiness for MNT 299.</li> <li>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career-services.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	Processes         Maintenance and         Instrumentation in         Manufacturing         Pre Cooperative Education         Seminar         Statistics         Manufacturing Safety         CNC Programming         Speech Communication Skills	MNT 115	esses tenance and umentation in		3	MAT 095 with a grade of "C" or higher	
Instrumentation in Manufacturing       MNT 115       S       3       Complete MNT 103 and MN         Manufacturing       Total       15       Met with Program Coordinations for MNT 2         Pre Cooperative Education Seminar       CPS 298       F/S       0       Met with Program Coordinations for MT 2         Statistics       MAT 122       F/S/SU       §       MAT 095 with a grade of "C" or higher or approp place       Considering transfer, meet application process; or creat application process; or freat application proces; or freat application process; or freat application process; or freat application proces; or freat application process; or freat application proces; or freat application proces; or freat application process; or fre	Meet with Program Coordinator to discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See www.QCC.edu/career- services. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Instrumentation in Manufacturing Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills		umentation in	9			
Total         15           Semester 3         Met with Program Coordina discuss readiness for MNT 2           Pre Cooperative Education Seminar         CPS 298         F/S         0         Met with Program Coordina discuss readiness for MNT 2           Statistics         MAT 122         F/S/SU         8         MAT 095 with a grade of "C" or higher or approp place         Contact Career Services to all requirements of CPS 298           Manufacturing Safety         MNT 100         F/S         3         Placement into college level English, or approp place         If considering transfer, meet representatives of four-year.           CNC Programming         MNT 210         F         4         Coreq: MNT 101, MNT 108         Complete MNT 100 (includer certification exam).           Speech Communication Skills         SPH 101         F/S/S/U         3         Placement into college level English, or approp place score         Complete MNT 100 (includer certification exam).           Program Elective          F/S/SU         3         Placement into college level English or approp place score         Complete MNT 100 (includer certification exam).           Program Elective          F/S/SU         3         Placement into college level English or appropriate score         Complete MNT 210.           Manufacturing Capstone Project         MNT 216         S         4         MNT 102 or MNT	discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career-</u> <u>services</u> . If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Pre Cooperative Education Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	CPS 298		5	3		Complete MNT 103 and MNT 106.
Pre Cooperative Education Seminar       CPS 298       F/S       0       discuss readiness for MNT 2         Statistics       MAT 122       F/S/SU       3       MAT 095 with a grade of "C" or higher or approp place       Contact Career Services to c all requirements of CPS 298         Manufacturing Safety       MNT 100       F/S       3       Placement into college level English, MAT 095 with a grade of "C" or higher or approp place       If considering transfer, meet representatives of four-year to discuss/begin the transfer account on the QCC job boa search for internships, co-op jobs.         CNC Programming       MNT 210       F       4       Coreq: MNT 101, MNT 108       Complete MNT 100 (includer certification exam).         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English, MAT 095 with a grade of "C" or higher       Complete MNT 100 (includer certification exam).         Program Elective        F/S/SU       3       Placement into college level English       Complete MNT 100 (includer certification exam).         Program Elective        F/S/SU       3       Placement into college level English       Complete MNT 210.         Program Elective        F/S/SU       3       Complete MNT 101, MNT 210.       Complete MNT 20.       Complete MNT 210.         Manufacturing Capstone Project       MNT 218       S <td< td=""><td>discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career-</u> <u>services</u>. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers</td><td>Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills</td><td>CPS 298</td><td></td><td></td><td></td><td></td><td>-</td></td<>	discuss readiness for MNT 299. Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career-</u> <u>services</u> . If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	CPS 298					-
Pre Cooperative Education Seminar       CPS 298       F/S       0       Contact Career Services to a all requirements of CPS 298         Statistics       MAT 122       F/S/SU       3       MAT 095 with a grade of "C" or higher or approp place       Contact Career Services to a all requirements of CPS 298         Manufacturing Safety       MNT 100       F/S       3       Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score       If considering transfer, meet representatives of four-year to discuss/begin the transfer application process; or creat account on the QCC job boa search for internships, co-op jobs.         CNC Programming       MNT 210       F       4       Coreq: MNT 101, MNT 108       Complete MNT 210.       Complete MNT 210.         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English for the Program Elective       Gomplete MNT 210.       For the Program Electives (Semesters 3 and 4), for an alternative professional optic choose from ACC, BUS, ELI LOG, MGT, MNT, SOC, or a 200-level course.       Complete MNT 210.       For the Program Electives (Semesters 3 and 4), for an alternative professional optic choose from ACC, BUS, ELI LOG, MGT, MNT, SOC, or a 200-level course.       Continue with/complete the t application process; or if sea services for career readines preparation and to learn mor QCC's job board.         Lean Manufacturing Capstone Project       MNT 218       S       3       MNT 106       Complete MNT 216, which o SME CMMT example <td>Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career-</u><u>services</u>. If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers</td> <td>Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills</td> <td>CPS 298</td> <td></td> <td>Semeste</td> <td>er 3</td> <td></td> <td>Meet with Program Coordinator to</td>	Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career-</u> <u>services</u> . If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	CPS 298		Semeste	er 3		Meet with Program Coordinator to
Seminar       OTS 236       PTS       O       Contract Carleer SerVices to child carleer SerVices to child carleer SerVices to call requirements of CPS 288 (requirements of CPS 28	all requirements of CPS 298 (required prior to registration for MNT 299). See <u>www.QCC.edu/career-</u> <u>services</u> . If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Seminar Statistics Manufacturing Safety CNC Programming Speech Communication Skills	CPS 298					discuss readiness for MNT 299.
StatisticsMAT 122F/S/SU3MAT 095 with a grade of "C" or higher or approp place299). See www.QCC edu/ca services.Manufacturing SafetyMNT 100F/S3Placement into college level English, MAT 095 with a grade of "C" or higher or approp place scoreIf considering transfer, meet representatives of four-year to discuss/begin the transfer application process; or creat account on the QCC job boa search for internships, co-op jobs.CNC ProgrammingMNT 210F4Coreq: MNT 101, MNT 108Complete MNT 100 (includer certification exam).Speech Communication SkillsSPH 101F/S/SU3Placement into college level English or approp place scoreComplete MNT 100 (includer certification exam).Program ElectiveF/S/SU3Placement into college level English coreq: MNT 101, MNT 108Complete MNT 210.Program ElectiveF/S/SU3Placement into college level EnglishComplete MNT 210.Program ElectiveF/S/SU3Coreq: MNT 101, MNT 108Complete MNT 210.Manufacturing Capstone ProjectMNT 216S4MNT 102 or MNT 103, MNT 210Continue with/complete the t application process; or if see employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.Lean Manufacturing and Six SigmaMNT 218S3MNT 106Complete MNT 216, which o SHE CM/frod ExamCooperative WorkMNT 220F/S/SU3CPS 298, Approval of ProgramComplete MNT 216, which o SHE CM/frod E	<ul> <li>299). See <u>www.QCC.edu/career-services</u>.</li> <li>If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs.</li> <li>Complete MNT 100 (includes certification exam).</li> <li>Complete MNT 210.</li> <li>For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	Manufacturing Safety CNC Programming Speech Communication Skills			F/S	0		all requirements of CPS 298
Manufacturing Safety       MNT 100       F/S       3       Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score       representatives of four-year is to discuss/begin the transfer applicationes; or creat account on the QCC job boa search for internships, co-op jobs.         CNC Programming       MNT 210       F       4       Coreq: MNT 101, MNT 108       Complete MNT 100 (includes certification exam).         Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English       Complete MNT 100 (includes certification exam).         Program Elective        F/S/SU       3       Placement into college level English       Complete MNT 210.         Program Elective        F/S/SU       3       Placement into college level English       Complete MNT 210.         Manufacturing Capstone Project        F/S/SU       3       Continue with/complete the t application process; or if see employment, meet with Care project       Continue with/complete the t application process; or if see employment, meet with Care project         Lean Manufacturing and Six Sigma       MNT 218       S       3       MNT 106       Complete MNT 216, which o SMF CMfnT exam	representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	CNC Programming Speech Communication Skills	MAT 122	stics	F/S/SU	3		299). See <u>www.QCC.edu/career-</u> services.
CNC Programming     MNT 210     F     4     Coreq: MNT 101, MNT 108     jobs.       Speech Communication Skills     SPH 101     F/S/SU     3     Placement into college level English     Complete MNT 210.       Program Elective      F/S/SU     3     Placement into college level English     For the Program Electives (Semesters 3 and 4), for an alternative professional optic choose from ACC, BUS, ELT LOG, MGT, MNT, SOC, or a 200-level course.       Vertication Completer MNT 216     S     4     MNT 102 or MNT 103, MNT 210     Continue with/complete the t application process; or if see employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.       Cooperative Work     MNT 218     S     3     MNT 106     Complete MNT 216, which o SME CM/6T exam	jobs. Complete MNT 100 (includes certification exam). Complete MNT 210. For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers	Speech Communication Skills	MNT 100	ufacturing Safety	F/S	3	MAT 095 with a grade of "C" or higher	representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to
Speech Communication Skills       SPH 101       F/S/SU       3       Placement into college level English         Program Elective        F/S/SU       3       For the Program Electives (Semesters 3 and 4), for an alternative professional optic choose from ACC, BUS, ELT LOG, MGT, MNT, SUC, or a 200-level course.         Manufacturing Capstone Project       MNT 216       S       4       MNT 102 or MNT 103, MNT 210       Continue with/complete the tapplication process; or if see employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.         Cooperative Work       MNT 218       S       3       CPS 298, Approval of Program       Complete MNT 216, which o SME CMfoT exam.	For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers		MNT 210	Programming	F	4	Coreq: MNT 101, MNT 108	jobs. Complete MNT 100 (includes
Program Elective        F/S/SU       3       (Semesters 3 and 4), for an alternative professional optic choose from ACC, BUS, ELT LOG, MGT, MNT, SOC, or a 200-level course.         Total       16       200-level course.       Continue with/complete the t application process; or if see employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.         Lean Manufacturing and Six Sigma       MNT 218       S       3       MNT 106       Complete MNT 216, which o SME CMfoT exam.	<ul> <li>(Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT 200-level course.</li> <li>Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete MNT 216, which offers</li> </ul>	Program Elective	SPH 101	ech Communication Skills	F/S/SU	3	Placement into college level English	
Total     16     200-level course.       Semester 4       Manufacturing Capstone Project     MNT 216     S     4     MNT 102 or MNT 103, MNT 210     Continue with/complete the t application process; or if see employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.       Lean Manufacturing and Six Sigma     MNT 218     S     3     MNT 106     Complete MNT 216, which o SME CMfdT exam.	200-level course. Continue with/complete the transfer application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers			ram Elective	F/S/SU	3		(Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM,
Manufacturing Capstone Project       MNT 216       S       4       MNT 102 or MNT 103, MNT 210       application process; or if see employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.         Lean Manufacturing and Six Sigma       MNT 218       S       3       MNT 106       QCC's job board.         Cooperative Work       MNT 299       E/S/SUL       3       CPS 298, Approval of Program       Complete MNT 216, which of SME CMfdT exam.	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers				Total	16		
Manufracturing Capstone       MNT 216       S       4       MNT 102 or MNT 103, MNT 210       employment, meet with Care Services for career readiness preparation and to learn mor QCC's job board.         Lean Manufacturing and Six Sigma       MNT 218       S       3       MNT 106       Cooperative Work       CPS 298, Approval of Program       Complete MNT 216, which or SME CMfgT exam.	employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board. Complete MNT 216, which offers		•			-		Continue with/complete the transfer
Lean Manufacturing and Six Sigma     MNT 218     S     3     MNT 106     QCC's job board.       Cooperative Work     MNT 299     E/S/SUL     3     CPS 298, Approval of Program     Complete MNT 216, which of SME CMfgT exam.	QCC's job board. Complete MNT 216, which offers		MNT 216		S	4	MNT 102 or MNT 103, MNT 210	employment, meet with Career Services for career readiness
Cooperative vvork   MNT 200   F/S/SII   3   CPS 298, Approval of Program   SMF CMfgT exam			MNT 218		S	3	MNT 106	QCC's job board.
Experience & Seminar 173/30 3 Coordinator			1		F/S/SU	3		
Program Elective F/S/SU 3 Coordinator approval), which	Complete MNT 299 (with Program Coordinator approval), which introduces students to employers.	Program Elective	MNT 299	ram Elective	F/S/SU	3		Coordinator approval), which
Science Elective F/S/SU 3-4 Submit an Intent to Graduate	Submit an Intent to Graduate Form,	Science Elective			F/S/SU	-		Submit an Intent to Graduate Form,
Total 16-17 located on The Q.	Incaleu un me Q.	Total Credits R		nce Elective	Tetel	10-17		Incaled on The Q.

Engineering & Engineering Technology PROPOSED Manufacturing Technology - Quality Control Option - Associate in Science (Program Code: MPQ)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
Introduction to Microcomputer		Semest	-		Apply and get accepted to this program (Program Code: MPQ).
Applications	CIS 111	F/S/SU	3		program (Frogram Code. MFQ).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully
College Algebra	MAT 100	F/S/SU	3	MAT 099 with a grade of "C" or higher or approp place score	complete all courses to graduate in four semesters.
Mechanical CAD I	MNT 101	F/S	3	MAT 095 with a grade of "C" or higher or approp place score	Complete MNT 101.
Basic Machine Operation	MNT 108	F/S	3	MAT 095 with a grade of "C" or higher or approp place score	Complete MNT 108 (includes certification exam).
		Total Semest	15 er 2		Meet with Career Services to discuss
College Mathematics I: Pre-	MAT 400				the co-op process and leads for co-
Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score	op placements.
Solid Modeling Quality	MNT 103 MNT 106	F/S S	3	ERG 101 or MNT 101	If considering transfer, meet with a
Manufacturing Materials and Processes	MNT 110	s	3	MAT 095 with a grade of "C" or higher or approp place score	Transfer Services Advisor. See www.QCC.edu/transfer.
Maintenance and Instrumentation in Manufacturing	MNT 115	S	3		Complete MNT 103 and MNT 106.
Manufacturing		Total	15		-
		Semest			Meet with Program Coordinator to
					discuss readiness for MNT 299.
Pre Cooperative Education Seminar	CPS 298	F/S	0		Contact Career Services to complete all requirements of CPS 298 (required prior to registration for MN
Statistics	MAT 122	F/S/SU	3	College level math course or QMAT place score > 21 or Coreq: MAT 052	299). See <u>www.QCC.edu/career-</u> services.
Manufacturing Safety	MNT 100	F/S	3	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process; or create an account on the QCC job board to search for internships, co-ops and
CNC Programming	MNT 210	F	4	Coreq: MNT 101, MNT 108	jobs. Complete MNT 100 (includes certification exam).
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Complete MNT 210.
Program Elective		F/S/SU	3		For the Program Electives (Semesters 3 and 4), for an alternative professional option, choose from ACC, BUS, ELT, HUM, LOG, MGT, MNT, SOC, or any MAT
		Total	16		200-level course.
		Semest	er 4		Continue with/complete the transfer
Manufacturing Capstone Project	MNT 216	S	4	MNT 102 or MNT 103, MNT 210	application process; or if seeking employment, meet with Career Services for career readiness
Lean Manufacturing and Six Sigma	MNT 218	S	3	MNT 106	preparation and to learn more about QCC's job board.
Cooperative Work Experience & Seminar	MNT 299	F/S/SU	3	CPS 298, Approval of Program Coordinator	Complete MNT 216, which offers SME CMfgT exam.
Program Elective		F/S/SU	3		Complete MNT 299 (with Program Coordinator approval), which introduces students to employers.
Science Elective		F/S/SU Total	3-4 <b>16-17</b>		Submit an Intent to Graduate Form, located on <i>The Q</i> .

# <u>Healthcare</u> Healthcare - Medical Sales/Marketing Option - Associate in Science (Program Code: HCSM)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		emester 1 (			Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HCSM). Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced
<mark>General Biology: Core</mark> Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Placement (AP) Exams. QCC School Code: 3714. Complete BIO 101; or AP Biology, with
Composition I	ENG 101	F/S/SU	3	Placement into college level English	AP Exam grade of "3" or higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete FYE 102. Complete PSY 101; or AP Psychology, with AP Exam grade of
	For	Total nester 2 (S	16		"3" or higher, to count as PSY 101. Follow Academic Plan from FYE 102;
Anatomy & Physiology I OR	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	adjust with Academic Advisor, as needed.
Healthcare Elective					Meet with a Transfer Services Advisor.
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete ENG 102; or AP English/
Principles of Marketing Mathematics Elective	MRK 201	F/S/SU F/S/SU	3	Placement into college level English	Literature and Composition, with AP
		Total	16		Exam grade of "3" or higher, to count as ENG 102.
	S	emester 3 (			Follow Academic Plan from FYE 102;
Medical Law and Ethics	ALH 106	F/S	3	Placement into college level English	adjust with Academic Advisor, as needed.
Principles of Human Biology OR	BIO 100	F/S/SU	4	Placement into college level English	Consider taking Humanities Elective to complete MassTransfer block.
Anatomy & Physiology II	BIO 112			BIO 111	
Pre Cooperative Education Seminar	CPS 298	F/S	0		Meet with representatives of four-year schools to discuss/begin the transfer application process; or create an
Sales & Sales Management	MRK 221	S	3	Placement into college level English	account on the QCC job board to search for internships, co-ops and
Healthcare Elective or Humanities Elective		F/S/SU Total	3 <b>13</b>		jobs. Complete CPS 298.
	Ser	nester 4 (S	-	I	Follow Academic Plan from FYE 102;
Healthcare Externship	ALH 299	F/S/SU	3	ACC 101 or MRK 201, ALH 106, BSS 112 or MRK 221, CPS 298	adjust with Academic Advisor, as needed.
Human Relations in Organizations	PSY 158	F/S/SU	3	Placement into college level English	Consider taking Humanities and Social Science Electives to complete MassTransfer block.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Continue with/complete the transfer application process; or if seeking employment, meet with Career
Healthcare Elective or Humanities Elective		F/S/SU	3		Services for career readiness preparation and to learn more about QCC's job board.
Healthcare Elective or Social Science Elective		F/S/SU	3		Submit an Intent to Graduate Form,
Total Cuadita D	quirod	Total	15		
Total Credits Re	quirea		60		

# <u>Healthcare</u> Healthcare - Medical Sales/Marketing Option - Associate in Science (Program Code: HCSM)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	S	emester 1 (	(Fall)		Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HCSM). Contact Career Services (www.QCC.edu/APexams) to receive
<mark>General Biology: Core</mark> Concepts	BIO 101	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	credit for High School (HS) Advanced Placement (AP) Exams. QCC School Code: 3714.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	AP Exam grade of "3" or higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete FYE 102. Complete PSY 101; or AP Psychology, with AP Exam grade of
	_	Total	16		"3" or higher, to count as PSY 101.
	Ser	nester 2 (S	pring)		Follow Academic Plan from FYE 102;
Anatomy & Physiology I OR	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	adjust with Academic Advisor, as needed.
Healthcare Elective					Meet with a Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Attend
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Transfer Services events.
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete ENG 102; or AP English/
Principles of Marketing	MRK 201	F/S/SU F/S/SU	3	Placement into college level English	Literature and Composition, with AP
Mathematics Elective		Total	16		Exam grade of "3" or higher, to count as ENG 102.
	Se	emester 3 (			Follow Academic Plan from FYE 102;
Medical Law and Ethics	ALH 106	F/S	3	Placement into college level English	adjust with Academic Advisor, as needed.
Principles of Human Biology <b>OR</b>	BIO 100	F/S/SU	4	Placement into college level English	Consider taking Humanities Elective to
Anatomy & Physiology II	BIO 112	175/50	4	BIO 111	complete MassTransfer block.
Pre Cooperative Education Seminar	CPS 298	F/S	0		Meet with representatives of four-year schools to discuss/begin the transfer application process; or create an
Sales & Sales Management	MRK 221	s	3	Placement into college level English	account on the QCC job board to search for internships, co-ops and
Healthcare Elective or Humanities Elective		F/S/SU	3		jobs.
	Sor	Total nester 4 (S	13 (pring)		Complete CPS 298. Follow Academic Plan from FYE 102:
Healthcare Externship	ALH 299	F/S/SU	3	ACC 101 or MRK 201, ALH 106, BSS 112 or MRK 221, CPS 298	adjust with Academic Advisor, as needed.
Human Relations in Organizations	PSY 158	F/S/SU	3	Placement into college level English	Consider taking Humanities and Social Science Electives to complete MassTransfer block.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Continue with/complete the transfer application process; or if seeking
Healthcare Elective or Humanities Elective		F/S/SU	3		employment, meet with Career Services for career readiness preparation and to learn more about
Healthcare Elective or Social Science Elective		F/S/SU	3		QCC's job board. Submit an Intent to Graduate Form,
	L	Total	15		located on The Q.
Total Credits Re	equired		60		

# <u>Healthcare</u> Healthcare - Pre-Dental Hygiene Option - Associate in Science (Program Code: HCDH)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester 1	(Fall)		Apply and get accepted to this
Introduction to Medical					program (Program Code: HCDH).
Terminology	ALH 102	F/S/SU	3	Placement into college level English	Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS)
<mark>General Biology: Core</mark> Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher	Advanced Placement (AP) Exams. QCC School Code: 3714.
· ·				or approp place score	Complete BIO 101; or AP Biology, with AP Exam grade of "3" or
Composition I	ENG 101	F/S/SU	3	Placement into college level English	higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
					Complete FYE 102.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP
		Total	16		Psychology, with AP Exam grade of "3" or higher, to count as PSY 101.
	Se	emester 2 (	-		Follow Academic Plan from FYE
Introduction to Pharmacology for Allied Health Professionals	ALH 103	F/S/SU	3	Placement into college level English	102; adjust with Academic Advisor, as needed.
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Meet with Dental Hygiene Program Coordinator to discuss associate degree (Program Code: DH); or if considering transfer, meet with a
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 095 with a grade of "C" or higher or approp place score	Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete ENG 102; or AP English/ Literature and Composition, with AP Exam grade of "3" or higher, to
		Total	14		count as ENG 102.
	r	Semester 3	· /		Follow Academic Plan from FYE
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	102; adjust with Academic Advisor, as needed.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
Healthcare Elective		F/S/SU	3		If considering transfer, meet with
Healthcare Elective		F/S/SU	3		to discuss/begin the transfer
Humanities Elective		F/S/SU	3		application process.
	Se	Total emester 4 (	16 Spring)		Follow Academic Dian from EVE
			opiniy)		Follow Academic Plan from FYE 102; adjust with Academic Advisor,
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	as needed.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Consider taking Humanities, Mathematics, and Social Science Electives to complete MassTransfer
Healthcare Elective or Humanities Elective		F/S/SU	3		block.
Healthcare Elective or Mathematics Elective		F/S/SU	3		Apply to associate degree (Program Code: DH); or continue with/ complete the transfer application
Healthcare Elective or Social Science Elective		F/S/SU	3		process. Submit an Intent to Graduate Form,
		Total	16		located on The Q.
Total Credits Re	equired		62		

# <u>Healthcare</u> Healthcare - Pre-Dental Hygiene Option - Associate in Science (Program Code: HCDH) PR

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	ę	Semester 1	(Fall)		Apply and get accepted to this
Introduction to Medical	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HCDH).
Terminology		F/3/30	5		Contact Career Services (www.QCC.edu/APexams) to receive credit for High School (HS) Advanced Placement (AP) Exams.
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	QCC School Code: 3714. Complete BIO 101; or AP Biology,
					with AP Exam grade of "3" or
Composition I	ENG 101	F/S/SU	3	Placement into college level English	higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
					Complete FYE 102.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP
					Psychology, with AP Exam grade of
		Total	16		"3" or higher, to count as PSY 101.
	Se	emester 2 (	Spring)		Follow Academic Plan from FYE
Introduction to Pharmacology for Allied Health Professionals	ALH 103	F/S/SU	3	Placement into college level English	102; adjust with Academic Advisor, as needed.
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Meet with Dental Hygiene Program Coordinator to discuss associate degree (Program Code: DH); or if considering transfer, meet with a Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 095 with a grade of "C" or higher or approp place score	
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete ENG 102; or AP English/ Literature and Composition, with AP Exam grade of "3" or higher, to count as ENG 102.
		Total	14		
	I	Semester 3	· /		Follow Academic Plan from FYE
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	102; adjust with Academic Advisor, as needed.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
Healthcare Elective		F/S/SU	3		If considering transfer, meet with representatives of four-year schools
Healthcare Elective		F/S/SU	3		to discuss/begin the transfer
Humanities Elective		F/S/SU	3		application process.
	Se	Total emester 4 (	16 Spring)		Follow Academic Plan from FYE
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	102; adjust with Academic Advisor, as needed.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Consider taking Humanities, Mathematics, and Social Science
Healthcare Elective or Humanities Elective		F/S/SU	3		Electives to complete MassTransfer block.
Healthcare Elective or Mathematics Elective		F/S/SU	3		Apply to associate degree (Program Code: DH); or continue with/ complete the transfer application
Healthcare Elective or Social Science Elective		F/S/SU	3		process. Submit an Intent to Graduate Form,
		Total	16		located on The Q.
Total Credits Re	equired		62		

#### <u>Healthcare</u> Emergency Medical Technician Certificate (Program Code: EMT)

#### CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1	•	Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: EMT).
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Register for and successfully complete all courses to graduate in
Composition I	ENG 101	F/S/SU	3	Placement into college level English	two semesters.
Healthcare First Year Experience	FYE 102	F/S/SU	3		
		Total	12		
		Semeste	er 2		EMT 101 may be taken as a free-
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	standing course or as part of the entire certificate. If seeking employment, meet with
General Biology: Core Concepts	BIO 101	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Career Services for career readiness preparation and to learn more about QCC's job board. Sit for NREMT written exam. Sit for
Basic Emergency Medical Technology	EMT 101	F/S/SU	7		NREMT/MA psychomotor exam. Apply for MA EMT certification.
		Tatal	44		Submit an Intent to Graduate Form, located on <i>The Q</i> .
Tatal One dita D		Total	11		
Total Credits Required			23		

#### <u>Healthcare</u> Emergency Medical Technician Certificate (Program Code: EMT)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: EMT).
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Register for and successfully complete all courses to graduate in
Composition I	ENG 101	F/S/SU	3	Placement into college level English	two semesters.
Healthcare First Year Experience	FYE 102	F/S/SU	3		
		Total	12		
		Semest	er 2		EMT 101 may be taken as a free-
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	standing course or as part of the entire certificate. If seeking employment, meet with
General Biology: Core Concepts	BIO 101	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Career Services for career readiness preparation and to learn more about QCC's job board. Sit for NREMT written exam. Sit for
Basic Emergency Medical Technology	EMT 101	F/S/SU	7		NREMT/MA psychomotor exam. Apply for MA EMT certification. Submit an Intent to Graduate Form,
		Total	11		located on The Q.
Total Credits R	equired	1	23		

#### <u>Healthcare</u> Nursing Assistant Certificate (Program Code: NA)

#### CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones		
	Semester 1						
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: NA), in order to take ALH 131.		
Introductory Nursing Assistant	ALH 131	F/S/SU	5	Placement into college level English			
Principles of Human Biology OR	BIO 100			Placement into college level English	Register for and successfully complete all courses to graduate in		
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	two semesters. Complete BIO 100 or BIO 101.		
Healthcare First Year Experience	FYE 102	F/S/SU	3				
		Total	15				
		Semeste	er 2		If seeking employment, meet with		
Advanced Nursing Assistant	ALH 132	F/S/SU	2	ALH 131, Certificate of Completion from a state-approved nursing assistant training program or current C.N.A. Certificate	Career Services for career readiness preparation and to learn more about QCC's job board.		
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .		
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English			
		Total	8				
Total Credits R	equired		23				

## <u>Healthcare</u>

## Nursing Assistant Certificate (Program Code: NA)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: NA), in order to take ALH 131.
Introductory Nursing Assistant	ALH 131	F/S/SU	5	Placement into college level English	1
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	Register for and successfully complete all courses to graduate in
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	two semesters. Complete BIO 100 or BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		
		Total	15		
		Semest	er 2		If seeking employment, meet with
Advanced Nursing Assistant	ALH 132	F/S/SU	2	ALH 131, Certificate of Completion from a state-approved nursing assistant training program or current C.N.A. Certificate	Career Services for career readiness preparation and to learn more about QCC's job board.
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	8		
Total Credits R	equired		23		

## <u>Healthcare</u> Pharmacy Technician Certificate (Program Code: PT)

#### CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones		
	Semester 1						
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: PT), in order to take ALH 137.		
Pharmacy Technician	ALH 137	F	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	Register for and successfully complete all courses to graduate in		
Principles of Human Biology OR	BIO 100			Placement into college level English	two semesters.		
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Complete ALH 137 with a grade of "C" or higher.		
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete BIO 100 or BIO 101.		
		Total	13				
	-	Semeste	er 2		If seeking employment, meet with		
Pharmacy Technician Clinical Co-Operative Externship	ALH 138	S	6	ALH 137	Career Services for career readiness preparation and to learn more about QCC's job board.		
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Complete ALH 138 with a grade of "C" or higher.		
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Submit an Intent to Graduate Form,		
		Total	12		located on The Q.		
Total Credits Required		25					

# <u>Healthcare</u> Pharmacy Technician Certificate (Program Code: PT)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones		
	Semester 1						
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: PT), in order to take ALH 137.		
Pharmacy Technician	ALH 137	F	3	Placement into college level English, MAT 090 with a grade of "C" or higher or approp place score	Register for and successfully complete all courses to graduate in		
Principles of Human Biology OR	BIO 100			Placement into college level English	two semesters.		
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Complete ALH 137 with a grade of "C" or higher.		
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete BIO 100 or BIO 101.		
		Total	13				
		Semest	er 2		If seeking employment, meet with		
Pharmacy Technician Clinical Co-Operative Externship	ALH 138	S	6	ALH 137	Career Services for career readiness preparation and to learn more about QCC's job board.		
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Complete ALH 138 with a grade of "C" or higher.		
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Submit an Intent to Graduate Form,		
		Total	12 25		located on The Q.		
Total Credits R	Total Credits Required						

#### <u>Healthcare</u> Phlebotomy/EKG Technician Certificate (Program Code: PEKG)

CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1		Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: PEKG), in order to take ALH 125.
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	Register for and successfully
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	complete all courses to graduate in two semesters.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete BIO 100 or BIO 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	13		
		Semeste	er 2		If seeking employment, meet with
Phlebotomy/EKG Technician Principles and Application	ALH 125	F/S/SU	9	Placement into college level English	Career Services for career readiness preparation and to learn more about QCC's job board.
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Complete ALH 125 with a grade of "C" or higher.
		Total	12		Submit an Intent to Graduate Form, located on <i>The Q</i> .
Total Credits R	eauired	Total	25		

#### <u>Healthcare</u> Phlebotomy/EKG Technician Certificate (Program Code: PEKG)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	•	Semeste	er 1		Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: PEKG), in order to take ALH 125.
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	Register for and successfully
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	complete all courses to graduate in two semesters.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete BIO 100 or BIO 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	13		
		Semeste	er 2		If seeking employment, meet with
Phlebotomy/EKG Technician Principles and Application	ALH 125	F/S/SU	9	Placement into college level English	Career Services for career readiness preparation and to learn more about QCC's job board.
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Complete ALH 125 with a grade of "C" or higher. Submit an Intent to Graduate Form,
		Total	12		located on <i>The</i> Q.
Total Credits Required			25		

# <u>Healthcare</u> Healthcare - Associate in Science (Program Code: HLC)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones			
		Semeste	er 1		Apply and get accepted to this			
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HLC). Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS)			
<mark>General Biology: Core</mark> Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Advanced Placement (AP) Exams. QCC School Code: 3714. Complete BIO 101; or AP Biology, with AP Exam grade of "3" or			
Composition I	ENG 101	F/S/SU	3	Placement into college level English	higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.			
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.			
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete FYE 102. Complete PSY 101; or AP Psychology, with AP Exam grade of			
		Total	16		"3" or higher, to count as PSY 101.			
		Semeste	er 2		Follow Academic Plan from FYE			
Introduction to Pharmacology for Allied Health Professionals	ALH 103	F/S/SU	3	Placement into college level English	102; adjust with Academic Advisor, as needed.			
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Meet with Program Coordinator of desired QCC healthcare field (e.g., Dental Hygiene, etc.); or if considering transfer, meet with a Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events.			
Composition II	ENG 102	F/S/SU	3	ENG 101				
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete ENG 102; or AP English/ Literature and Composition, with AP			
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Exam grade of "3" or higher, to count as ENG 102.			
					Complete prerequisite(s) for MAT			
		Total	16		122.			
Anatomy & Physiology II	BIO 112	Semeste F/S/SU		BIO 111	Follow Academic Plan from FYE 102; adjust with Academic Advisor,			
Anatomy & Physiology II		F/3/30	4	MAT 095 with a grade of "C" or higher	as needed.			
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	or approp place				
Healthcare Elective		F/S/SU	3		If considering transfer, meet with			
Healthcare Elective		F/S/SU	3		representatives of four-year schools			
Humanities Elective		F/S/SU	3		to discuss/begin the transfer			
		Total	16		application process. Follow Academic Plan from FYE			
	Semester 4							
Healthcare Elective		F/S/SU	3		102; adjust with Academic Advisor, as needed.			
Healthcare Elective		F/S/SU	3		Apply to desired QCC healthcare			
History Elective		F/S/SU	3		field associate degree; or continue with/complete the transfer application process.			
Humanities Elective (200-level)		F/S/SU Total	3 <b>12</b>		Submit an Intent to Graduate Form, located on <i>The Q</i> .			
Total Cradita D	oquirod	TOLAI	60					
Total Credits R	equired		00					

# <u>Healthcare</u> Healthcare - Associate in Science (Program Code: HLC)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1		Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HLC). Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS)
General Biology: Core Concepts	BIO 101	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Advanced Placement (AP) Exams. QCC School Code: 3714. Complete BIO 101; or AP Biology, with AP Exam grade of "3" or
Composition I	ENG 101	F/S/SU	3	Placement into college level English	higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete FYE 102. Complete PSY 101; or AP Psychology, with AP Exam grade of
		Total	16		"3" or higher, to count as PSY 101.
		Semeste	er 2		Follow Academic Plan from FYE
Introduction to Pharmacology for Allied Health Professionals	ALH 103	F/S/SU	3	Placement into college level English	102; adjust with Academic Advisor, as needed.
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Meet with Program Coordinator of desired QCC healthcare field (e.g., Dental Hygiene, etc.); or if considering transfer, meet with a
Composition II	ENG 102	F/S/SU	3	ENG 101	Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Attend
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Transfer Services events. Complete ENG 102; or AP English/ Literature and Composition, with AP
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Exam grade of "3" or higher, to count as ENG 102.
					Complete prerequisite(s) for MAT
		Total	16		122.
Anotomy & Dhysiology II	BIO 112	Semeste F/S/SU	-	BIO 111	Follow Academic Plan from FYE
Anatomy & Physiology II	BIO 112	F/5/50	4	-	102; adjust with Academic Advisor, as needed.
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	
Healthcare Elective		F/S/SU	3		If considering transfer, meet with
Healthcare Elective		F/S/SU	3		representatives of four-year schools
Humanities Elective					to diaguag/bagin the transfer
		F/S/SU	3		to discuss/begin the transfer
		F/S/SU Total	16		application process.
		F/S/SU	16		application process. Follow Academic Plan from FYE
Healthcare Elective		F/S/SU Total	16		application process.
Healthcare Elective Healthcare Elective		F/S/SU Total Semeste	16 er 4		application process. Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed. Apply to desired QCC healthcare
		F/S/SU Total Semeste F/S/SU	16 er 4 3		application process. Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed. Apply to desired QCC healthcare field associate degree; or continue with/complete the transfer
Healthcare Elective		F/S/SU Total Semeste F/S/SU F/S/SU	16 r 4 3 3 3 3		application process. Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed. Apply to desired QCC healthcare field associate degree; or continue with/complete the transfer application process. Submit an Intent to Graduate Form,
Healthcare Elective History Elective		F/S/SU Total Semeste F/S/SU F/S/SU F/S/SU	16 r 4 3 3 3		application process. Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed. Apply to desired QCC healthcare field associate degree; or continue with/complete the transfer application process.

# <u>Healthcare</u> Healthcare - Medical Office Management Option - Associate in Science (Program Code: HCMO) CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		emester 1 (			Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HCMO). Contact Career Services (www.QCC.edu/APexams) to receive credit for High School (HS) Advanced
General Biology: Core <mark>Concepts</mark>	BIO 101	F/S/SU	4	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	Placement (AP) Exams. QCC School Code: 3714. Complete BIO 101; or AP Biology, with
Composition I	ENG 101	F/S/SU	3	Placement into college level English	AP Exam grade of "3" or higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete FYE 102. Complete PSY 101; or AP Psychology, with AP Exam grade of
		Total	16		"3" or higher, to count as PSY 101.
	Ser	nester 2 (S	pring)	BIO 101 or BIO 107 or HS AP	Follow Academic Plan from FYE 102; adjust with Academic Advisor, as
Anatomy & Physiology I <b>OR</b>	BIO 111	F/S/SU	4	Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	needed.
Healthcare Elective Medical/Dental Billing and					Meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Attend
Insurance	BSS 112	F/S	3	ALH 102	Transfer Services events.
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Complete ENG 102; or AP English/ Literature and Composition, with AP
Composition II	ENG 102	F/S/SU	3	ENG 101	Exam grade of "3" or higher, to count as ENG 102.
	6	Total emester 3 (	13 (Fall)		
	3	emester 5	(Fall)	Placement into college level	Follow Academic Plan from FYE 102; adjust with Academic Advisor, as
Financial Accounting I	ACC 101	F/S/SU	3	English, MAT 090 with a grade of "C" or higher or approp place score	needed.
Medical Law and Ethics	ALH 106	F/S	3	Placement into college level English	Consider taking Humanities Elective to complete MassTransfer block.
Principles of Human Biology <b>OR</b>	BIO 100	F/S/SU	4	Placement into college level English	
Anatomy & Physiology II	BIO 112			BIO 111	Meet with representatives of four-year schools to discuss/begin the transfer
Pre Cooperative Education Seminar Human Relations in	CPS 298	F/S	0		application process; or create an account on the QCC job board to
Organizations	PSY 158	F/S/SU	3	Placement into college level English	search for internships, co-ops and
Healthcare Elective or Humanities Elective		F/S/SU	3		obs. Complete CPS 298.
	Ser	Total nester 4 (S	16 (pring)		Follow Academic Plan from FYE 102;
Healthcare Externship	ALH 299	F/S/SU	3	ACC 101 or MRK 201, ALH 106, BSS 112 or MRK 221, CPS 298	adjust with Academic Advisor, as needed.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Consider taking Humanities, Mathematics, and Social Science Electives to complete MassTransfer
Healthcare Elective or Humanities Elective		F/S/SU	3		block. Continue with/complete the transfer
Healthcare Elective or Mathematics Elective		F/S/SU	3		application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about
Healthcare Elective or Social Science Elective		F/S/SU	3		QCC's job board. Submit an Intent to Graduate Form,
		Total	15		located on The Q.
Total Credits Re	equired		60		

# Healthcare Healthcare - Medical Office Management Option - Associate in Science (Program Code: HCMO) PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		emester 1 (			Apply and get accepted to this
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	program (Program Code: HCMO). Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced
<mark>General Biology: Core</mark> Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	Placement (AP) Exams. QCC School Code: 3714. Complete BIO 101; or AP Biology, with
Composition I	ENG 101	F/S/SU	3	Placement into college level English	AP Exam grade of "3" or higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete FYE 102. Complete PSY 101; or AP Psychology, with AP Exam grade of
		Total	16		"3" or higher, to count as PSY 101.
	Ser	nester 2 (S	pring)	BIO 101 or BIO 107 or HS AP	Follow Academic Plan from FYE 102;
Anatomy & Physiology I OR	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	adjust with Academic Advisor, as needed.
Healthcare Elective					Meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Attend
Medical/Dental Billing and Insurance	BSS 112	F/S	3	ALH 102	Transfer Services events.
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3		Complete ENG 102; or AP English/ Literature and Composition, with AP
Composition II	ENG 102	F/S/SU	3	ENG 101	Exam grade of "3" or higher, to count
		Total	13 (Fall)		as ENG 102.
	50	emester 3 (	raii)	Placement into college level	Follow Academic Plan from FYE 102; adjust with Academic Advisor, as
Financial Accounting I	ACC 101	F/S/SU	3	English, MAT 090 with a grade of "C" or higher or approp place score	needed.
Medical Law and Ethics	ALH 106	F/S	3	Placement into college level English	Consider taking Humanities Elective to complete MassTransfer block.
Principles of Human Biology OR	BIO 100	F/S/SU	4	Placement into college level English	
Anatomy & Physiology II Pre Cooperative Education	BIO 112			BIO 111	Meet with representatives of four-year schools to discuss/begin the transfer
Seminar	CPS 298	F/S	0		application process; or create an account on the QCC job board to
Human Relations in Organizations	PSY 158	F/S/SU	3	Placement into college level English	search for internships, co-ops and
Healthcare Elective or Humanities Elective		F/S/SU	3		jobs.
		Total	16		Complete CPS 298.
	Ser	nester 4 (S	pring)		Follow Academic Plan from FYE 102; adjust with Academic Advisor, as
Healthcare Externship	ALH 299	F/S/SU	3	ACC 101 or MRK 201, ALH 106, BSS 112 or MRK 221, CPS 298	needed.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	Consider taking Humanities, Mathematics, and Social Science Electives to complete MassTransfer block.
Healthcare Elective or Humanities Elective		F/S/SU	3		Continue with/complete the transfer
Healthcare Elective or Mathematics Elective		F/S/SU	3		application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about
Healthcare Elective or Social Science Elective		F/S/SU	3		QCC's job board. Submit an Intent to Graduate Form,
		Total	15		located on The Q.
Total Credits Re	equired		60		

<u>Healthcare</u> <u>Medical Support Specialist - Medical Assisting Option - Associate in Science (Program Code: MSMA)</u>

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester 1	(Fall)		Apply and get accepted to this
Upon successful completion of Certified Medical Assistant (CMA) through American Association of Medical Assistants (AAMA) or Registered Medical Assistant (RMA) through American Medical Technologists (AMT), 22 credits credentialed (22 credits can be transferred from regionally accredited college)	Transfer Courses: MSS 111 MSS 112 MSS 121 MSS 122 MSS 199	Total	22		program (Program Code: MSMA). Meet with Career Services to credential 22 credits for CMA or RMA. Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced Placement (AP) Exams. QCC School Code: 3714.
	Se	emester 2 (			Meet with Program Coordinator of
Composition I	ENG 101	F/S/SU	3	Placement into college level English	desired QCC healthcare field (e.g., Nurse Education, etc.); or if considering transfer, meet with a Transfer Services Advisor. See
Healthcare First Year Experience	FYE 102	F/S/SU	3		www.QCC.edu/transfer. Attend Transfer Services events.
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher or approp place	Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY 101.
		Total	12		
	;	Semester 3	(Fall)		Follow Academic Plan from FYE
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	102; adjust with Academic Advisor, as needed.
Composition II	ENG 102	F/S/SU	3	ENG 101	If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	application process. Complete ENG 102; or AP English/
Humanities Elective		F/S/SU	3		Literature and Composition, with AP Exam grade of "3" or higher, to
		Total	13		count as ENG 102.
	Se	emester 4 (	Spring)	 _	Follow Academic Plan from FYE
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	102; adjust with Academic Advisor, as needed.
History Elective		F/S/SU	3		Apply to desired QCC healthcare field associate degree; or continue
Humanities Elective		F/S/SU	3		with/complete the transfer application process.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .
Total Credits Re	auired	Total	13 60		
	quireu		00		

<u>Healthcare</u> Medical Support Specialist - Medical Assisting Option - Associate in Science (Program Code: MSMA)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semester 1	(Fall)		Apply and get accepted to this
Upon successful completion of Certified Medical Assistant (CMA) through American Association of Medical Assistants (AAMA) or Registered Medical Assistant (RMA) through American Medical Technologists (AMT), 22 credits credentialed (22 credits can be transferred from regionally accredited college)	Transfer Courses: MSS 111 MSS 112 MSS 121 MSS 122 MSS 199	Total	22		Apply and get accepted to this program (Program Code: MSMA). Meet with Career Services to credential 22 credits for CMA or RMA. Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced Placement (AP) Exams. QCC School Code: 3714.
	Se	emester 2 (			Meet with Program Coordinator of
Composition I	ENG 101	F/S/SU	3	Placement into college level English	desired QCC healthcare field (e.g., Nurse Education, etc.); or if considering transfer, meet with a Transfer Services Advisor. See
Healthcare First Year Experience	FYE 102	F/S/SU	3		www.QCC.edu/transfer. Attend Transfer Services events.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY 101.
		Total	12		
		Semester 3	(Fall)	1	Follow Academic Plan from FYE
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	<ul><li>102; adjust with Academic Advisor, as needed.</li><li>If considering transfer, meet with</li></ul>
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools to discuss/begin the transfer
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	application process. Complete ENG 102; or AP English/
Humanities Elective		F/S/SU	3		Literature and Composition, with AP Exam grade of "3" or higher, to
		Total	13		count as ENG 102.
	Se	emester 4 (	spring)		Follow Academic Plan from FYE
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	102; adjust with Academic Advisor, as needed.
History Elective		F/S/SU	3		Apply to desired QCC healthcare field associate degree; or continue
Humanities Elective		F/S/SU	3		with/complete the transfer application process.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .
Total Credite D	quirod	Total	13 60		
Total Credits Re	quired		00		

# <u>Healthcare</u> Healthcare - Practical Nursing - Associate in Science (Program Code: HCPN)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Seme	ster 1 (Sur	nmer)	-	Apply and get accepted to this program
Upon successful completion of LP certificate, LPE certificate, or state Licensed Practical Nursing exam, 17 credits	Transfer Courses: PNP 210 PNP 233 PNP 235		17		(Program Code: HCPN). Meet with Career Services to credential up to 17 Healthcare Elective credits for current LPN certification.
credentialed (17 credits can be transferred from regionally accredited college)	(or any combination of PNP courses)	Total	17		Contact Career Services ( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced Placement (AP) Exams. QCC School Code: 3714.
	Sei	mester 2 (F			Apply and get accepted to a QCC nurse
Composition I	ENG 101	F/S/SU	3	Placement into college level English	education program (e.g., Program Code: NUR, NUL, etc.) as these high demand programs have waitlists; or if considering transfer (LPN to BSN), meet with a Transfer Services Advisor. See
Healthcare First Year Experience	FYE 102	F/S/SU	3		www.QCC.edu/transfer. Complete ENG 101; or AP English/Language and Composition, with AP Exam grade of "3" or
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of 3 of 6 higher, to count as ENG 101.
		Total	9		101.
	Sem	ester 3 (Sp	ring)		Follow Academic Plan from FYE 102; adjust with
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Academic Advisor, as needed. Monitor status on waitlist for selected QCC nurse education program.
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete BIO 111 with a grade of "C" or higher.
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	Complete ENG 102; or AP English/Literature and Composition, with AP Exam grade of "3" or
	Co.	Total	10		higher, to count as ENG 102.
	Sei	mester 4 (F	aii)		Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	Monitor status on waitlist for selected QCC nurse
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	education program; or if considering transfer, meet with representatives of four-year schools to
History Elective		F/S/SU	3		discuss/begin the transfer application process; or create an account on the QCC job board to
Humanities Elective		F/S/SU	3		search for internships, co-ops and jobs.
	Sem	Total ester 5 (Sp	13 ring)		Complete BIO 112 with a grade of "C" or higher. Follow Academic Plan from FYE 102; adjust with
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	Academic Advisor, as needed. Monitor status on waitlist for selected QCC nurse
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	education program; or continue with/complete the transfer application process for LPN to BSN; or if seeking employment, meet with Career Services for career readiness preparation and to
Humanities Elective		F/S/SU	3		learn more about QCC's job board.
Humanities Elective		F/S/SU	3		Complete BIO 232 with a grade of "C" or higher. Submit an Intent to Graduate Form, located on
Total Credits	Required	Total	13 62		The Q.
			72		

# <u>Healthcare</u> Healthcare - Practical Nursing - Associate in Science (Program Code: HCPN)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Seme	ster 1 (Sur	nmer)	· · · · · · · · · · · · · · · · · · ·	Apply and get accepted to this program
Upon successful completion of LP	Transfer Courses:				(Program Code: HCPN).
certificate, LPE certificate,	PNP 210				Meet with Career Services to credential up to 17
or state Licensed Practical	PNP 233				Healthcare Elective credits for current LPN
Nursing exam, 17 credits	PNP 235		17		certification.
credentialed (17 credits	(or any				
can be transferred from	combination				Contact Career Services
regionally accredited	of PNP				(www.QCC.edu/APexams) to receive credit for
college)	courses)				High School (HS) Advanced Placement (AP)
		Total	17		Exams. QCC School Code: 3714.
	Se	mester 2 (F	all)	1	Apply and get accepted to a QCC nurse
Composition I	ENG 101	F/S/SU	3	Placement into college level English	education program (e.g., Program Code: NUR, NUL, etc.) as these high demand programs have waitlists; or if considering transfer (LPN to BSN), meet with a Transfer Services Advisor. See
Healthcare First Year Experience	FYE 102	F/S/SU	3		www.QCC.edu/transfer. Complete ENG 101; or AP English/Language
					and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY
		Total	9		101.
	Sem	ester 3 (Sp	ring)		Follow Academic Plan from FYE 102; adjust with
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Academic Advisor, as needed. Monitor status on waitlist for selected QCC nurse education program.
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete BIO 111 with a grade of "C" or higher.
Statistics	MAT 122	F/S/SU	3	College level math course or QMAT place score > 21 or Coreg: MAT 052	Complete ENG 102; or AP English/Literature and Composition, with AP Exam grade of "3" or
		Total	10		higher, to count as ENG 102.
	Se	mester 4 (F	all)		Follow Academic Plan from FYE 102; adjust with
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	Academic Advisor, as needed.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Monitor status on waitlist for selected QCC nurse education program; or if considering transfer, meet with representatives of four-year schools to
History Elective		F/S/SU	3		discuss/begin the transfer application process; or create an account on the QCC job board to
			Ŭ		create an account on the QCC job board to
Humanities Elective		F/S/SU	3		search for internships, co-ops and jobs.
-		Total	3 <b>13</b>		search for internships, co-ops and jobs. Complete BIO 112 with a grade of "C" or higher.
-			3 <b>13</b>		search for internships, co-ops and jobs. Complete BIO 112 with a grade of "C" or higher. Follow Academic Plan from FYE 102; adjust with
		Total	3 <b>13</b>	BIO 112 or CHM 105 or CHM 123	search for internships, co-ops and jobs. Complete BIO 112 with a grade of "C" or higher. Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.
Humanities Elective	 Sem	Total ester 5 (Sp	3 13 ring)		<ul> <li>search for internships, co-ops and jobs.</li> <li>Complete BIO 112 with a grade of "C" or higher.</li> <li>Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.</li> <li>Monitor status on waitlist for selected QCC nurse education program; or continue with/complete the transfer application process for LPN to BSN; or if seeking employment, meet with Career Services for career readiness preparation and to</li> </ul>
Humanities Elective Medical Microbiology Introductory Sociology	 Sem BIO 232	<b>Total</b> ester 5 (Sp F/S/SU	3 13 ring) 4	123 Placement into college level	<ul> <li>search for internships, co-ops and jobs.</li> <li>Complete BIO 112 with a grade of "C" or higher.</li> <li>Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.</li> <li>Monitor status on waitlist for selected QCC nurse education program; or continue with/complete the transfer application process for LPN to BSN; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> </ul>
Humanities Elective Medical Microbiology Introductory Sociology (Principles)	 Sem BIO 232 SOC 101	Total ester 5 (Sp F/S/SU F/S/SU	3 <b>13</b> ring) 4 3	123 Placement into college level	<ul> <li>search for internships, co-ops and jobs.</li> <li>Complete BIO 112 with a grade of "C" or higher.</li> <li>Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.</li> <li>Monitor status on waitlist for selected QCC nurse education program; or continue with/complete the transfer application process for LPN to BSN; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> <li>Complete BIO 232 with a grade of "C" or higher.</li> </ul>
Humanities Elective Medical Microbiology Introductory Sociology (Principles) Humanities Elective	 Sem BIO 232 SOC 101	Total ester 5 (Sp F/S/SU F/S/SU F/S/SU	3 13 ring) 4 3 3	123 Placement into college level	<ul> <li>search for internships, co-ops and jobs.</li> <li>Complete BIO 112 with a grade of "C" or higher.</li> <li>Follow Academic Plan from FYE 102; adjust with Academic Advisor, as needed.</li> <li>Monitor status on waitlist for selected QCC nurse education program; or continue with/complete the transfer application process for LPN to BSN; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.</li> </ul>

# <u>Healthcare</u> Healthcare - Pre-Nursing Option - Associate in Science (Program Code: HCNU)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	ter 1		Apply and get accepted to this
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	program (Program Code: HCNU).
General Biology: Core Concepts <b>OR</b>	BIO 101	F/S/SU	<mark>3-4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced Placement (AP) Exams. QCC School
Introduction to Public Health	PHA 101			Placement into college level English	Code: 3714. Complete BIO 101; or AP Biology, with
Composition I	ENG 101	F/S/SU	3	Placement into college level English	AP Exam grade of "3" or higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY 101.
		Total Semest	12-13		Follow Academic Plan from FYE 102;
		Jeillesi			adjust with Academic Advisor, as
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	needed.
Introductory Nursing Assistant	ALH 131	F/S/SU	5	Placement into college level English	Apply and get accepted to a QCC nurse education program (e.g., Program Code: NUR, NUE, etc.) as these high demand programs have waitlists.
Advanced Nursing Assistant	ALH 132	F/S/SU	2	ALH 131, Certificate of Completion from a state-approved nursing assistant training program or current C.N.A. Certificate	Take ALH 132 after ALH 131 in same semester, in addition to ALH 102 (note that Clinical Affiliate Health/ Immunization requirements needed for
		Total	10		ALH 131).
		Semest	ter 3		Follow Academic Plan from FYE 102;
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	adjust with Academic Advisor, as needed.
Composition II	ENG 102	F/S/SU	3	ENG 101	Monitor status on waitlist for selected QCC nurse education program.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete ENG 102; or AP English/ Literature and Composition, with AP
Humanities Elective		F/S/SU	3		Exam grade of "3" or higher, to count
		Total	13		as ENG 102.
Anotomy & Diversity 11		Semest	-		Follow Academic Plan from FYE 102;
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	adjust with Academic Advisor, as needed.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Monitor status on waitlist for selected
History Elective		F/S/SU	3		QCC nurse education program.
Philosophy Elective		F/S/SU Total	3 13		Complete prerequisite(s) for MAT 122.
		Semest	-		Follow Academic Plan from FYE 102;
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	adjust with Academic Advisor, as
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	needed. Monitor status on waitlist for selected
Introduction to Global Health	PHA 102	F/S/SU	3	Placement into college level English	QCC nurse education program.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form,
		Total	13		located on The Q.
Total Credits F	Required		61-62		

# <u>Healthcare</u> Healthcare - Pre-Nursing Option - Associate in Science (Program Code: HCNU)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semest	er 1		Apply and get accepted to this
Principles of Human Biology <b>OR</b>	BIO 100			Placement into college level English	program (Program Code: HCNU). Contact Career Services
General Biology: Core Concepts <b>OR</b>	BIO 101	F/S/SU	<mark>3-4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	( <u>www.QCC.edu/APexams</u> ) to receive credit for High School (HS) Advanced Placement (AP) Exams. QCC School
Introduction to Public Health	PHA 101			Placement into college level English	Code: 3714. Complete BIO 101; or AP Biology, with
Composition I	ENG 101	F/S/SU	3	Placement into college level English	AP Exam grade of "3" or higher, to count as BIO 107, then petition for BIO 107 to count as BIO 101.
Healthcare First Year Experience	FYE 102	F/S/SU	3		Complete ENG 101; or AP English/ Language and Composition, with AP Exam grade of "3" or higher, to count as ENG 101.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete PSY 101; or AP Psychology, with AP Exam grade of "3" or higher, to count as PSY 101.
		Total Semest	12-13		Follow Academic Plan from FYE 102:
		Ucinica			adjust with Academic Advisor, as
Introduction to Medical Terminology	ALH 102	F/S/SU	3	Placement into college level English	needed.
Introductory Nursing Assistant	ALH 131	F/S/SU	5	Placement into college level English	Apply and get accepted to a QCC nurse education program (e.g., Program Code: NUR, NUE, etc.) as these high demand programs have waitlists.
Advanced Nursing Assistant	ALH 132	F/S/SU	2	ALH 131, Certificate of Completion from a state-approved nursing assistant training program or current C.N.A. Certificate	Take ALH 132 after ALH 131 in same semester, in addition to ALH 102 (note that Clinical Affiliate Health/ Immunization requirements needed for
		Total	10		ALH 131).
		Semest	er 3		Follow Academic Plan from FYE 102;
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	adjust with Academic Advisor, as needed.
Composition II	ENG 102	F/S/SU	3	ENG 101	Monitor status on waitlist for selected QCC nurse education program.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete ENG 102; or AP English/ Literature and Composition, with AP
Humanities Elective		F/S/SU	3		Exam grade of "3" or higher, to count
		Total	13		as ENG 102.
		Semest			Follow Academic Plan from FYE 102;
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	adjust with Academic Advisor, as needed.
Survey of Life Span Development	PSY 121	F/S/SU	3	PSY 101	Monitor status on waitlist for selected
History Elective		F/S/SU	3		QCC nurse education program.
Philosophy Elective		F/S/SU Total	3 13		Complete prerequisite(s) for MAT 122.
		Semest	-	l	Follow Academic Plan from FYE 102:
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	adjust with Academic Advisor, as
Statistics	MAT 122	F/S/SU	3	College level math course or QMAT place score > 21 or Coreq: MAT 052	needed. Monitor status on waitlist for selected
Introduction to Global Health	PHA 102	F/S/SU	3	Placement into college level English	QCC nurse education program.
Humanities Elective		F/S/SU	3		Submit an Intent to Graduate Form,
		Total	13		located on The Q.
Total Credits F	kequired		61-62		

# Healthcare Healthcare - Public Health Option - Associate in Science (Program Code: HCPL) CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones				
	Apply and get accepted to this								
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	program (Program Code: HCPL). Register for and successfully complete all courses to graduate in				
Composition I	ENG 101	F/S/SU	3	Placement into college level English	six semesters.				
Survey of Personal Health	PHA 100	F/S	3	Placement into college level English	Complete BIO 111 and ENG 101.				
Introduction to Public Health	PHA 101	F/S/SU	3	Placement into college level English	Complete prerequisite(s) for CHM				
		Total	13		101.				
		Semeste	er 2	·	If considering transfer, meet with a				
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	Transfer Services Advisor. See				
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 095 with a grade of "C" or higher or approp place score	www.QCC.edu/transfer.				
Introduction to Global Health	PHA 102	F/S/SU	3	Placement into college level English					
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English					
		Total	14						
		mester 3 (S	Summer)		Complete prerequisite(s) for MAT 122.				
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123					
Humanities Elective		F/S/SU	3						
		Total	7						
		Semeste			If considering transfer, meet with				
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools				
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	to discuss/begin the transfer application process; or create an				
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	account on the QCC job board to search for internships, co-ops and				
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	jobs.				
		Total	12						
		Semeste	-		Continue with/complete the transfer				
Nutrition	BIO 241	F/S/SU	3	BIO 101 or BIO 111	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.				
Pre Cooperative Education Seminar	CPS 298	F/S	0						
Public Health Epidemiology	PHA 103	F	3	CHM 101, MAT 122, PHA 100, PHA 101, PHA 102					
United States Government	PSC 201	F/S/SU	3	ENG 101					
Humanities Elective (200-level)		F/S/SU	3		Complete CPS 298.				
		Total	12						
	Se	mester 6 (S	Summer)		Submit an Intent to Graduate Form,				
Public Health Co-Operative Externship	PHA 299	S	3	BIO 241, CPS 298, PHA 103, PSC 201	located on The Q.				
·		Total	3						
Total Credits R	equired		61						

# Healthcare Healthcare - Public Health Option - Associate in Science (Program Code: HCPL) PROPOSED

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	program (Program Code: HCPL). Register for and successfully complete all courses to graduate in
Composition I	ENG 101	F/S/SU	3	Placement into college level English	six semesters.
Survey of Personal Health	PHA 100	F/S	3	Placement into college level English	Complete BIO 111 and ENG 101.
Introduction to Public Health	PHA 101	F/S/SU	3	Placement into college level English	Complete prerequisite(s) for CHM
		Total	13		101.
		Semeste		•	If considering transfer, meet with a
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	Transfer Services Advisor. See
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU	4	CHM 090 or one year of HS Chemistry, MAT 095 with a grade of "C" or higher or approp place score	www.QCC.edu/transfer.
Introduction to Global Health	PHA 102	F/S/SU	3	Placement into college level English	
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	
		Total	14		
		mester 3 (S			Complete prerequisite(s) for MAT 122.
Medical Microbiology	BIO 232	F/S/SU	4	BIO 112 or CHM 105 or CHM 123	
Humanities Elective		F/S/SU	3		
		Total	7		
O server a sitting II	<b>ENO</b> 400	Semeste		ENO 404	If considering transfer, meet with
Composition II	ENG 102	F/S/SU	3	ENG 101	representatives of four-year schools
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	to discuss/begin the transfer application process; or create an
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	account on the QCC job board to search for internships, co-ops and
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	jobs.
		Total	12		
		Semeste	-		Continue with/complete the transfer
Nutrition	BIO 241	F/S/SU	3	BIO 101 or BIO 111	application process; or if seeking employment, meet with Career Services for career readiness preparation and to learn more about QCC's job board.
Pre Cooperative Education Seminar	CPS 298	F/S	0		
Public Health Epidemiology	PHA 103	F	3	CHM 101, MAT 122, PHA 100, PHA 101, PHA 102	
United States Government	PSC 201	F/S/SU	3	ENG 101	1
Humanities Elective (200-level)		F/S/SU	3		Complete CPS 298.
		Total	12		
	Se	mester 6 (S	ummer)		Submit an Intent to Graduate Form,
Public Health Co-Operative Externship	PHA 299	S	3	BIO 241, CPS 298, PHA 103, PSC 201	located on The Q.
		Total	3		
Total Credits R	equired		61		

# <u>Healthcare</u> Radiologic Technology - Associate in Science (Program Code: RT)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Sem	ester 1 (Su	mmer I & I		Attend Program and Clinical Orientation
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	sessions (mandatory). Complete BIO 111 with a grade of "C" or higher.
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Complete ENG 101.
Topics in Mathematics <b>OR</b>	MAT 121	F/S/SU	3	MAT 095 with a grade of "C" or higher	
Statistics	MAT 122			or approp place	Complete either MAT 121 (recommended) or MAT 122 with a grade of "C" or higher.
		Total Semester	10 2 (Eall)		
Introduction to Psychology	1		2 (Fall)		Successfully complete six pre-clinical and three competency evaluations; demonstrate
OR Psychology of Interpersonal	PSY 101	F/S/SU	3	Placement into college level English	professional attributes and compliance with policies in the clinical setting.
Relations	PSY 118	F/S			Complete all RDT courses each semester with
Patient Care & Ethics in Radiology	RDT 102	F	3	Accepted to RT Program	grades of "C" or higher.
Radiographic Medical Terminology	RDT 104	F	1	Accepted to RT Program	
Fundamentals of Radiographic Equipment and Medical Imaging	RDT 110	F	3	Accepted to RT Program, MAT 121 or MAT 122 with a grade of "C" or higher	
Radiographic Positioning & Anatomy I	RDT 121	F	3	Coreq: RDT 102, RDT 104	
Medical Radiography Clinic I	RDT 131	F	2	Coreq: RDT 110, RDT 121	
Speech Communication Skills	SPH 101	F/S/SU	3 18	Placement into college level English	
	9	Total Semester 3			Successfully complete five pre-clinical and 16
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	competency evaluations; demonstrate
Medical Imaging II	RDT 112	S	3	RDT 110	professional attributes and compliance with
Radiographic Positioning & Anatomy II	RDT 122	S	3	RDT 121, SPH 101	policies in the clinical setting.
Medical Radiography Clinic II Radiation Science	RDT 132 RDT 141	S S	3	RDT 131 RDT 110	Complete BIO 112 with a grade of "C" or higher.
Radiation Science	KDI 141	Total	2 15	RDT 110	
	Se	mester 4 (			Successfully complete four competency
Medical Radiography Summer Clinic II	RDT 133	SU	2	RDT 132	evaluations; demonstrate professional attributes and compliance with policies in the clinical
		Total	2		setting.
Medical Radiography		mester 5 (S	Summer II)		Successfully complete three pre-clinical and two competency evaluations; demonstrate
Summer Clinic III	RDT 230	SU Total	2 2	RDT 133	professional attributes and compliance with policies in the clinical setting.
		Semester	-		Successfully complete 18 initial and four
Composition II	ENG 102	F/S/SU	3	ENG 101	continued competency evaluations; demonstrate
Medical Radiography Clinic III	RDT 231 RDT 240	F F	3	RDT 230	professional attributes and compliance with policies in the clinical setting.
Imaging Applications Medical Radiographic Equipment & Quality Assurance	RDT 240	F	3	RDT 112, RDT 122 RDT 112	
		Total	13		
	<u>و</u>	Semester 7	(Spring)		If seeking employment, meet with Career
Medical Radiography Clinic IV	RDT 232	S	3	RDT 231	Services for career readiness preparation and to learn more about QCC's job board.
Radiology Seminar	RDT 252	S	4	BIO 112, RDT 231, RDT 240	Apply for ARRT certification exam ( <u>www.arrt.org</u> ) and MA-RCP temporary license ( <u>www.mass.gov/</u>
Radiologic Pharmacology and Pathology	RDT 254	S	3	BIO 112, RDT 231, RDT 240	how-to/apply-for-a-temporary-radiologic- technologist-license).
CT & Cross-Section Anatomy	RDT 260	S	2	ARRT Certification in Radiography and current license by the State of Massachusetts Radiation Control Program, Department of Public Health; or BIO 112 and RDT 231 and RDT 240	Successfully complete two pre-clinical, 12 initial and four continued competency evaluations; demonstrate professional attributes and compliance with policies in the clinical setting. Submit an Intent to Graduate Form, located on
		Total	12		The Q.
Total Credits R	equired		72		

# <u>Healthcare</u> Radiologic Technology - Associate in Science (Program Code: RT)

Course Title	Course #	Offered	Credits	Prereguisites	Milestones
			mmer I & I		Attend Program and Clinical Orientation
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or	sessions (mandatory).
Composition I	ENG 101	F/S/SU	3	higher, Coreq: ENG 101 Placement into college level English	Complete BIO 111 with a grade of "C" or higher.
Topics in Mathematics <b>OR</b>	MAT 121		_	College level math course or QMAT place score > 21 or approp multiple	Complete ENG 101.
Out that the	MAT 400	F/S/SU	<mark>3</mark>	measures place or Coreq: MAT 051 College level math course or QMAT	Complete either MAT 121 (recommended) or MAT 122 with a grade of "C" or higher.
Statistics	MAT 122	Tetal	10	place score > 21 or Coreq: MAT 052	
		Total Semester	10 2 (Eall)		
Introduction to Doughology		Semester			Successfully complete six pre-clinical and three competency evaluations; demonstrate
Introduction to Psychology OR Psychology of Interpersonal	PSY 101	F/S/SU	3	Placement into college level English	professional attributes and compliance with policies in the clinical setting.
Relations	PSY 118	F/S			Complete all RDT courses each semester with
Patient Care & Ethics in Radiology	RDT 102	F	3	Accepted to RT Program	grades of "C" or higher.
Radiographic Medical Terminology	RDT 104	F	1	Accepted to RT Program	
Fundamentals of Radiographic Equipment and Medical Imaging	RDT 110	F	3	Accepted to RT Program, MAT 121 or MAT 122 with a grade of "C" or higher	
Radiographic Positioning & Anatomy I	RDT 121	F	3	Coreq: RDT 102, RDT 104	
Medical Radiography Clinic I	RDT 131	F	2	Coreq: RDT 110, RDT 121	
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
· ·		Total	18		1
		Semester 3	(Spring)		Successfully complete five pre-clinical and 16
Anatomy & Physiology II	BIO 112	F/S/SU	4	BIO 111	competency evaluations; demonstrate
Medical Imaging II Radiographic Positioning &	RDT 112	S	3	RDT 110	professional attributes and compliance with policies in the clinical setting.
Anatomy II Medical Radiography Clinic II	RDT 122 RDT 132	S S	3	RDT 121, SPH 101 RDT 131	Complete BIO 112 with a grade of "C" or higher.
Radiation Science	RDT 141	S	2	RDT 110	
		Total	15		
	Se	mester 4 (	Summer I)		Successfully complete four competency
Medical Radiography Summer Clinic II	RDT 133	SU	2	RDT 132	evaluations; demonstrate professional attributes and compliance with policies in the clinical
		Total	2		setting.
	Se	mester 5 (S	Summer II)		Successfully complete three pre-clinical and two
Medical Radiography Summer Clinic III	RDT 230	SU	2	RDT 133	competency evaluations; demonstrate professional attributes and compliance with
		Total	2		policies in the clinical setting.
<b>a</b>		Semester	- ( )		Successfully complete 18 initial and four
Composition II	ENG 102	F/S/SU	3	ENG 101	continued competency evaluations; demonstrate
Medical Radiography Clinic III	RDT 231 RDT 240	F	3	RDT 230	professional attributes and compliance with policies in the clinical setting.
Imaging Applications	RD1 240	F	4	RDT 112, RDT 122	policies in the clinical setting.
Medical Radiographic Equipment & Quality Assurance	RDT 245	F	3	RDT 112	
		Total	13		
	9	Semester 7	(Spring)		If seeking employment, meet with Career
Medical Radiography Clinic IV	RDT 232	S	3	RDT 231	Services for career readiness preparation and to learn more about QCC's job board.
	RDT 252	S	4	BIO 112, RDT 231, RDT 240	Apply for ARRT certification exam ( <u>www.arrt.org</u> ) and MA-RCP temporary license ( <u>www.mass.gov/</u>
Radiology Seminar			3	BIO 112, RDT 231, RDT 240	how-to/apply-for-a-temporary-radiologic- technologist-license).
Radiology Seminar Radiologic Pharmacology and Pathology	RDT 254	S	Ũ		
Radiologic Pharmacology	RDT 254 RDT 260	S	2	ARRT Certification in Radiography and current license by the State of Massachusetts Radiation Control Program, Department of Public Health; or BIO 112 and RDT 231 and RDT 240	Successfully complete two pre-clinical, 12 initial and four continued competency evaluations; demonstrate professional attributes and compliance with policies in the clinical setting. Submit an Intent to Graduate Form, located on
Radiologic Pharmacology and Pathology				and current license by the State of Massachusetts Radiation Control Program, Department of Public Health; or BIO 112 and RDT 231 and RDT	and four continued competency evaluations; demonstrate professional attributes and compliance with policies in the clinical setting.

## <u>Liberal Arts & General Studies</u> General Studies - Associate in Arts (Program Code: GS)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste			Apply and get accepted to this
Composition I	ENG 101	F/S/SU	3	Placement into college level English	program (Program Code: GS).
First Year Experience	FYE 101	F/S/SU	3		Register for and successfully
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	complete all courses to graduate in four semesters.
College Algebra OR	MAT 100	F/S/SU	3	MAT 099 with a grade of "C" or higher or approp place score	Complete ENG 101, FYE 101, and
Topics in Mathematics OR Statistics	MAT 121 MAT 122	175/50	<b>0</b>	MAT 095 with a grade of "C" or higher or approp place	HUM 101.
Behavioral Science Elective		F/S/SU	3		Complete MAT 100 or MAT 121 or
		Total	15		MAT 122.
	1	Semeste		I	Meet with Academic Advisor to
Composition II	ENG 102	F/S/SU	3	ENG 101	choose Electives consistent with academic and career plan.
Elective		F/S/SU	3		
Elective		F/S/SU	3		If considering transfer, meet with a
Elective		F/S/SU	3		Transfer Services Advisor. See www.QCC.edu/transfer.
History Elective		F/S/SU	3		
		Total	15		Complete ENG 102.
		Semeste	r 3		If considering transfer, meet with
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	representatives of four-year schools to discuss/begin the transfer application process; or create an
Elective		F/S/SU	3		account on the QCC job board to search for internships, co-ops and
Humanities Elective		F/S/SU	3		jobs.
Lab Science Elective		F/S/SU	4		Confirm that MassTransfer 34-
Social Science Elective		F/S/SU	3		credit general education transfer
		Total	16		block can be completed.
	T	Semeste			Continue with/complete the transfer
Elective		F/S/SU	3		application process; or if seeking employment, meet with Career
Elective (200-level)		F/S/SU	3		Services for career readiness
Humanities Elective (200-level)		F/S/SU	3		preparation and to learn more about QCC's job board.
Lab Science Elective		F/S/SU	4		
Social Science Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .
	L	Total	16		
Total Credits Re	quired		62		

## <u>Liberal Arts & General Studies</u> General Studies - Associate in Arts (Program Code: GS)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste			Apply and get accepted to this
Composition I	ENG 101	F/S/SU	3	Placement into college level English	program (Program Code: GS).
First Year Experience	FYE 101	F/S/SU	3		Desister for and suspendfully
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in
College Algebra <b>OR</b>	MAT 100			MAT 099 with a grade of "C" or higher or approp place score	four semesters.
Topics in Mathematics <b>OR</b>	MAT 121	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or approp multiple measures place or Coreq: MAT 051	Complete ENG 101, FYE 101, and HUM 101.
Statistics	<mark>MAT 122</mark>			College level math course or QMAT place score > 21 or Coreq: MAT 052	Complete MAT 100 or MAT 121 or MAT 122.
Behavioral Science Elective		F/S/SU	3		
		Total	15		
		Semeste	1	l .	Meet with Academic Advisor to
Composition II	ENG 102	F/S/SU	3	ENG 101	choose Electives consistent with academic and career plan.
Elective		F/S/SU	3		
Elective		F/S/SU	3		If considering transfer, meet with a Transfer Services Advisor. See
Elective		F/S/SU	3		www.QCC.edu/transfer.
History Elective		F/S/SU	3		
		Total	15		Complete ENG 102.
		Semeste	r 3		If considering transfer, meet with
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	representatives of four-year schools to discuss/begin the transfer application process; or create an
Elective		F/S/SU	3		account on the QCC job board to search for internships, co-ops and
Humanities Elective		F/S/SU	3		jobs.
Lab Science Elective		F/S/SU	4		Confirm that MassTransfer 34-
Social Science Elective		F/S/SU	3		credit general education transfer
		Total	16		block can be completed.
	I	Semeste	1		Continue with/complete the transfer
Elective		F/S/SU	3		application process; or if seeking employment, meet with Career
Elective (200-level)		F/S/SU	3		Services for career readiness
Humanities Elective (200-level)		F/S/SU	3		preparation and to learn more
Lab Science Elective		F/S/SU	4		about QCC's job board.
Social Science Elective		F/S/SU	3		Submit an Intent to Graduate Form,
		Total	16		located on The Q.
Total Credits Re	quired		62		

# Liberal Arts & General Studies General Studies - Deaf Studies Option - Associate in Arts (Program Code: GSDS)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	•	Semeste	er 1		Apply and get accepted to this
Beginning American Sign Language I	ASL 111	F/S/SU	3		program (Program Code: GSDS).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	complete all courses to graduate in four semesters.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete ENG 101.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete prerequisite(s) for MAT
		Total	15		121 or MAT 122.
		Semeste	er 2		If considering transfer, meet with a
Beginning American Sign Language II	ASL 112	F/S/SU	3	ASL 111	Transfer Services Advisor. See www.QCC.edu/transfer.
Introduction to Deaf Studies	ASL 113	S	3	ASL 111	
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete MAT 121 or MAT 122.
Topics in Mathematics OR Statistics	MAT 121 MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
		Total	15		
		Semeste	er 3	·	If considering transfer, meet with
Issues in Deaf Society	ASL 114	F/S	3		representatives of four-year schools to discuss/begin the transfer
Career Signing	ASL 119	F/S	3	ASL 112, ASL 113	application process; or create an account on the QCC job board to
Intermediate American Sign Language I	ASL 211	F/S	3	ASL 112	search for internships, co-ops and jobs.
Lab Science Elective		F/S/SU	4		Confirm that MassTransfer 34-credit
Social Science Elective		F/S/SU	3		general education transfer block can be completed.
		Total	16		
		Semeste			Continue with/complete the transfer
Deaf Community Practicum	ASL 200	F/S	3	ASL 112, ASL 113, CORI/SORI Check	application process; or if seeking
Intermediate American Sign Language II	ASL 212	S	3	ASL 211	employment, meet with Career Services for career readiness
Social Psychology	PSY 253	F/S	3	ENG 101, PSY 101	preparation and to learn more about QCC's job board.
History Elective		F/S/SU	3		
Science Elective or Lab Science Elective		F/S/SU	3-4		Submit an Intent to Graduate Form,
		Total	15-16		located on The Q.
Total Credits R	equired		61-62		

# Liberal Arts & General Studies General Studies - Deaf Studies Option - Associate in Arts (Program Code: GSDS)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste			Apply and get accepted to this
Beginning American Sign Language I	ASL 111	F/S/SU	3		program (Program Code: GSDS).
Composition I	ENG 101	F/S/SU	3	Placement into college level English	Register for and successfully
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	complete all courses to graduate in four semesters.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Complete ENG 101.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete prerequisite(s) for MAT
		Total	15		121 or MAT 122.
		Semeste	er 2		If considering transfer, meet with a
Beginning American Sign Language II	ASL 112	F/S/SU	3	ASL 111	Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> .
Introduction to Deaf Studies	ASL 113	S	3	ASL 111	
Composition II	ENG 102	F/S/SU	3	ENG 101	Complete MAT 121 or MAT 122.
Topics in Mathematics OR	MAT 121	F/S/SU	3	College level math course or QMAT place score > 21 or approp multiple measures place or Coreq: MAT 051	
Statistics	MAT 122		_	College level math course or QMAT place score > 21 or Coreq: MAT 052	-
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	
		Total	15		
		Semeste	er 3		If considering transfer, meet with
Issues in Deaf Society	ASL 114	F/S	3		representatives of four-year schools to discuss/begin the transfer
Career Signing	ASL 119	F/S	3	ASL 112, ASL 113	application process; or create an account on the QCC job board to
Intermediate American Sign Language I	ASL 211	F/S	3	ASL 112	search for internships, co-ops and jobs.
Lab Science Elective		F/S/SU	4		Confirm that MassTransfer 34-credit
Social Science Elective		F/S/SU	3		general education transfer block can be completed.
		Total	16		•
		Semeste			Continue with/complete the transfer
Deaf Community Practicum	ASL 200	F/S	3	ASL 112, ASL 113, CORI/SORI Check	application process; or if seeking
Intermediate American Sign Language II	ASL 212	S	3	ASL 211	employment, meet with Career Services for career readiness
Social Psychology	PSY 253	F/S	3	ENG 101, PSY 101	preparation and to learn more about
History Elective		F/S/SU	3		QCC's job board.
Science Elective or Lab Science Elective		F/S/SU	3-4		Submit an Intent to Graduate Form,
		Total	15-16		located on The Q.
Total Credits R	Required		61-62		

## <u>Liberal Arts & General Studies</u> Liberal Arts - Psychology Option - Associate in Arts (Program Code: LAPY)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste	er 1	•	Apply and get accepted to this
Composition I	ENG 101	F/S/SU	3	Placement into college level English	program (Program Code: LAPY).
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	four semesters.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Attend Transfer Services events. For information see
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	www.QCC.edu/transfer.
		Total	15		Complete ENG 101 and MAT 122.
		Semeste			Meet with Academic Advisor to choose Program Electives
Composition II	ENG 102	F/S/SU	3	ENG 101	consistent with academic and
Research Methods in Psychology	PSY 251	F/S	3	ENG 101, MAT 122, PSY 101	career plan. For the Program Electives
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	(Semesters 2 and 4), choose: PSY 123, PSY 124, PSY 252, PSY 253, PSY 261, or PSY 262.
Program Elective		F/S/SU	3		Meet with a Transfer Services Advisor. See <u>www.QCC.edu/transfer</u> . Attend Transfer Services events. Meet with Academic Advisor to
U.S. or World History Survey Elective		F/S/SU	3		
		Total	15		
		Semeste	er 3		
General Biology: Core Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place score	discuss Foreign Language requirement at potential transfer institution(s).
Psychological Statistics	PSY 250	F/S/SU	3	ENG 101, MAT 122, PSY 101	Meet with representatives of four-
Creative Arts Elective		F/S/SU	3		year schools to discuss/begin the transfer application process.
Foreign Language Elective		F/S/SU	3		Confirm that MassTransfer 34-credit
Multiple Perspectives Elective		F/S/SU	3		general education transfer block
		Total	16		can be completed.
		Semeste	er 4		Register for second Foreign
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Language Elective course (should be next level in same language as completed in Semester 3).
Elective		F/S/SU	3		Continue with/complete the transfer
Foreign Language Elective		F/S/SU	3		application process.
Program Elective		F/S/SU	3		Submit an Intent to Graduate Form,
Program Elective		F/S/SU	3		located on <i>The</i> Q.
	equired	Total	16		

## <u>Liberal Arts & General Studies</u> Liberal Arts - Psychology Option - Associate in Arts (Program Code: LAPY)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
		Semeste			Apply and get accepted to this
Composition I	ENG 101	F/S/SU	3	Placement into college level English	program (Program Code: LAPY).
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	Register for and successfully complete all courses to graduate in
Statistics	MAT 122	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	four semesters.
Introduction to Psychology	PSY 101	F/S/SU	3	Placement into college level English	Attend Transfer Services events. For information see
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	www.QCC.edu/transfer.
		Total	15		Complete ENG 101 and MAT 122.
	1	Semeste	r 2	1	Meet with Academic Advisor to
Composition II	ENG 102	F/S/SU	3	ENG 101	choose Program Electives consistent with academic and
Research Methods in Psychology	PSY 251	F/S	3	ENG 101, MAT 122, PSY 101	career plan. For the Program Electives
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	(Semesters 2 and 4), choose: PSY 123, PSY 124, PSY 252, PSY 253, PSY 261, or PSY 262.
Program Elective		F/S/SU	3		
U.S. or World History Survey Elective		F/S/SU	3		Meet with a Transfer Services Advisor. See www.QCC.edu/transfer. Attend
		Total	15		Transfer Services events.
		Semeste	r 3	•	Neet with Academic Advisor to
<mark>General Biology: Core</mark> Concepts	BIO 101	F/S/SU	<mark>4</mark>	Placement into college level English, MAT 095 with a grade of "C" or higher or approp place	discuss Foreign Language requirement at potential transfer institution(s).
Psychological Statistics	PSY 250	F/S/SU	3	ENG 101, MAT 122, PSY 101	Meet with representatives of four-
Creative Arts Elective		F/S/SU	3		year schools to discuss/begin the transfer application process.
Foreign Language Elective		F/S/SU	3		
Multiple Perspectives Elective		F/S/SU	3		Confirm that MassTransfer 34-credit general education transfer block
		Total	16		can be completed.
		Semeste	r 4	•	Register for second Foreign
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or BIO 107 or HS AP Biology or PNP 240 with a grade of "C" or higher, Coreq: ENG 101	Language Elective course (should be next level in same language as completed in Semester 3).
Elective		F/S/SU	3		Continue with/complete the transfer
Foreign Language Elective		F/S/SU	3		application process.
Program Elective		F/S/SU	3		
Program Elective		F/S/SU	3		Submit an Intent to Graduate Form, located on <i>The Q</i> .
		Total	16		
Total Credits R	equired		62		

## <u>Liberal Arts & General Studies</u> Liberal Arts - Sociology Option - Associate in Arts (Program Code: LASO)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Composition I	ENG 101	F/S/SU	3	Placement into college level English	program (Program Code: LASO).
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	Register for and successfully
Topics in Mathematics	MAT 121	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	complete all courses to graduate in four semesters.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete ENG 101 and MAT 121.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	1
		Total	15		
		Semeste	er 2		Meet with a Transfer Services
Cultural Anthropology OR Introduction to Psychology	ANT 111 PSY 101	F/S/SU	3	Placement into college level English	Advisor. See www.QCC.edu/transfer. Attend
Composition II	ENG 102	F/S/SU	3	ENG 101	Transfer Services events.
Introduction to Humanities	HUM 105	F/S/SU	3	ENG 101	
Social Problems & Social Change	SOC 111	F/S/SU	3	Placement into college level English	Complete ENG 102.
Science Elective or Lab Science Elective		F/S/SU	3-4		
		Total	15-16		
		Semeste	er 3		Meet with representatives of four-
Statistics	MAT 122	F/S/SU	<mark>3</mark>	MAT 095 with a grade of "C" or higher or approp place	year schools to discuss/begin the transfer application process.
Creative Arts Elective		F/S/SU	3		
Liberal Arts Elective (200-level)		F/S/SU	3		Confirm that MassTransfer 34-credit
Sociology Elective (200-level)		F/S/SU	3		general education transfer block
U.S. or World History Survey Elective		F/S/SU	3		can be completed.
		Total	15		Complete MAT 122.
		Semeste	er 4		Consult with transfer institution
Lab Science Elective		F/S/SU	4		regarding selection of Liberal Arts
Liberal Arts Elective (200-level)		F/S/SU	3		Electives.
Literature, Philosophy, or Language Elective		F/S/SU	3		Continue with/complete the transfer application process.
Multiple Perspectives Elective		F/S/SU	3		1
Sociology Elective (200-level)		F/S/SU	3		Submit an Intent to Graduate Form,
		Total	16		located on The Q.
Total Credits Re	equired		61-62		

## <u>Liberal Arts & General Studies</u> Liberal Arts - Sociology Option - Associate in Arts (Program Code: LASO)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones
	Apply and get accepted to this				
Composition I	ENG 101	F/S/SU	3	Placement into college level English	program (Program Code: LASO).
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	Placement into college level English	Register for and successfully
Topics in Mathematics	MAT 121	F/S/SU	3	College level math course or QMAT place score > 21 or approp multiple measures place or Coreq: MAT 051	complete all courses to graduate in four semesters.
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	Placement into college level English	Complete ENG 101 and MAT 121.
Speech Communication Skills	SPH 101	F/S/SU	3	Placement into college level English	7
		Total	15		
	•	Semeste	r 2	•	Meet with a Transfer Services
Cultural Anthropology <b>OR</b> Introduction to Psychology	ANT 111 PSY 101	F/S/SU	3	Placement into college level English	Advisor. See www.QCC.edu/transfer. Attend
Composition II	ENG 102	F/S/SU	3	ENG 101	Transfer Services events.
Introduction to Humanities	HUM 105	F/S/SU	3	ENG 101	1
Social Problems & Social Change	SOC 111	F/S/SU	3	Placement into college level English	Complete ENG 102.
Science Elective or Lab Science Elective		F/S/SU	3-4		
		Total	15-16		
		Semeste	er 3		Meet with representatives of four-
Statistics	<mark>MAT 122</mark>	F/S/SU	<mark>3</mark>	College level math course or QMAT place score > 21 or Coreq: MAT 052	year schools to discuss/begin the transfer application process.
Creative Arts Elective		F/S/SU	3		
Liberal Arts Elective (200-level)		F/S/SU	3		Confirm that MassTransfer 34-credit
Sociology Elective (200-level)		F/S/SU	3		general education transfer block
U.S. or World History Survey Elective		F/S/SU	3		can be completed.
		Total	15		Complete MAT 122.
		Semeste	r 4	•	Consult with transfer institution
Lab Science Elective		F/S/SU	4		regarding selection of Liberal Arts
Liberal Arts Elective (200-level)		F/S/SU	3		Electives.
Literature, Philosophy, or Language Elective		F/S/SU	3		Continue with/complete the transfer application process.
Multiple Perspectives Elective		F/S/SU	3		
Sociology Elective (200-level)		F/S/SU	3		Submit an Intent to Graduate Form,
		Total	16		located on The Q.
Total Credits Re	equired		61-62		

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# DEGREE PROGRAM OR CERTIFICATE PROPOSAL FOR CLOSURE

1. Degree or Certificate Name and Code to be closed: Technician in Applied Behavior Analysis (TABC)

2. Originator: Meghan Martin Date: 12/20/2022

3. School Dean: Melissa Fama

4. Rationale for the proposed program or certificate closure: The training and preparation needed to become a Registered Behavior Technician has become easily accessible for free through direct employers and well as online vendors. The need for the training as a college certificate has decreased significantly and the program is no longer sustainable with low enrollment numbers.

Date:

5.	Effective Date: Fall 2023	
6.	Reviewed by Program and Process (if applicable) Date:	
7.	Recommended by the School of PSESS Comments:	Date:
8.	Kevin Li AA Leadership Team:	01/23/23
	Recommended:   X   Not Recommended:     Comments:	
9.	VP/Academic Affairs: Mr. James M. Keane	Date: 01/23/23
	Recommended:     Not Recommended:       X     Comments:	
10.	John Stazinski . Learning Council:	Date:02/14/23
	Recommended:     X     Not Recommended:       Comments:	
11.	VP/Academic Affairs: Dr. James M. Keane	Date:02/14/23
	Approved:     X     Not Approved:       Comments:	

# FOR PROGRAM/CERTIFICATE CLOSURE

President:		Date:
Approved:	Not Approved:	
Board of Trustees:		Date:
Approved:	Not Approved:	

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# **COURSE REVISION PROPOSAL**

1.	Course Number and Name: ECE 101 Introduction to Ea (from current AY22/23 catalog)	rly Childhood Education
2.	Originator: Greg E. Mullaney	Date: 11/14/2022
3.	School Dean: Melissa Fama	Date: 11/14/2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date:
6.	Recommended by the School of <u>PSESS</u> Comments:	Date: <u>12/15/2022</u>
7.	Kevin Li AA Leadership Team:	<b>Date:</b> <u>01/23/23</u>
	Recommended: X Not Recommended:	
	Comments:	
8.	VP/Academic Affairs: Mr. James M. Keane	<b>Date:</b> <u>01/23/23</u>
	Recommended: Not Recommended:	
	Comments:	
9.	John Stazinski	Date:02/14/23
	Recommended:   Not Recommended:	
	Comments:	
10.	VP/Academic Affairs: Dr. James M. Keane	Date:02/14/23
	Approved: Not Approved:	
	Comments:	

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# **COURSE REVISION PROPOSAL**

Type of Revision:					
	Prerequisite	<u>Corequisite</u>	Number	Name	# Credits
	Other (explain)	1			
Course Discipline or Departm		School: I	PSESS		
Current Course Number: ECE			-		
Current Course Name: Introd					
Current Course Description (a				rse three lett	er designation
and number, title, credits, sem	esters offered a	nd prerequisites/c	orequisites):		
ECE 101 Introduction to Early Childhood Education This course is an introduction to early childhood education. Students study the history and contributing theories of the field and the basic aspects important to quality programs for young children. Course content includes studies of child development, the types of programs available; qualifications for teachers and staff; state regulations monitoring programs, state Guidance Policy, the Massachusetts Early Childhood Standards; career opportunities; special education considerations, and current issues in early childhood education. During a 10-hour field experience students make observations in the Children's School: QCC's Early Childhood Education Lab School and focus on guidance practices; children's play; integrated curriculum practices; transitions and routines; and appropriate methods for addressing special needs of young children. Credits: 3 Prerequisite: Placement into college level English					
Semester Offered: F/S/SU					
Proposed Description (include	all proposed ch	anges):			
ECE 101 Introduction to Early Childhood Education This course is an introduction to early childhood education. Students study the history and contributing theories of the field and the basic aspects important to quality programs for young children. Course content includes studies of child development, the types of programs available; qualifications for teachers and staff; state regulations monitoring programs, state Guidance Policy, the Massachusetts Early Childhood Standards; career opportunities; special education considerations, and current issues in early childhood education. During a 10-hour field experience, students make observations in the Children's School: QCC's Early Childhood Education Lab School, or local licensed Child Care program, or public school that focuses on guidance practices; children's play; integrated curriculum practices; transitions and routines; and appropriate methods for addressing students of differing abilities. Credits: 3 Prerequisite: Placement into college level English Semester Offered: F/S/SU					
Rationale for the change:					
This change is made to addres Children's School to do obser CORI/SORI process (only tho	vations. It also h se doing observ	elps to clarify wh ations at the Child	ich students w	ill need to g	
Provide a description of any cl	nange in course	content.			
None					
List the programs that are affe	cted by this cha	nge (list program	names and pro	oram codes	as they appear
in the college catalog):	cicu by this cha	nge (nat program	names and pro	grain coues	as mey appear
Description wording changes	only – no progra	am grids affected.			

Please confer with the coordinator of the affected department.

Attach current and proposed academic maps (<u>with changes in **bold**</u>) for all affected programs. You can obtain academic maps from Barb Zabka.

Please submit a generic syllabus to your dean with all of the revisions included.

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# **COURSE REVISION PROPOSAL**

1.	Course Number and Name: ECE 202 Fieldwork with (from current AY22/23 catalog)	Young Children I
2.	Originator: Greg Mullaney	Date: 11/18/2022
3.	School Dean: Melissa Fama	Date: 11/18/2022
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date:
6.	Recommended by the School of <u>PSESS</u> Comments	Date: 12/15/2022
7.	Kevin Li AA Leadership Team:	Date: <u>01/23/23</u>
	Recommended: X Not Recommended:	
	Comments:	
8.	VP/Academic Affairs: Mr. James M. Keane	<b>Date:</b> <u>01/23/23</u>
	Recommended: Not Recommended:	
	Comments:	
9.	John Stazinski	Date:02/14/23
	Recommended: X Not Recommended:	
	Comments:	
10.	VP/Academic Affairs: Dr. James M. Keane	Date:02/14/23
	Approved: Not Approved:	
	Comments:	

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# **COURSE REVISION PROPOSAL**

Type of Revision:
• 1
Description _X_ PrerequisiteCorequisiteNumberName# Credits
Elective TypeOther (explain)
Course Discipline or Department: ECE School: PSESS
Current Course Number: ECE 202
Current Course Name: Fieldwork with Young Children I
Current Course Description (as it appears in the college catalog including course three letter designation
and number, title, credits, semesters offered and prerequisites/corequisites):
ECE 202 Fieldwork with Young Children I
This course provides onsite supervision and consultation for students who are developing skills and
competencies as they work directly with young children in a school setting (ages 2.9-under seven years
old and not yet enrolled in first grade). Early Childhood Education faculty observe and consult with
students during this process. Students demonstrate and document competence in the following areas:
setting up and maintaining a safe, healthy learning environment for children; providing positive guidance
for children; implementing an age appropriate, culturally sensitive curricula; providing appropriate social
experiences for young children; communicating and cooperating with team members appropriately;
documenting self-growth over time; and demonstrating awareness of the total classroom at all times.
Credits: 3 Semester Offered: F/S
Proposed Description (include all proposed changes):
FCF 202 Fieldwark with Voune Children I
ECE 202 Fieldwork with Young Children I
This course provides onsite supervision and consultation for students who are developing skills and competencies as they work directly with young children in a school setting (ages 2.9-under seven years
old and not yet enrolled in first grade). Early Childhood Education faculty observe and consult with
students during this process. Students demonstrate and document competence in the following areas:
setting up and maintaining a safe, healthy learning environment for children; providing positive guidance
for children; implementing an age appropriate, culturally sensitive curricula; providing appropriate social
experiences for young children; communicating and cooperating with team members appropriately;
documenting self-growth over time; and demonstrating awareness of the total classroom at all times.
Credits: 3
Prerequisite: ECE 102
Semester Offered: F/S
Rationale for the change:
This course comes at the end of the ECE certificate and requires students to understand child development
as they are working directly with children.
Provide a description of any change in course content.
None
List the programs that are affected by this change (list program names and program codes as they appear
in the college catalog):
Early Childhood Education Certificate (Program Code: ED)
Please confer with the coordinator of the affected department.
Attach current and proposed academic maps (with changes in <b>bold</b> ) for all affected programs. You can
obtain academic maps from Barb Zabka.
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Please submit a generic syllabus to your dean with all of the revisions included.

## Education Early Childhood Education Certificate (Program Code: ED)

#### CURRENT

Course Title	Course #	Offered	Credits	Prerequisites	Milestones	
		Semester 1	1 (Fall)		Apply and get accepted to this	
Introduction to Early Childhood Education	ECE 101	F/S/SU	3	Placement into college level English	program (Program Code: ED). Register for and successfully	
Growth & Development of the Young Child	ECE 102	F/S/SU	3	Placement into college level English	complete all courses to graduate in two semesters. Meet with ECE Advisor to discuss	
Family Issues & Dynamics	ECE 112	F/S/SU	3	Placement into college level English	requirements of program. Take College Placement Test for	
		Total	9		English, as needed.	
Semester 2 (S			(Spring)		Meet with ECE Advisor to register	
Fieldwork with Infants and Toddlers (Observation and Experience) <b>OR</b>	ECE 123	S	3	Placement into college level English	and complete paperwork for field placement.	
Fieldwork with Young Children I	ECE 202	F/S			If seeking employment, meet with Career Services for career	
Infant & Toddler Curriculum and Development	ECE 221	F/S	3	ECE 102	readiness preparation and to learn more about QCC's job board.	
Discipline: Guiding Children's Behavior	ECE 255	F/S	3	ECE 102	Submit an Intent to Graduate Form,	
		Total	9 18		located on The Q.	
Total Credits R	Total Credits Required					

#### Education Early Childhood Education Certificate (Program Code: ED)

Course Title	Course #	Offered	Credits	Prerequisites	Milestones	
Semester 1			1 (Fall)		Apply and get accepted to this	
Introduction to Early Childhood Education	ECE 101	F/S/SU	3	Placement into college level English	program (Program Code: ED). Register for and successfully	
Growth & Development of the Young Child	ECE 102	F/S/SU	3	Placement into college level English	complete all courses to graduate in two semesters. Meet with ECE Advisor to discuss	
Family Issues & Dynamics	ECE 112	F/S/SU	3	Placement into college level English	requirements of program.	
		Total	9		English, as needed.	
Semester 2 (			(Spring)		Meet with ECE Advisor to register	
Fieldwork with Infants and Toddlers (Observation and Experience) <b>OR</b>	ECE 123	S	3	Placement into college level English	and complete paperwork for field placement.	
Fieldwork with Young Children I	ECE 202	F/S		ECE 102	If seeking employment, meet with Career Services for career	
Infant & Toddler Curriculum and Development	ECE 221	F/S	3	ECE 102	readiness preparation and to learn more about QCC's job board.	
Discipline: Guiding Children's Behavior	ECE 255	F/S	3	ECE 102	Submit an Intent to Graduate Form,	
		Total	9		located on The Q.	
Total Credits R	equired		18			

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# **NEW COURSE PROPOSAL**

1.	Course Number and Name: ENG 101L Composition	on I with Lab
2.	Originator: John Stazinski	Date: Sept 7, 2022
3.	School Dean: Brady Hammond	Date:
4.	Effective Date: Fall 2023	
5.	Reviewed by Program and Process (if applicable)	Date:
6.	<b>Recommended by the School of</b> <u>English &amp; Hun</u> <b>Comments:</b>	nanities Date:
7.	Kevin Li AA Leadership Team:	Date: <u>01/23/23</u>
	Recommended: X Not Recommended	led:
8.	VP/Academic Affairs: Mr. James M. Keane	<b>Date:</b> <u>01/23/23</u>
	Recommended: Not Recommended	led:
		02/14/22
9.	John Stazinski	Date:
	Recommended: X Not Recommend	ed:
	Comments: remove a.k.a. Placement by Advising	language in prerequisite wording
10.	VP/Academic Affairs: Dr. James M. Keane	Date: 02/14/23
	Approved:	

# 2022 - 2023 QUINSIGAMOND COMMUNITY COLLEGE

# **NEW COURSE PROPOSAL**

Course Discipline/Department: English School: English and Humanities			
Course Number: ENG 101L			
Course Name: Composition I with Lab			
Prerequisites and/or corequisites (confer with affected department coordinator): Appropriate Placement			
based on GPA (2.4-2.89) and Self-Placement Test and/or Conference with Advisor (a.k.a.,			
Placement by Advising)			
CIP code (check with IRaP Office):			
Effective Term/year: Fall 2023			
Give a rationale for the new course. Be sure to indicate whether this course replaces another course. Is the course transferable?			
Because some students—based on high school GPA and self-placement test scores—are not quite prepared for ENG 101 but also not likely to require a full semester of developmental English, an ENG 101 course that provides additional supports and resources is necessary. This allows students to enroll directly into college-level courses while also limiting the number of non-credit courses students are required to take. The lab will be limited to twelve students in a 22-student ENG 101 class, six meet with the writing coach on alternating days in a week so that each student can receive individualized attention and so the writing coach can understand the needs of individual students. The writing coach is expected to attend the ENG 101 class once a week and to be familiar with the			
course syllabus, assignments, and expectations. While the ENG 101 course is fully transferable,			
credit for the lab section would not be.			
Is the course content similar to other courses now offered? Yes X_ No If yes, attach a statement from the coordinator of the department offering the similar course.			
If yes, attach a statement from the coordinator of the department offering the similar course.			
In essence, this is an ENG 101 course with additional lab support.			
Please indicate if this course will serve as any of the following types of electives			
Elective (any college level course can serve as an elective)			
Specific Type (indicate Business, Multiple Perspectives*, Liberal Arts, Humanities, Foreign			
Language, Social Science, Behavioral Science, Mathematics, Science, Lab Science, Social Science			
Foundational*, Literature, Philosophy or Language*, Creative Arts*)			
Program specific (name the program)			
*confer with the Liberal Arts Coordinator			
Is this course required for a program? If yes, submit a separate DEGREE OR CERTIFICATE REVISION			
PROPOSAL. If the course is required for a new program, submit a separate NEW DEGREE, OPTION			
OR CERTIFICATE PROPOSAL. Please list all affected programs here.			
N/A			
Expected enrollment per term: UNKExpected enrollment per year: UNK			
Will any of the following be required:			
Additional staff _X_ Additional space _X_ Additional equipment _X_ Additional library resources			
Provide a rationale for any needs indicated above and include approximate cost of equipment.			
The goal is to pilot the lab section of the course with an instructor who will create a training program so that the lab section can be staffed by writing tutors going forward. The lab course will also need to be held in a computer room or students will be required to have laptops or, if feasible,			

may be held in the Writing Center.

# **Course Materials**

Lecture Hours:	Lab Hours:	Clinic Hours:
General course description and pre	requisites as it will appear in the coll	ege catalog (including <b>course</b>

three letter designation and number, title, credits, semesters offered and prerequisites/corequisites):

#### ENG 101L Composition I with Lab

The course focuses on theme-based argument. Students practice and develop critical reading, thinking, and writing skills necessary for college. Students read, analyze, and summarize college level analytic arguments from various genres (popular, academic, etc.) and compose research-based analytic arguments based on the course's theme. Students become aware of writing decisions made for different audiences, purposes, and genres, with a focus on academic writing conventions. Students also learn beginning research skills, including appropriate quotation, summary, paraphrase, and documentation skills. At the end of the semester, students compile a portfolio of 15-25 pages, to include their summary, synthesis, and analysis projects. This section of the course includes a two-hour lab component where an academic coach will support students with planning, organizing, and revising assignments, focusing on sentence and paragraph-level revision as well as the rhetorical content of the ENG 101 course. **Credits: 3** 

## Prerequisite: Placement by Advising Semester Offered: F/S/SU

Lecture Hours per semester	Lab Hours per semester: 22.5	Clinic Hours or Internship Hours
(e.g., 45 hr. for 3 credit course):		per semester:
45		

Provide the following course information selected from the E-2 checklist for course materials. Provide your dean with a syllabus that includes all of the checklist course materials.

- All required course readings (whether written or electronic), including information on publisher and edition used or website address or link
- Student Learning Outcomes (list)
- Teaching procedures (briefly describe)
- Course topics and/or assignments and/or required and/or supplemental reading
- Tentative test schedule/assignment(s) schedule
- Basis for student grading and calculation of final grade as well as criteria for evaluating student performance

The lab section of the course follows the course schedule of the ENG 101 course attached.

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I - Introductory/Background: There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional: There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized: There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome. NA – Not Applicable: This is not a learning outcome for this course.

CONNECTION TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I, M, E,
	NA
Civic Learning & Engagement: Students will develop civic knowledge, skills and dispositions	
through learning and practice.	
Communication Skills: Students will read, write, and speak effectively to build knowledge and	
convey meaning.	
Information and Digital Literacy: Students will engage in a reflective process of information	
discovery, use information responsibly and employ digital technologies to learn, communicate and	
collaborate.	
Intercultural Knowledge and Competence: Students will demonstrate intercultural knowledge	
within a variety of cultural contexts and with culturally different ideas and individuals	
Quantitative and Scientific Reasoning: Students will apply concepts and methods of mathematics	
and science to acquire knowledge and solve problems.	
(Con Ed Cools adopted 2022)	•

(Gen. Ed. Goals adopted 2022).

#### ****CIVIC LITERACY**

If civic learning or civic literacy is a component of this course (within the course description, course topics and/or student learning outcomes), please consult the "Guide for Designating Civic Learning Courses" from the Department of Higher Education, available on Frequently Used Forms (with the other Academic Governance Forms). Utilizing the DHE definitions, please indicate whether this course can be designated as one of the following:

____ Civic Learning (CL)

- ____ Civic Learning with Engagement Required (CLER)
- ____ Civic Learning with Engagement Optional (CLEO)
- ____ Civic Learning is not a component of this course (NA)