English as a Second Language

Special Program: Certificate

The English as a Second Language (ESL) credit program offers non-native speakers an opportunity to develop their English skills as part of their full-time college program. It is also available part-time for students preparing to enter a degree program or anyone wishing to improve their English language for personal or employment reasons. Upon successful completion of the program, students are awarded an English Language Achievement Certificate designated "Highest Commendation," "Commendation," or "Proficient" depending on grades achieved in the Advanced course sequence.

Students who wish to enroll in the ESL program must complete and submit the online MCCC admissions application and take the free ESL ACCUPLACER placement test. Contact the Testing Center at (609) 570-3295 for arrangements. After completing the test, visit the International Student Services and ESL offices in SC 251, SC 262, or SC 263 for advisement and class registration.

Full-time students must enroll in 12 credits based on their ESL ACCUPLACER placement test results. Four-credit courses in Speech, Reading, and Writing are offered in levels progressing from ESL Foundation, Advanced Beginner, Intermediate, to Advanced.

International students who wish to enter a program of study must complete the Test of English as a Foreign Language (TOEFL), administered worldwide by Educational Testing Service. Students who score 109 or higher on the TOEFL are exempt from ESL coursework. MCCC's International Student Services and ESL office provides a packet detailing other current requirements for international students.

Mercer County Community College offers a 2-credit online TOEFL Prep Course [ESL 080 - see page 156] for international students wishing to take the TOEFL iBT (Internet-based test). Eligibility for this course requires either a minimum score of 60 to 109 on the TOEFL or enrollment in MCCC's Intermediate-level ESL courses. Graded as "credit" or "no credit," this TOEFL iBT Prep Course – *not a substitute for any courses in the MCCC English as a Second Language certificate program* – can be repeated up to three times. Fees apply.

While studying in the ESL credit program, students may be eligible to enroll in a limited number of college courses such as math, science, computer science, or arts according to their ability in specific disciplines. An advisor will assist with this determination.

Curriculum

Code	Course	Credits
Foundation		
ESL 041	ESL Foundation in Speech Concepts	4
ESL 042	ESL Foundation in Reading Concepts	4
ESL 043	ESL Foundation in Grammar Concepts	4
Advanced Beginner		
ESL 051	ESL Speech Concepts I	4
ESL 052	ESL Reading and Critical Thinking I	4
ESL 053	ESL Writing Concepts I	4
Intermediate		
ESL 061	ESL Speech Concepts II	4
ESL 062	ESL Reading and Critical Thinking II	4
ESL 063	ESL Writing Concepts II	4
Advanced		
ESL 071	ESL Speech Concepts III	4
ESL 072	ESL Reading and Critical Thinking III	4
ESL 073	ESL Writing Concepts III	4

NOTE: Prior to registration, students are required to take the ESL ACCUPLACER test for assessment of their English proficiency level, regardless of their TOEFL score. Students are assigned to the appropriate ESL program level based on test scores achieved.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Accounting

Associate in Applied Science Degree

Program **ACCTG.AAS**
CIP 520302

The field of accounting is dynamic, exciting, growing and currently in need of paraprofessionals. The Accounting program seeks to meet this need by preparing students for various entry-level accounting positions in governmental agencies, private and public corporations, and small business firms.

Graduates can begin their career as junior accountants, assistant auditors, bookkeepers, or accounting clerks. Recent graduates have obtained positions with the State of New Jersey, The Clark Group, The Mercadien Group, Bell Atlantic, Congoleum Corporation, the City of Trenton, Educational Testing Service, and AGFA Division of Miles.

Courses offered include income taxation, not-for-profit accounting, auditing, and cost accounting.

PROGRAM OUTCOMES

- Perform all the steps of the accounting cycle for sole proprietorships, partnerships, and corporations;
- Compute and record financial transactions that are unique to governmental and not-for-profit institutions such as hospitals, colleges, and universities;
- Analyze financial statements, prepare managerial reports, and suggest appropriate actions to alleviate or eliminate problems;
- Implement an effective system of internal control;
- Utilize the computer to record accounting information and perform spreadsheet analysis;
- Research printed and electronic resources, evaluate the quality of the information, and report findings orally and/or in written reports.

Students may study full-time or part-time. Most courses are offered both day and evening; advanced accounting courses may be offered only at night.

For students who already possess a qualified baccalaureate or higher degree and are considering sitting for the CPA (Certified Public Accountant) Examination, see the CPA Education Compliance certificates on the following page.

Admission to the program requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BUS 101	Introduction to Business (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
MAT 140	Applied College Algebra (4/0)[1]	4
— —	General Education elective[2]	3
SECOND SEMESTER		
ACC 111	Principles of Financial Accounting (4/0)	4
BUS 107	Business Law I (3/0)	3
CIS 175	PC Applications: Spreadsheets (2/2)	3
ENG 112	English Composition II with Speech (3/0)	3
— —	General Education elective[2]	3
THIRD SEMESTER		
ACC 112	Principles of Managerial Accounting (4/0)	4
ACC 201	Intermediate Accounting I (3/1)	3
ACC 207	Computerized Accounting (2/2)	3
ECO 103	Basic Economics (3/0)	
	OR	
ECO 111	Macroeconomics (3/0)	3
	OR	
ECO 112	Microeconomics (3/0)	
— —	Elective	3
FOURTH SEMESTER		
ACC 202	Intermediate Accounting II (3/1)	3
ACC 204	Auditing (3/1)	3
ACC 214	Accounting for Non-Profit Organizations (3/0)	3
ACC 215	Cost Accounting (3/1)	3
BUS 296	International Business Practice Firm (1/5)	3
		65

NOTE: Electives should be selected in consultation with an academic advisor. Students must earn a minimum grade of C in all accounting (ACC) courses to graduate.

[1] Or higher-level mathematics course.

[2] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Accounting: CPA Education Compliance

Programs **CPA.ACC26.CERT**
CPA.BUS24.CERT
CIP 520303

Certificates of Proficiency

CPA Education Compliance certificates offered through Mercer County Community College are suitable for those students seeking to satisfy the educational requirements established by the New Jersey State Board of Accountancy in order to be eligible to take the CPA Examination. These are not "review" or "prep" courses for the examination.

To be licensed as a Certified Public Accountant in New Jersey, an applicant must have a baccalaureate or higher degree and obtain at least 150 semester hours from an accredited college or university. These credits can be obtained within or beyond a degree program. In addition, an applicant must obtain at least one year of full-time experience in the areas of auditing or accounting, working under a CPA whose active license is from New Jersey or a state having requirements substantially equivalent to those of New Jersey.

To take the CPA Examination, an applicant must possess:

- a baccalaureate or higher degree from an accredited college or university in any field of study;
- at least 24 semester hours in accounting and 24 semester hours in business courses other than accounting;
- a minimum of 120 semester hours.

Enrollment in these certificate programs alone or concurrently is permitted, depending on individual student requirements. Admission to either requires a baccalaureate or higher degree as specified, including course credits for English (equivalent to ENG 101 or higher) and mathematics (equivalent to MAT 140 or higher), and approval of the program coordinator.

Curriculum

Accounting 26

Code	Course (lecture/lab hours)	Credits
ACC 111	Principles of Financial Accounting (4/0)	4
ACC 112	Principles of Managerial Accounting (4/0)	4
ACC 201	Intermediate Accounting I (3/1)	3
ACC 202	Intermediate Accounting II (3/1)	3
ACC 203	Federal Income Taxation (3/0)	3
ACC 204	Auditing (3/1)	3
ACC 207	Computerized Accounting (2/2)	
	OR	3
ACC 214	Accounting for Non-Profit Organizations (3/0)	
ACC 215	Cost Accounting (3/1)	3
		26

NOTE: In order to meet the regulatory minimum 24 credit requirement for accounting courses, it is necessary to take 26 credits of accounting at Mercer County Community College.

Business 24

Code	Course (lecture/lab hours)	Credits
BUS 101	Introduction to Business (3/0)	3
BUS 107	Business Law I (3/0)	3
BUS 205	Business Statistics I (3/0)	3
BUS 206	Business Statistics II (3/0)	3
BUS 209	Business Communications (3/0)	3
BUS 210	Principles of Management (3/0)	3
BUS 230	Global Environment of Business (3/0)	3
BUS 296	International Business Practice Firm (1/5)	
	OR	3
MKT 101	Principles of Marketing (3/0)	
		24

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Administrative Support

Certificate of Proficiency

Program **ADM.SUP.CERT**
CIP 520401

This certificate program is designed for students who wish to develop entry-level skills in a short time or for those already employed who wish to upgrade their skills. The acquired skills enable successful graduates of the program to attain one of many possible office support positions in business.

PROGRAM OUTCOMES

- Use a range of computer software programs as tools to complete common business projects;
- Produce documents that are formatted according to standard business practices;
- Perform a variety of general office functions;
- Apply correct grammar, punctuation, and word usage principles in producing documents;
- Compose routine business correspondence;
- Understand the importance of interpersonal skills.

The program may be pursued part- or full-time. Admission requires a high school diploma or its equivalent with one year of mathematics. Students may receive credit for previous training in the skills area by applying for credit-by-examination, credit-by-experience, and/or credit-by-articulation. Contact the Administrative Support program coordinator for additional information.

Note: Computer application courses are mapped to Microsoft certification exams.

Also see:
- Medical Office Assistant certificate program
- Microcomputer Applications certificate program

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
OST 111	Computer Keyboarding with Word Processing Applications (2/2)	3
IST 101	Computer Concepts with Applications (2/2)[1]	3
BUS 105	Business Writing (3/0)	3
ACC 106	Office Accounting I (3/0)	
	OR	3-4
ACC 111	Principles of Financial Accounting (4/0)	
BUS 209	Business Communications (3/0)	3
OST 112	Advanced Keyboarding Applications (2/2)	3
CIS 173	PC Applications: Database (2/2)	3
OST 222	Current Topics in Office Administration (2/2)	3
OST 219	Word Processing Concepts and Applications (2/2)	3
CIS 175	PC Applications: Spreadsheets (2/2)	3
		33-34

[1] May be substituted with another Technology general education elective if student shows competency in Microsoft Office applications.

NOTE: Students must earn a minimum grade of C in BUS 105 as well as all CIS and OST courses to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Advanced Manufacturing Technology*

Program **MANUF.TECH.AMT.AAS**
CIP 143601

Associate in Applied Science Degree

The Advanced Manufacturing Technology (AMT) A.A.S. degree program is designed to prepare students to move into the workforce in the modern manufacturing environment, and/or to transfer to an institution that offers a bachelor's degree in such studies as mechatronics, advanced manufacturing technology, or mechanical engineering technology.

With American manufacturers becoming increasingly dependent upon the use of high-tech equipment that involves multiple, integrated systems, it is crucial to recruit and employ individuals who know how to operate, troubleshoot, and maintain it. Skills learned in this program include operation of a manual lathe, manual milling machine, as well as computer numerically controlled (CNC) machines and programmable logic controllers (PLCs).

The AMT degree program prepares students for apprentice/entry-level positions in manufacturing facilities and machine shops locally as well as nearly anywhere in the country. Typical tasks include setting up and operating equipment such as engine or turret lathes, milling machines, and power presses. More advanced tasks may involve operating CNC manufacturing equipment as well as PLCs or robots for assembly lines.

AMT graduates are attractive to employers who implement team-oriented design, production, quality, and maintenance systems within the manufacturing environment. Students in this program are also eligible for NIMS (National Institute of Metalworking Skills) certifications.

PROGRAM OUTCOMES

- Pursue NIMS certification;
- Read blueprints and schematics;
- Use instruments such as micrometers, calipers, and scales;
- Set up and operate a milling machine;
- Set up and operate a lathe;
- Set up and operate CNC machines;
- Maintain a safe and organized work space;
- Make certain mathematical calculations related to shop work;
- Populate and repair printed circuit boards.

Admission to the program requires a high school diploma or its equivalent with one year of algebra or applied mathematics.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
EET 144	DC/AC Electric Circuits (3/3)	4
MAT 146	Pre-Calculus (4/0)	4
MET 122	Industrial Measurements (2/3)	3
PHY 101	College Physics I (3/3)	4
SECOND SEMESTER		
COS 101	Introduction to Computer Science (3/2)	4
EET 140	Electronic Construction (1/3)	2
ENG 101	English Composition I (3/0)	3
MET 123	Machine Shop Techniques I (2/3)	3
PHY 102	College Physics II (3/3)	4
THIRD SEMESTER		
DRA 190	Introduction to Computer-Aided Drafting (1/2)	2
EET 219	Electronic Networks (3/3)	4
EET 251	Digital Circuit Fundamentals (3/3)	4
ENG 102	English Composition II (3/0)	3
MET 124	Machine Shop Techniques II (2/3)	3
FOURTH SEMESTER		
DRA 218	3-D Modeling / 3-D Printing (2/2)	3
ECO 111	Macroeconomics (3/0)[1]	3
EET 230	Linear Integrated Circuits (3/3)	4
AMT 231	Introduction to Computer Numerically Controlled (CNC) Machines (2/3)	3
AMT 290	Advanced Manufacturing Technology Internship	2
		64

[1] ECO 112 is an acceptable alternative.

† Some exemptions apply. Consult academic advisor for details.

NOTE: EET 266 (Programmable Logic Controllers) and AMT 232 (Advanced Computer Numerically Controlled (CNC) Machines) can be taken to enhance opportunities for transfer to a B.S. degree institution.

** State approval pending*

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Advanced Manufacturing Technology

Program **MANUF.TECH.AMT.CERT**
CIP 143601

Certificate of Proficiency

The Advanced Manufacturing Technology program is designed to prepare students for the modern manufacturing environment. This certificate of proficiency is attractive to employers who implement team-oriented design, production, quality, and maintenance systems within the manufacturing environment.

American manufacturers are becoming increasingly dependent upon the use of high-tech equipment that involves multiple, integrated systems. It is crucial that these companies be able to recruit and employ individuals who know how to operate, troubleshoot, and maintain it.

The certificate program prepares students for apprentice/entry-level positions in shops and manufacturing facilities not only in the local area but almost anywhere in the country. Typical tasks include setting up and operating equipment such as engine or turret lathes, milling machines, and power presses. More advanced tasks may involve operating computer-controlled manufacturing equipment (CNC) as well as programmable logic controllers (PLCs) or robots for assembly lines.

Admission to the program requires a high school diploma or its equivalent with one year of algebra or applied mathematics.

PROGRAM OUTCOMES

- Read prints and schematics;
- Use instruments such as micrometers, calipers, and scales;
- Set up and operate a milling machine;
- Set up and operate a lathe;
- Populate and repair printed circuit boards;
- Maintain a safe and organized work space;
- Make certain mathematical calculations related to shop work;
- Succeed in future courses, such as those involving PLC and CNC systems.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ECO 103	Basic Economics (3/0)	3
ENG 101	English Composition I (3/0)	3
EET 130	Fundamentals of Electronics (2/2)	3
EET 140	Electronic Construction (1/3)	2
IST 101	Computer Concepts with Applications (2/2)	3
MAT —	Mathematics elective[1]	3-4
DRA 218	3-D Modeling / 3-D Printing (2/2)	3
ENT 116	Engineering Graphics (1/2)	2
MET 122	Industrial Measurements (2/3)	3
MET 123	Machine Shop Techniques I (2/3)	3
MET 124	Machine Shop Techniques II (2/3)	3
AMT 290	Advanced Manufacturing Technology Internship	2
		33-34

[1] Select in consultation with an academic advisor.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Advertising + Graphic Design

Associate in Applied Science Degree in Visual Arts

Program **ADV.GRA.AAS**
CIP 500402

Advertising + Graphic Design, a comprehensive art program in the Visual Arts A.A.S. degree, emphasizes concept development and visual communication skills. The degree program prepares students for positions as graphic designers, art directors, design consultants, web/digital designers, prepress specialists, exhibit designers, packaging developers, and visual communicators. These positions are most often found in advertising agencies, design firms, corporate communication departments, interactive multimedia studios, and the television, film and media industries.

Students gain a thorough understanding of the discipline by preparing for advanced study in graphic design, advertising design, and web/digital design. The program parallels the first two years of education at a majority of undergraduate universities and art colleges, with an emphasis on career training for gainful employment.

The general principles studied and practiced in these courses are the foundation of creative thinking and successful solutions for graphic design, illustration, and advertising art direction communication problems. The design course sequence emphasizes the development of creative thinking, problem solving, and forms of visual communication.

Most coursework takes place in a studio using regularly upgraded professional-quality hardware and software. Applying Macintosh as well as PC platforms, the equipment used at MCCC is the same as that most commonly used by agencies, studios, and corporate art departments.

The program may be pursued on a full-time or part-time basis. Some courses may only be offered during the day.

PROGRAM OUTCOMES

- Apply computer applications to design principles;
- Visualize and practice professional typography;
- Design and present professional-quality work;
- Create professional-quality logos, newsletters, posters, brochures, websites, publications, and advertisements;
- Create web pages that use design principles that communicate effectively;
- Develop and present creative ideas in both written and oral formats;
- Develop a professional portfolio to serve in the pursuit of further education or employment.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ART 102	Basic Drawing (1/4)	3
ART 105	Two-Dimensional Design (1/4)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
DMA 105	Introduction to Computer Art (1/4)	3
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
ADV 101	Advertising Design I (1/4)	3
ADV 110	Typography I: Basics of Graphic Design (1/4)	3
ART 104	Life Drawing (1/4)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
MAT —	Mathematics elective[1]	3
THIRD SEMESTER		
ADV 201	Advertising Design II (1/4)	3
ADV 210	Publication Design (1/4)	3
DMA 110	Digital Imaging (1/4)	3
DMA 145	Web Design I (1/4)	
	OR	3
CMN 146	Social Media Technologies (2/2)	
ART —	Art History elective[2]	3
FOURTH SEMESTER		
ADV 202	Advertising Design III (1/4)	3
ART 106	Three-Dimensional Design (1/4)	3
ART 123	History of Modern Art (3/0)	3
PHO 103	Digital Photography I (2/3)	3
— —	Science OR Technology general ed. elective[3]	3
— —	Professional elective[4]	3
		65

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[2] Select from ART 121, 122, 124, 125.

[3] Select in consultation with an academic advisor.

[4] Select from ADV 220, 230; DMA 245.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in ADV 101, 201, 202, 210; ART 105; DMA 105 and 145 to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Airline Transport Pilot (ATP)

Program **AVI.ATP.CRT**
CIP 490102

Certificate of Achievement

The Airline Transport Pilot (ATP) certificate program completes the educational and flight training requirements for commercial/instrument rated helicopter pilots to obtain their Airline Transport Pilot Certificate and be eligible for employment with a regional airline as a professional pilot.

The program is intended to provide students with an educational experience that encourages integration of the theoretical and technical aspects of aviation and the airline industry; to provide a transition from helicopter to multi-engine fixed wing aircraft; and to foster an atmosphere of education as a lifelong process that is necessary in the ever-changing aviation industry.

PROGRAM OUTCOMES

- Obtain the appropriate ground and flight certificates;
- Eligibility for a position with a regional airline to begin their ATP training.

Along with proof of citizenship or Transportation Security Administration approval, admission to this certificate program requires the student to possess a commercial/instrument helicopter rating, 60 credits of college-level courses at an accredited institution, or equivalent employment experience.

Before flight training begins, an aviation medical will be required. Contact the aviation program coordinator for details. Flight fees are required.

Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)[1]	3
MAT 135	Intermediate Algebra with Applications (4/0)	4
AVI 102	Aviation Transportation (3/0)	3
AVI 216	Flight V (1/3)	4
AVI 250	Airline Transport Pilot (ATP) Prep I (2/6)	6
AVI 251	Airline Transport Pilot (ATP) Prep II (1/3)	3
AVI 217	Flight VI (Multi-Engine Training) (1/1)	1
		24

[1] Students possessing a bachelor's degree should take ENG 112.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

3-D Animation

Certificate of Proficiency

Program **ANIMTN.CERT**
CIP 500402

The 3-D Animation Certificate prepares students for positions as 3-D production artists, animators, and modelers. Typical employers include animation studios; advertising agencies; design firms; television, film and video effects houses; and other branches of the entertainment industry.

PROGRAM OUTCOMES

- Explain the pre-production process, including character design and storyboarding;
- Visualize and animate story ideas;
- Apply animation and storytelling principles to specific animation projects;
- Apply design principles to create 3-D computer animations that communicate effectively;
- Apply professional 3-D modeling and animation software applications;
- Solve design problems, which contain change over time, 3-D models, camera positions, lighting, and textures;
- Create a professional portfolio to serve in the pursuit of further education or employment.

Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
ART 102	Basic Drawing (1/4)	3
ART 104	Life Drawing (1/4)	3
ART 125	Topics in Contemporary Art (3/0)	3
DMA 105	Introduction to Computer Art (1/4)	3
DMA 120	3-D Modeling I (1/4)	3
DMA 135	Digital Narrative (1/4)	3
DMA 220	3-D Modeling II (1/4)	
	OR	3
DMA 224	Rigging for Animation and Games (1/4)	
DMA 225	Computer Animation I (1/4)	3
DMA 226	Computer Animation II (1/4)	3
DMA 250	Digital Portfolio Seminar (1/4)	3
		33

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Architecture

Associate in Science Degree

Program **ARCH.AS**
CIP 049999

The Architecture transfer program parallels the first two years of education at a majority of undergraduate schools of architecture. It offers a balance of academic and design courses.

The academic courses provide students with a broad base of general knowledge which widens their outlook and increases their ability to evaluate issues and make enlightened decisions. The design courses emphasize the development of skills in architectural conceptualization and design decision-making. They include both traditional methods of architectural graphics and model building as well as use of the computer as a three-dimensional design study tool.

Together, the academic courses and design courses form the foundation needed for advancement in architectural education and, later, in professional practice. Students have the opportunity to enrich their education through participation in field trips and a variety of architecture-related extracurricular activities.

Since architecture programs vary among senior colleges and admission is highly competitive, faculty assistance is readily available to students preparing design portfolios and investigating potential transfer institutions. The architecture faculty are registered architects.

PROGRAM OUTCOMES

- Use analytical skills to determine the major elements of a work of architecture and/or an architectural design project;
- Comprehend and apply the various stages of the creative thought process to produce an architectural design;
- Understand and apply the basic principles of sustainable design;
- Use two- and three-dimensional visual communication skills (freehand, traditional, and computer-generated drawings and physical models) to convey a complete architectural idea;
- Demonstrate knowledge of the important buildings and stages in the history of architecture and the social and technological factors that influenced them;
- Critically evaluate the built environment – its relationship to the natural world and the reciprocal sociological and psychological influences on man;
- Demonstrate knowledge of architectural materials and structural systems and their appropriate applications in building construction.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ARC 102	Graphic Communication for Architecture (1/4)	3
ARC 121	Architecture Basic Design I (1/8)	5
ARC 125	Architecture and the Environment (3/0)	3
ENG 101	English Composition I (3/0)	3
CMN 112	Public Speaking (3/0)	3
SECOND SEMESTER		
ARC 104	Computers in Architecture (1/4)	3
ARC 123	Architecture Basic Design II (1/8)	5
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)[1]	4
THIRD SEMESTER		
ARC 122	History of Architecture to 1860 (3/0)	3
ARC 134	Building Construction Systems (3/0)	3
ARC 227	Architecture Design I (1/8)	5
— —	Science elective[2]	4
— —	Social Science general education elective	3
FOURTH SEMESTER		
ARC 124	History and Theory of Modern Architecture (3/0)	3
ARC 228	Architecture Design II (1/8)	5
— —	Math, Science OR Technology elective[2]	4
— —	General Education elective[3]	3
		67

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Or approved higher-level mathematics course.

[2] PHY 101 and 102 are highly recommended.

[3] Select course from the following general education categories: Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

Admission to the Architecture program requires a high school diploma or its equivalent with at least one year of science (biology, chemistry, or physics) and two years of algebra. Courses in the visual arts are highly recommended.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Automotive Technology

Associate in Applied Science Degree

Program **AUTO.TECH.AAS**
CIP 150803

The Automotive Technology program introduces students to current automotive systems and related diagnostic and service techniques. Students learn on and about current automotive technology and its use in late model production vehicles. Learning occurs during classroom instruction and lab activities performed in the auto shop. In addition, students develop a strong work ethic and learn professionalism while fulfilling internship requirements at their sponsoring repair facility.

The A.A.S. program offers two paths of study that students may choose from: MOPAR CAP (Career Automotive Program) and Comprehensive.

MCAP students complete FIAT/Chrysler-specific course material and secure a position at a Chrysler, Dodge, Jeep, or FIAT dealership as an apprentice technician.

Students following the Comprehensive path learn theory, operation, diagnosis, and service of systems not specific to any particular vehicle manufacturer, and complete internship requirements at an approved independent, franchise, or dealership repair facility.

PROGRAM OUTCOMES

- Diagnose, repair, and service current automotive technologies;
- Demonstrate desirable attitudes and work habits while working individually or with others;
- Obtain service repair information and procedures from online websites and electronic databases;
- Communicate effectively and professionally with customers and fellow technicians.

Admission to the program requires a high school diploma or its equivalent and a strong interest in a career in automotive technology. Admission is competitive, determined by basic skill levels along with a personal interview with program representatives. Academic foundations requirements should be completed before starting automotive classes.

The program may be completed in two years, beginning in the Fall semester and with Summer session attendance required each year. Instruction is organized in a concentrated two-day / three-day session format. Students attend the automotive classes Mondays and Wednesdays or Tuesdays and Thursdays, completing academic support classes in the afternoon or evening. Each session includes an internship at a dealership or approved repair facility.

The automotive classes meet at the Assunpink Campus of the Mercer County Technical Schools, across from MCCC's West Windsor campus on Old Trenton Road.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
AUT 110	Introduction to Automotive Electronics (3/1)	3
AUT 111	Automotive Service Fundamentals (2/6)	5
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
AUT 112	Automotive Fuel Systems (2/2)	3
AUT 113	Suspension, Steering and Alignment (2/4)	4
MAT 140	Applied College Algebra (4/0)[1]	4
SUMMER SESSION		
AUT 115	Automotive Brake Systems (2/4)	4
AUT 122	Internship in Automotive Technology I	1
AUT 212	Automotive Air Conditioning (2/2)	3
ENG 112	English Composition II with Speech (3/0)	3
THIRD SEMESTER		
AUT 114	Automotive Electricity and Electronics (2/2)	3
AUT 123	Internship in Automotive Technology II	1
AUT 213	Engine Service (2/4)	4
PHY 111	Physical Science Concepts (2/2)	3
FOURTH SEMESTER		
AUT 211	Automotive Emissions and Driveability Diagnosis (2/2)	3
AUT 221	Internship in Automotive Technology III	1
AUT 224	Manual Transmissions and Drivelines (2/3)	3
— —	General Education elective[2]	3
SUMMER SESSION		
AUT 222	Internship in Automotive Technology IV	1
AUT 225	Automatic Transmission Service (2/3)	3
IST 101	Computer Concepts with Applications (2/2) OR	3
IST 102	Computer Concepts with Programming (2/2)	
— —	General Education elective[3]	3
		66

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Or higher-level mathematics course.

[2] Select course from either Social Science or Humanities general education categories.

[3] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Aviation Customer Relations

Program **AVI.CUS.AAS**
CIP 490106

Associate in Applied Science Degree

The Aviation Customer Relations program provides students with fundamental knowledge of various transportation systems and with the skills to function as flight attendants, ticket agents, travel agents and in other related customer service positions with the travel industry. Courses provide the student with knowledge of both Federal Aviation Administration and Department of Transportation requirements.

PROGRAM OUTCOMES

- Perform customer relations staff functions with air carriers, commuter airlines, travel agencies, and other aviation-related businesses;
- Use interpersonal skills to communicate effectively about services and programs offered to the traveling public;
- Communicate effectively with the international air traveler;
- Perform essential office functions with proficiency, utilizing computer information systems.

Admission to the program requires a high school diploma or its equivalent. The college has direct transfer options with Thomas Edison State College, Embry-Riddle Aeronautical University, Metropolitan State College, and St. Francis College. Cooperative education programs also are available.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
HOS 123	Introduction to Travel and Tourism (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
OST 111	Computer Keyboarding with Word Processing Applications (2/2)	3
— —	World Language elective[1]	3
SECOND SEMESTER		
AVI 102	Aviation Transportation (3/0)	3
ENG 102	English Composition II (3/0)	3
PHY 111	Physical Science Concepts (2/2)	3
SOC 101	Introduction to Sociology (3/0)	3
— —	World Language elective[1]	3
THIRD SEMESTER		
AVI 101	Aerospace Development (3/0)	3
CMN 111	Speech: Human Communication (3/0)	3
GEO 102	Cultural Geography (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
— —	World Language elective[1]	3
FOURTH SEMESTER		
AVI 111	Flight Concepts (2/0)	2
BUS 209	Business Communications (3/0)	3
HOS 124	Computerized Reservations (3/0)[2]	3
HPE 105	First Aid, CPR and AED (2/2)	3
PSY 204	Social Psychology (3/0)	3
MAT —	Mathematics elective[3]	3-4
		64-65

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] It is recommended that all three electives be in the same language. At least two must be.

[2] BUS 296 (International Business Practice Firm) may be substituted for HOS 124. It is recommended that students interested in careers with travel agencies or airline reservations take BUS 296.

[3] Select from approved MAT courses.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Aviation Flight Technology

Associate in Applied Science Degree

Program **AVI.FLT.AAS**
CIP 490102

The Aviation Flight Technology program is accredited by the Aviation Accreditation Board International and provides flight instruction for the Private and Commercial certificates and Instrument rating.

In order to complete the program, every student must successfully pass the Federal Aviation Administration (FAA) Private, Commercial, and Instrument computer examinations and be certified as a commercial pilot with instrument rating. Ninety-seven percent of Mercer's students have passed the examinations on the first attempt. The college is an approved examining authority; FAA computer tests are conducted at the college.

PROGRAM OUTCOMES

- Obtain the appropriate ground and flight certificates;
- Fill related aviation positions requiring specific aviation knowledge with airport service operators located at numerous airports in the United States and possessions.

Most of the aviation courses are offered during the day, and certain ones may be available during the evening. Cooperative education opportunities are also available.

A career with the major airlines may require a four-year baccalaureate degree. There are direct transfer agreements with Embry-Riddle Aeronautical University, Florida Institute of Technology, Metropolitan State College, Thomas Edison State College, Southern Illinois University, Dowling College, and Central Missouri State University.

Students in the Aviation Flight Technology program receive classroom and laboratory instruction on the West Windsor Campus. Actual flight training takes place at a fixed base operation at Trenton-Mercer Airport, where the college has access to a fleet of aircraft and supervises the flight instructors.

An active advisory commission consisting of experts from the government and civilian areas of aviation recommends changes necessary to maintain a quality program.

Admission to the program requires a high school diploma with one year of algebra. High school courses in trigonometry and physics are an advantage. Proof of citizenship or Transportation Security Administration approval is required for enrollment in the Flight program. Before flight training begins, an aviation medical will be required. Contact the Aviation program coordinator for details.

Graduates of the program often return to take a flight training course toward the certified flight instructor rating.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
AVI 101	Aerospace Development (3/0)	3
AVI 113	Flight I (1/3)[1]	2
AVI 131	Commercial Pilot I (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)[2]	4
SECOND SEMESTER		
AVI 105	Aviation Weather (3/0)	3
AVI 114	Flight II (1/3)[1]	2
AVI 132	Commercial Pilot II (3/0)	3
CMN 112	Public Speaking (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)[2]	4
THIRD SEMESTER		
AVI 203	Aircraft Components (3/0)	3
AVI 213	Flight III (1/4)[1]	3
AVI 231	Commercial Pilot III (3/0)	3
PHY 101	College Physics I (3/3)	4
— —	General Education elective[3]	3
FOURTH SEMESTER		
AVI 102	Aviation Transportation (3/0)	3
AVI 208	Aviation Seminar	1
AVI 214	Flight IV (1/4)[1]	3
AVI 215	Aerodynamics (2/2)	3
IST 101	Computer Concepts with Applications (2/2)	3
— —	General Education elective[4]	3
		67

[1] Special fee required; hours to be arranged.

[2] Or higher-level mathematics course.

[3] Select course from either Social Science or Humanities general education categories.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective (PSY 101 recommended).

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in AVI 113, 114, 131, 132, 213, 214, 215, 231, and MAT 135 to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Aviation Flight Technology

Airline Transport Pilot (ATP) concentration

Associate in Applied Science Degree

Program **AVI.FLT.ATP.AAS**
CIP 490102

Students with an FAA Helicopter Commercial / Instrument Certificate should enroll in the Airline Transport Pilot (ATP) concentration.

The Airline Transport Pilot (ATP) concentration of the Aviation Flight Technology A.A.S. degree program completes the educational and flight training requirements for commercial/instrument rated helicopter pilots to be eligible for employment with a regional airline as a professional pilot.

PROGRAM OUTCOMES

- Obtain the appropriate ground and flight certificates;
- Eligibility for a position with a regional airline to begin their ATP training.

Along with proof of citizenship or Transportation Security Administration approval, enrollment in the flight program requires the student to possess an FAA commercial/instrument helicopter rating. Before flight training begins, an aviation medical will be required. Contact the aviation program coordinator for details.

Flight fees are required. AVI 216, 217, 250, and 251 are six-week courses; all others follow the standard semester schedule or may be taken online as applicable. Credit for prior experience will be evaluated by the program coordinator.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
AVI 101	Aerospace Development (3/0)	3
AVI 216	Flight V (1/3)[1]	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)[2]	4
SECOND SEMESTER		
AVI 105	Aviation Weather (3/0)	3
AVI 217	Flight VI (1/1)[1]	1
CMN 112	Public Speaking (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)[2]	4
THIRD SEMESTER		
AVI 203	Aircraft Components (3/0)	3
AVI 250	Airline Transport Pilot (ATP) Prep I (2/6)[1]	6
PHY 101	College Physics I (3/3)	4
— —	General Education elective[3]	3
FOURTH SEMESTER		
AVI 102	Aviation Transportation (3/0)	3
AVI 208	Aviation Seminar	1
AVI 215	Aerodynamics (2/2)	3
AVI 251	Airline Transport Pilot (ATP) Prep II (1/3)[1]	3
IST 101	Computer Concepts with Applications (2/2)	3
— —	General Education elective[4]	3
		62

[1] Special fee required. Offered in six-week terms, hours to be arranged. Flight prerequisite courses are required to be completed before starting the next flight course. AVI 217 and 250 may be offered in the same semester since each is not a prerequisite for the other.

[2] Or higher-level mathematics course.

[3] Select course from either Social Science or Humanities general education categories.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective (PSY 101 recommended).

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in AVI 215, 216, 217, 250, 251, and MAT 135 to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Aviation Flight Technology: CFI

Program **AVI.FLT.CFI.CERT**
CIP 490108

Certificate of Proficiency

The Aviation Flight Technology: CFI (Certified Flight Instructor) Certificate is designed to qualify graduates to become flight instructors. This position is a beginning step to becoming a professional pilot.

To succeed in a career as a pilot for a major airline, a candidate must possess a college degree. Many students who already possess an associate and/or a baccalaureate degree can qualify for these competitive positions after they attain their flight credentials and experience. Students without previous college experience can pursue this certificate and then later, if they wish, apply the credits toward the A.A.S. degree in Aviation Flight Technology.

PROGRAM OUTCOMES

- Give flight instruction for the private pilot certificate;
- Teach ground school for the private certificate;
- Demonstrate the flight characteristics of a single-engine aircraft for sales and maintenance;
- Fly power line, fish spotting, traffic patrol and parachute drops, and tow aerial banners;
- Work as flight schedulers with fixed base operators.

Proof of citizenship or Transportation Security Administration approval is required for enrollment in the Flight program. Before flight training begins, an aviation medical will be required. Contact the Aviation program coordinator for details.

All of the credits earned in this certificate except the flight instructor course apply to the A.A.S. degree in Aviation Flight Technology. Additionally, all of the certificate credits are transferable to the baccalaureate Aviation program at Thomas Edison State College.

Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)	4
AVI 113	Flight I (1/3)[1]	2
AVI 131	Commercial Pilot I (3/0)	3
AVI 105	Aviation Weather (3/0)	3
AVI 114	Flight II (1/3)[1]	2
AVI 132	Commercial Pilot II (3/0)	3
AVI 215	Aerodynamics (2/2)	3
AVI 213	Flight III (1/4)[1]	3
AVI 231	Commercial Pilot III (3/0)	3
AVI 214	Flight IV (1/4)[1]	3
AVI 233	Flight Instructor – Airplane (3/0)	3
		35

[1] Special fee required; hours to be arranged.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Aviation Management

Program **AVI.MGMT.AS**
CIP 490104

Associate in Science Degree

The Aviation Management program provides students with a background in business administration and related technical knowledge in aviation. In most cases, the graduate of this program should seek a four-year baccalaureate degree. Aviation management has evolved into a career discipline that requires a variety of skills.

PROGRAM OUTCOMES

- Utilize business information processing systems to improve management control in aviation businesses;
- Interpret financial statements and prepare budgets;
- Perform staff functions in marketing, sales, and general management with aviation-related businesses;
- Interpret and apply Federal Aviation Administration regulations and procedures to aviation-related businesses.

There are direct transfer options with Embry-Riddle Aeronautical University, Metropolitan State College, St. Francis College, Southern Illinois University, Thomas Edison State College, and Florida Institute of Technology. Although many graduates transfer to four-year colleges, graduates also enter the private sector in entry-level management positions with manufacturers, airline authorities, airport service operations, commuter air services, and corporate flight operations.

Students may study full-time or part-time. Most courses are offered during the day and evening. Admission to the program requires a high school diploma or its equivalent with two years of high school math.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
AVI 101	Aerospace Development (3/0)	3
BUS 101	Introduction to Business (3/0)	3
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)[1]	4
PSY 101	Introduction to Psychology (3/0)	3
SECOND SEMESTER		
ACC 111	Principles of Financial Accounting (4/0)	4
AVI 102	Aviation Transportation (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)	4
MKT 101	Principles of Marketing (3/0)	3
THIRD SEMESTER		
ACC 112	Principles of Managerial Accounting (4/0)	4
BUS 210	Principles of Management (3/0)	3
ECO 111	Macroeconomics (3/0)	3
PHY 111	Physical Science Concepts (2/2)	3
— —	Humanities general education elective	3
FOURTH SEMESTER		
BUS 107	Business Law I (3/0)	3
CMN 111	Speech: Human Communication (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ECO 112	Microeconomics (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
		63

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Or higher-level mathematics course.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Biology

Associate in Science Degree in Liberal Arts and Sciences

Program **BIO.AS**
CIP 240101

The Biology option of the Liberal Arts and Sciences program primarily prepares graduates for transfer into the junior year of programs such as ecology, conservation, biology, microbiology, pharmacy, forestry, entomology, genetics, biotechnology, and preprofessional fields of medicine and dentistry. Biology graduates have transferred to colleges throughout Pennsylvania, New Jersey and the northeast, including Rider University, Temple University, Cornell University, Rutgers University, Stockton College, The College of New Jersey, and Rowan University.

Graduates earning a four-year degree have been employed by firms such as Bristol-Myers Squibb, Johnson & Johnson, and various New Jersey governmental departments. Others have successfully completed medical, dental, chiropractic, pharmaceutical, physical/occupational therapy, physician's assistant, veterinary medicine, and other graduate programs.

The biology facilities include specially equipped laboratories for microbiology, genetics/molecular biology, and anatomy/physiology. Students learn a wide variety of investigative techniques, including microscopy, spectrophotometry, and gel electrophoresis. Real-life systems are studied through field trips to sites in the New Jersey Pinelands and elsewhere. A special honors sequence affords eligible students the opportunity to participate in a research project under the supervision of faculty at nearby Rider University, Monmouth University, or Princeton University as well as other research institutions.

PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamental principles, concepts, and terminology of biology;
- Explain the structures and fundamental processes of life at molecular, cellular, and organismal levels;
- View the living world with greater understanding, insight, and appreciation as it relates to the field of biology and contemporary problems and issues;
- Demonstrate the ability to apply the scientific method of inquiry to gather and use information for the purposes of critical thinking, information analysis, and problem solving;
- Exhibit proficiency in the laboratory and in the field by using standard equipment and measurement and observation techniques that allow one to gather, analyze, and interpret qualitative and quantitative data.

Most courses may be completed through part-time study in the evening. Course selection and program of study must be approved by an academic advisor.

Admission to the Biology option requires a high school diploma or equivalent with at least one year of science (biology, chemistry, or physics) and two years of academic mathematics. Successful completion of the Biology option results in the award of the Associate in Science degree in Liberal Arts and Sciences.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 101	General Biology I (3/3)	4
CHE 101	General Chemistry I (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 146	Pre-Calculus (4/0)[A]	4
SECOND SEMESTER		
BIO 102	General Biology II (3/3)	4
CHE 102	General Chemistry II (3/3)	4
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
THIRD SEMESTER		
BIO —	Biology elective[1]	4
— —	Technical electives[2,B]	4
— —	Technical electives[2,B]	4
— —	Social Science general education elective	3
FOURTH SEMESTER		
BIO —	Biology elective[1]	4
— —	Technical elective[2,C]	4
— —	Humanities general education elective	3
— —	General Education elective[3]	3
		60

[1] Approved biology electives: BIO 201, 202, 203, 204, 208. Final grade must be C or above for biology majors.

[2] Select from approved list of BIO, CHE, MAT, PHY, and COS courses available from biology advisors or Business & STEM division office. Minimum grade of C required for BIO courses being applied as a Technical elective.

[3] Select course from either Social Science or Humanities general education categories.

†Some exemptions apply. Consult academic advisor for details.

The Biology degree with a **Pre-Medicine, Pre-Veterinarian, Pre-Dentistry** concentration primarily prepares graduates for transfer into the junior year of programs such as premedicine, pre-veterinarian, pre-dentistry, physician assisting, biotechnology, microbiology, molecular biology, genetic or biochemical engineering, pharmacy and physical therapy.

Students follow the standard Biology curriculum (above), with course substitutions as follows, for a total of 62 credits:

Concentration

Pre-Medicine, Pre-Veterinarian, Pre-Dentistry

SEMESTER 1
[A] MAT 151 Calculus I in place of MAT 146

SEMESTER 3
[B] CHE 201 Organic Chemistry I (5 credits) and
MAT 152 Calculus II (4 credits) in place of Technical electives (8 credits)

SEMESTER 4
[C] CHE 202 Organic Chemistry II (5 credits)
in place of Technical elective (4 credits)

Building Construction Technology

Program **BLDG.CONSTR.CERT**
CIP 150101

Certificate of Proficiency

The certificate program in Building Construction Technology is an opportunity for those working in the varied fields of construction, or construction documentation, to update their knowledge and skills in building construction operations, management, or construction office administration.

Students may study full-time or part-time. Admission to the program requires a high school diploma or its equivalent with one year of algebra.

PROGRAM OUTCOMES

- Understand drafting and design standards used in the building construction industry;
- Demonstrate knowledge of materials and methods of construction;
- Identify established surveying procedures to layout projects in accordance with construction document drawings and site information.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
BCT 101	Construction Graphics (2/2)	3
BCT 110	Building Construction Materials and Methods I (3/0)	3
BCT 112	Building Construction Materials and Methods II (3/0)	3
CIV 101	Surveying I (2/3)	3
DRA 191	Intro to Building Information Modeling (1/2)	2
ENG 101	English Composition I (3/0)	3
MAT —	Mathematics elective[1]	3-4
— —	Technical electives[2]	9-11
— —	Elective	3
		32-35

[1] Select in consultation with an academic advisor.

[2] In consultation with an academic advisor, select from BCT 104, 112, 232, 234, 236; CIV 102; DRA 190.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Business Administration

Program **BUS.ADM.AS**
CIP 520201

Associate in Science Degree

The Business Administration program is designed for the student who plans to earn a business-related baccalaureate degree at a four-year college or university. Eighty percent of graduates successfully transfer to four-year colleges. Direct transfer options accommodate transfer to many in-state and out-of-state institutions.

Graduates of the program demonstrate competencies in introductory courses in accounting, business law, economics, and statistics as well as other business-related courses consistent with acceptance into junior status at a four-year college.

Graduates have transferred to colleges and universities nationwide, including Rutgers University, Rider University, The College of New Jersey, Drexel University, Temple University, and New York University. The Rutgers Business School has an additional articulation agreement for MCCC Honors students.

PROGRAM OUTCOMES

- Formulate an analytical and quantitative approach to problem solving;
- Demonstrate an understanding of the role of U.S. business in a globalized society;
- Acquire effective business communication skills, including computer literacy;
- Develop the foundation necessary to continue studies in fields such as economics, finance, accounting, management, marketing, and human resources;
- Use the economic way of thinking in everyday life.

Students may study full-time or part-time. Business Administration students who cannot attend on weekdays can complete their degree requirements with evening, weekend, and MercerOnline classes offered with Mercer's Flexible Learning option (see page 11).

Many core courses required for the Business Administration degree are offered on weekends, most in an accelerated eight-week format. Students can accelerate their degree completion by taking two eight-week courses instead of one 15-week course during a semester. Students attending weekend classes on an accelerated basis along with night and distance learning courses could potentially finish their Business Administration degree within the same time frame as a full-time traditional student.

Admission to the Business Administration program requires a high school diploma or its equivalent. A strong background in mathematics is very helpful.

Students interested in pursuing a Supply Chain Management or Finance major at Rider University upon graduation from MCCC should consider the Rider/MCCC Dual Admissions program and consult their academic advisor or transfer counselor upon beginning the Business Administration program for requirements unique to Rider.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
BUS 107	Business Law I (3/0)	3
IST 101	Computer Concepts with Applications (2/2) OR[1]	3
IST 102	Computer Concepts with Programming (2/2)	
— —	Humanities general education elective	3
SECOND SEMESTER		
MAT 146	Pre-Calculus (4/0)[2]	4
ACC 111	Principles of Financial Accounting (4/0)	4
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
— —	Lab Science elective[3]	3
THIRD SEMESTER		
ACC 112	Principles of Managerial Accounting (4/0)	4
BUS 205	Business Statistics I (3/0)	3
BUS 210	Principles of Management	3
ECO 111	Macroeconomics (3/0)	3
MAT 151	Calculus I for the Mathematical and Physical Sciences (4/0)[4]	4
FOURTH SEMESTER		
BUS 206	Business Statistics II (3/0)	3
BUS 230	Global Environment of Business (3/0)	3
ECO 112	Microeconomics (3/0)	3
— —	General Education elective[5]	3
— —	General Education elective[5,6]	3
		63

[1] Select in consultation with an academic advisor and your intended transfer institution, which may require IST 102.

[2] Students who are not college-ready in mathematics should meet with an advisor to develop an academic plan no later than the first semester. Math classes in preparation for MAT 146 should be taken as soon as possible. Preparatory courses, including MAT 135, cannot be applied as general education electives.

[3] BIO 114 not acceptable. Select in consultation with an academic advisor and your intended transfer institution.

[4] Consult your intended transfer institution to determine if MAT 149 is an acceptable substitute.

[5] Select courses – other than any MAT (mathematics) course or ECO 103 – from at least two of the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[6] BUS 218, 244, or MKT 101 may be taken in place of this general education elective.

NOTE: Rutgers Business School - New Brunswick requires IST 102 and MAT 151.

† Some exemptions apply. Consult academic advisor for details. Enrollment in a CSW 100 class designated for business students is preferred.

Business Administration students who would like to pursue future studies in international business should consider the Business Administration concentration in **Global Business** (BUS.ADM.GLB.AS). This option enables students to tailor their general education electives toward international topics.

Since completion of this curriculum demonstrates commitment to an international business specialization, students pursuing this concentration have an advantage when applying to a four-year international business program. A.S. degree coursework emphasizing the issues of a globalized world provides students with the necessary foundation to pursue further studies in international business at a four-year institution.

Concentration Curriculum

Global Business

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
— —	World Language elective[1]	3
— —	General Education elective[2]	3
SECOND SEMESTER		
BUS 230	Global Environment of Business (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)	4
— —	Lab Science elective	3
— —	World Language elective[1]	3
THIRD SEMESTER		
ACC 111	Principles of Financial Accounting (4/0)	4
BUS 205	Business Statistics I (3/0)	3
ECO 111	Macroeconomics (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	
	OR	3
IST 102	Computer Concepts with Programming (2/2)	
MAT 151	Calculus I for the Mathematical and Physical Sciences (4/0)	
	OR	4
MAT 149	Calculus (4/0)	
FOURTH SEMESTER		
ACC 112	Principles of Managerial Accounting (4/0)	4
BUS 206	Business Statistics II (3/0)	3
ECO 112	Microeconomics (3/0)	3
— —	General Education elective[2]	3
— —	General Education elective[3]	3
		63

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] It is highly recommended that both electives be in the same language.

[2] Select from the following:

Historical Perspective

HIS 101	Western Civilization to 1648
HIS 102	Western Civilization Since 1648
HIS 112	World History to 1500
HIS 113	World History Since 1500
HIS 218	History of Latin America

Humanities

ENG 203	World Literature I
ENG 204	World Literature II
ENG 214	Literature of the East
REL 102	Living World Religions

[3] Select from the following:

Diversity and Global Perspective

GEO 102	Cultural Geography
HOS 115	Food and Culture
POL 201	International Relations
REL 102	Living World Religions

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Students intending to pursue their bachelor's degree in sports management should consider Business Administration with a concentration in **Sports Management** (BUS.ADM.SPRTS.AS), completing a degree program that includes courses in accounting, management, marketing, economics, and computer applications.

PROGRAM OUTCOMES

- Demonstrate critical thinking and problem-solving skills;
- Demonstrate knowledge of technology and its use in sports management;
- Demonstrate a concern for the societal issues involved in sports management;
- Demonstrate knowledge of management, legal issues, and sports marketing.

Concentration Curriculum

Sports Management

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BUS 107	Business Law (3/0)[1]	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	
	OR	3
IST 102	Computer Concepts with Programming (2/2)	
SECOND SEMESTER		
ACC 111	Principles of Financial Accounting (4/0)	4
BUS 210	Principles of Management (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)	4
PSY 101	Introduction to Psychology (3/0)	3
THIRD SEMESTER		
ACC 112	Principles of Managerial Accounting (4/0)	4
BUS 102	Introduction to Sports Management (3/0)	3
ECO 111	Macroeconomics (3/0)	3
MKT 101	Principles of Marketing (3/0)	3
— —	Lab Science general education elective[2]	3
FOURTH SEMESTER		
BUS 205	Business Statistics I (3/0)	3
ECO 112	Microeconomics (3/0)	3
MKT 106	Sports Marketing (3/0)	3
SOC 101	Introduction to Sociology (3/0)	3
— —	Humanities general education elective	3
		62

[1] BUS 111 is an acceptable alternative.

[2] Select from the course categories of BIO, CHE, or PHY.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Upon beginning this program, students planning to transfer to the Rutgers University Sports Management program should consult their academic advisor or transfer counselor for requirements unique to Rutgers.

Business Studies

Associate in Applied Science Degree in Business Management

Programs **BUS.STUD.AAS** **BUS.STUD.SYST.AAS**
CIP 520101 **BUS.STUD.ENTR.AAS**
BUS.STUD.MGMT.AAS
BUS.STUD.SFTW.AAS

Business Studies, a career and non-transferable degree program, provides opportunities for students to prepare for a wide variety of careers in business.

Students have the option of pursuing a general degree in Business Studies or selecting one of four concentrations, each comprised of 15 credits and designed to prepare students for specialty areas: Business Systems, Entrepreneurship, Management, Software Professional. Students should contact the program coordinator for advisement.

PROGRAM OUTCOMES

- Use effective verbal and written communication in conducting business;
- Analyze/resolve problems common to entry-level business positions;
- Apply management skills in a variety of business functions;
- Comprehend how the global economy and international events affect domestic and international business decisions;
- Understand basic accounting statements and their role in managing a business;
- Identify unethical behavior in a business setting and formulate appropriate action;
- Understand, analyze, and discuss current economic events and problems;
- Acquire computer literacy and exposure to hardware, software, networking, databases, and ethical issues;
- Apply financial concepts and tools to achieve personal goals.

Students may study full-time or part-time. Admission to the Business Studies program requires a high school diploma.

Business Studies students interested in pursuing bachelor's degree studies in labor or management should consider the Rutgers School of Labor and Management program on the MCCC campus.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BUS 101	Introduction to Business (3/0)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)[1]	3-4
SECOND SEMESTER		
ACC 106	Office Accounting I (3/0)	
	OR	3-4
ACC 111	Principles of Financial Accounting (4/0)	
BUS 209	Business Communications (3/0)	3
BUS 210	Principles of Management (3/0)	3
BUS 230	Global Environment of Business (3/0)	3
ENG 102	English Composition II (3/0)	3
— —	General Education elective[2]	3
THIRD SEMESTER		
BUS 109	Personal Finance (3/0)	3
ECO 103	Basic Economics (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	
	OR	3
IST 140	Internet and Computer Technology (2/2)	
— —	General Education elective[2]	3
— —	**Concentration/Business elective**[3]	3
FOURTH SEMESTER		
— —	**Concentration/Business elective**[3]	3
— —	**Concentration/Business elective**[3]	3
— —	**Concentration/Business elective**[3]	3
— —	**Concentration/Business elective**[3]	3
BUS 225	Employee Motivation and Leadership (3/0)	
	OR[4]	3
BUS 239	Entrepreneurship (3/0)	
		62-64

[1] MAT 135 or 140 are acceptable alternatives.

[2] Select course from the following general education categories: Social Science, Humanities, Diversity and Global Perspective.

[3] If pursuing a general degree in Business Studies, choose five business electives from the list below.

If pursuing a Business Studies concentration, select at least four electives from either the Business Systems, Entrepreneurship, Management, or Software Professional concentrations (see facing page) and one of the following courses for a total of five business electives.

ACC 207; BUS 105, 107, 128, 202, 225, 239, 240; CIS 112, 173, 175, 182; IST 140; MKT 101, 230; NET 102, 103, 104; OST 219

[4] Capstone course, to be taken as final course in the curriculum.

†Some exemptions apply. Consult academic advisor for details. Enrollment in a CSW 100 class designated for business students is preferred.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

The **Business Systems** concentration (BUS.STUD.SYST.AAS) prepares students for positions as help desk specialists, general office managers, or PC systems administrators in small to mid-sized firms. Students focus their degree based on individual professional needs, building upon the competencies gained from the general Business Studies program.

Concentration			
Business Systems (electives)			
CIS	173	PC Applications: Database (2/2)	3
CIS	175	PC Applications: Spreadsheets (2/2)	3
NET	102	Introduction to PC Hardware and Software (2/3)	3
NET	103	IT Essentials (2/3)	3
NET	104	Fundamentals of Computer Networks (2/2)	3

The **Entrepreneurship** concentration (BUS.STUD.ENTR.AAS) prepares students to own a small business. Students interested in forming their own enterprise, taking on a franchise, or purchasing an existing small business would benefit from this concentration, building upon the competencies gained from the general Business Studies program.

Concentration			
Entrepreneurship (electives)			
ACC	207	Computerized Accounting (2/2)	3
BUS	107	Business Law (3/0)	3
BUS	202	Consumer Orientation (3/0)	3
BUS	239	Entrepreneurship (3/0)	3
MKT	101	Principles of Marketing (3/0)	3

The **Management** concentration (BUS.STUD.MGMT.AAS) prepares students for positions as general office managers, retail sales managers, or supervisors in mid- to large-sized firms. Students focus their degree based on individual professional needs, building upon the competencies gained from the general Business Studies program.

Concentration			
Management (electives)			
BUS	107	Business Law (3/0)	3
BUS	202	Consumer Orientation (3/0)	3
BUS	225	Employee Motivation and Leadership (3/0)	3
BUS	240	Human Resource Management (3/0)	3
MKT	101	Principles of Marketing (3/0)	3
MKT	230	Principles of Retailing (3/0)	3

The **Software Professional** concentration (BUS.STUD.SFTW.AAS) prepares students for entry-level positions as general office managers, administrative professionals, executive assistants, office support staff, or supervisors in small to mid-sized firms. Students focus their degree based on individual professional needs, building upon the competencies gained from the general Business Studies program.

Concentration			
Software Professional (electives)			
CIS	173	PC Applications: Database (2/2)	3
CIS	175	PC Applications: Spreadsheets (2/2)	3
CIS	182	PC Applications: Presentations (2/2)	3
IST	140	Internet and Computer Technology (2/2)	3
OST	219	Word Processing Concepts and Applications (2/2)	3

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Catering Management

Certificate of Proficiency

Program **CATER.MGMT.CERT**
CIP 120504

The Catering Management Certificate of Proficiency prepares individuals to operate their own catering/banquet business and to work effectively in the profession. Graduates have skills to coordinate the various culinary, artistic and business activities required to be successful in the catering industry. The program enables students to create successful menus for their customers, together with the ability to purchase and price supplies and services profitably.

Admission to the program requires a high school diploma or its equivalent.

PROGRAM OUTCOMES

- Demonstrate a wide variety of culinary skills;
- Develop cost-effective, customer-accepted menus;
- Plan and organize a catered activity;
- Apply safe and sanitary practices in preparing and serving culinary creations;
- Assess the needs of and have the ability to purchase food and non-food supplies for the catering operation;
- Practice legal and financial management aspects of catering;
- Create high-quality food products with artistic designs;
- Prepare a feasibility study and business plan;
- Demonstrate management and organizational skills.

Curriculum

Code	Course (lecture/lab hours)	Credits
ACC 111	Principles of Financial Accounting (4/0)	4
BUS 239	Entrepreneurship (3/0)	3
ENG 101	English Composition I (3/0)	3
HOS 100	Hospitality Success Skills (1/0)	1
HOS 101	Food Preparation I (1/4)	3
HOS 102	Food Preparation II (1/4)	3
HOS 115	Food and Culture (2/2)	3
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 204	Hospitality Marketing (3/0)	3
HOS 205	Menu Planning/Costing and Design (2/0)	2
HOS 208	Hospitality Law (3/0)	3
HOS 209	Garde Manger (1/4) OR	3
HOS 109	Advanced Culinary Arts (1/4)	
HOS 290	Internship in Hotel, Restaurant, and Institution Management (1/0 + internship)	2
		35

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Chemistry

Program **CHEM.AS**
CIP 240101

Associate in Science Degree in Liberal Arts and Sciences

The Chemistry option of the Liberal Arts and Sciences program prepares students for transfer into baccalaureate programs leading to careers in fields such as pharmaceuticals, industrial chemistry, chemical engineering, chemical sales and service, environmental technology, food science, medicine, and education.

Chemistry graduates have transferred to institutions throughout the region, including Rutgers University, Rider University, The College of New Jersey, Temple University, Rowan University, and more. Graduates earning a four-year degree have secured employment in local laboratories including those of Bristol-Myers Squibb, Johnson & Johnson, New Jersey State Police, Medical Diagnostics Laboratory (MDL), Genesis Biotechnology Group (GBG), and elsewhere.

Students routinely use electronic balances; IR, UV, visible and NMR spectrophotometers; pH meters; GC; calorimeters; lasers; and other electronic devices in the laboratory. Computer applications for data collection and analysis are introduced in the General Chemistry sequence. Other software packages assist students with the mastery of concepts and problem-solving skills.

Second-year courses introduce specialized instrumentation for chromatographic separations and spectroscopic identification of compounds using gas chromatographs and infrared spectrophotometer. MCCC and Rider University are principal partners in a National Science Foundation project to give Mercer students Internet access to Rider's 300Mz FT-NMR for spectral analyses. An honors sequence allows students to conduct research under the supervision of Rider University or Princeton University faculty as well as at other research institutions.

PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamental principles, concepts, and terminology of chemistry;
- Develop a working knowledge of chemical principles and methods including problem solving, analytical reasoning, and laboratory skills;
- Utilize critical thinking, qualitative, and quantitative reasoning skills to organize, evaluate, and interpret data, expressing the results in a clearly written laboratory report or oral presentation;
- Conduct literature searches and communicate findings orally and in writing;
- Plan, execute, and interpret an experiment according to the Scientific Method using proper scientific and laboratory safety procedures and maintaining an accurate and complete laboratory notebook.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
CHE 101	General Chemistry I (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
— —	Technical elective[1]	4
— —	General Education elective[2]	3
SECOND SEMESTER		
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)	4
CHE 102	General Chemistry II (3/3)	4
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
— —	Technical elective[1]	4
THIRD SEMESTER		
CHE 201	Organic Chemistry I (3/4)	5
MAT —	Mathematics elective[3]	4
— —	Technical elective[1]	4
— —	General Education elective[2]	3
FOURTH SEMESTER		
CHE 202	Organic Chemistry II (3/4)	5
MAT —	Mathematics elective[3]	4
— —	Technical elective[1]	4
— —	General Education elective[2]	3
		66

[1] Select from approved list of CHE, BIO, MAT, PHY, and COS courses, available from Business & STEM division office or program coordinator.

[2] Select course from either Social Science or Humanities general education categories.

[3] Select from MAT 151, 152, 201, 251, 252.

†Some exemptions apply. Consult academic advisor for details.

NOTE: Chemistry majors must earn a minimum grade of C in all CHE courses.

Part-time evening study is encouraged for those who are currently employed. Course selection and program of study must be approved by an academic advisor.

Admission to the Chemistry option requires a high school diploma or equivalent with at least one year of science (biology, chemistry, or physics) and two years of academic mathematics. Students who complete the Chemistry option earn the Associate in Science degree in Liberal Arts and Sciences.

Civil Engineering Technology

Associate in Applied Science Degree

Program **ENGR.CIV.AAS**
CIP 150201

The Civil Engineering Technology program prepares students for employment in field and office positions with architects, engineers, and government agencies as engineering aides; construction, highway or materials technicians; transit operators; or estimators.

PROGRAM OUTCOMES

- Assist engineers in the preparation of designs for highways and for steel and concrete buildings and bridges;
- Function as a first-line supervisor at a construction site;
- Inspect highways during construction to ensure compliance with applicable specifications;
- Perform route/construction surveys using survey equipment and methods;
- Serve as a laboratory technician in the testing and analysis of various construction materials;
- Serve as a salesperson/technician in supplying construction materials;
- Prepare various construction and civil engineering drawings, both manually and with a computer-based drafting system.

MCCC is located near the central offices of many New Jersey governmental agencies. Graduates have found employment in county, state, and municipal departments of engineering and with many local civil engineering consultants. Cooperative education opportunities may be available.

Admission requires a high school diploma or its equivalent with one year of algebra. Students may study full-time or part-time, but some required courses may be offered only during evening hours.

Graduates wishing to pursue studies leading to a bachelor's degree can transfer into the junior year at many institutions. Temple University, New Jersey Institute of Technology (NJIT), Pennsylvania State University, and Fairleigh Dickinson University are among the institutions accepting Mercer graduates.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENT 116	Engineering Graphics (1/2)	2
DRA 190	Introduction to Computer-Aided Drafting (1/2)	2
ENG 101	English Composition I (3/0)	3
MAT —	Mathematics elective[1]	3-4
— —	Science elective[2]	3
SECOND SEMESTER		
CIV 101	Surveying I (2/3)	3
CIV 106	Mechanics (3/0)	3
ENG 112	English Composition II With Speech (3/0)	3
MAT —	Mathematics elective[1]	3-4
— —	Science elective[2]	3
THIRD SEMESTER		
CIV 223	Fluid Mechanics (3/3)	4
CIV 227	Structural Steel Design (2/3)	3
CIV 229	Mechanics of Materials (3/3)	4
— —	General Education elective[3]	3
— —	General Education elective[4]	3
FOURTH SEMESTER		
CIV 102	Surveying II (2/3)	3
CIV 228	Reinforced Concrete Design (2/3)	3
CIV 216	Highway Engineering (2/2)	3
IST 102	Computer Concepts with Programming (2/2) OR	3
IST 109	Introduction to Programming (2/2)	
— —	Technical elective[5]	2
— —	General Education elective[4]	3
		64-66

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Select in consultation with an academic advisor. Students must either have competence in trigonometry or be enrolled in MAT 115 when taking CIV 101. Students planning to earn a bachelor's degree should complete MAT 146 and 151.

[2] This requirement may be satisfied with PHY 111 plus one other Science general education elective. Students planning to earn a bachelor's degree should take PHY 101 and 102 to satisfy the requirement.

[3] Select course from either Social Science or Humanities general education categories.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[5] Select in consultation with an academic advisor.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Communication

Associate in Arts Degree in Liberal Arts and Sciences

Program **COMM.GEN.AA**
CIP 240101

The Communication program prepares students to transfer into a baccalaureate degree program. Designed to explore both theory and the development of practical skills, the core curriculum includes courses in oral communication, mass media, and media ethics as well as media production courses that introduce students to the creation process for audio and visual messages.

Students then choose electives that will further their interest of study. Choices to explore career paths in writing and communication processes are offered as well as courses in technical production.

PROGRAM OUTCOMES

- Analyze, evaluate, and critique the organizational design and delivery of all forms of communication;
- Create, develop, and synthesize messages that successfully deliver oral, electronic, and written communication to diverse multi-cultural audiences;
- Demonstrate effective techniques to manage communication anxiety and enhance message delivery through oral performance;
- Identify the nature and unique characteristics of intrapersonal, interpersonal, intercultural, group, organizational, and mass communication;
- Analyze, evaluate, and discuss the issues and ethical situations created by mediated messages.

Colleges and universities that students have transferred to include New York University, Rider University, The College of New Jersey, Fairleigh Dickinson University, Montclair State University, The University of Maryland, Rowan University, William Paterson University, Rutgers University, Temple University, and Syracuse University.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CMN 101	Mass Media (3/0)	3
CMN 141	Introduction to TV Production (2/2)	
	OR	3
CMN 151	Introduction to Radio (2/2)	
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
— —	Humanities general education elective	3
SECOND SEMESTER		
CMN 102	Media Issues and Ethics (3/0)	3
CMN 111	Speech: Human Communication (3/0)	
	OR[1]	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
MAT —	Mathematics elective[2]	3
— —	Social Science general education elective	3
THIRD SEMESTER		
CMN 214	Issues in Intercultural Communication in the U.S. (3/0)	
	OR	3
CMN 215	Communication and Gender (3/0)	
IST 101	Computer Concepts with Applications (2/2)	
	OR	
IST 102	Computer Concepts with Programming (3/0)	3
	OR	
COS 101	Introduction to Computer Science (3/0)	
CMN —	Communication elective[3]	3
ENG —	Humanities: Literature general education elective	3
HIS —	Historical Perspective general ed. elective	3
— —	Science elective[4]	3
FOURTH SEMESTER		
CMN —	Communication elective[3]	3
HIS —	Historical Perspective general ed. elective	3
MAT —	Mathematics elective[2]	
	OR	3
— —	Science elective[4]	
— —	Humanities: Aesthetic Appreciation general education elective	3
— —	Social Science general education elective	3
		62

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Unselected course may not be applied as a Communication (CMN) elective.

[2] Select any college-level MAT course. Students should consult the MAT requirements of their intended transfer institution.

[3] Select from **writing electives** CMN 131, 144, 161; **career-focused electives** CMN 122, 125, 131; **media and production electives** CMN 107, 141, 142, 146, 151, 153, 250; **general communication electives** CMN 201, 211, 214, 215.

[4] Select at least one general education science course (excluding BIO 114 and 115).

† Some exemptions apply. Consult academic advisor for details.

Students must earn a minimum grade of C in all ENG and CMN courses to graduate.

Communication: New Media

Program **COMM.MEDIA.AS**
CIP 240101

Associate in Science Degree in Liberal Arts and Sciences

The New Media program prepares students for the rapidly developing field that combines traditional media such as photography, film, music, and spoken and written word with the interactive power of computer and communications technology.

Students who have traditionally pursued courses of study in journalism, public relations, advertising, and communications will find that this program substantially prepares them to enter the work force or transfer to communications programs at four-year universities. Coursework emphasizes the convergence of audio/video, graphic design, photography, and writing.

PROGRAM OUTCOMES

- Analyze and break down elements of story across multiple platforms;
- Write clear and concise stories that are suitable for multiple platforms;
- Demonstrate technical proficiency with various video and DSLR cameras;
- Demonstrate technical proficiency in a variety of multimedia software;
- Analyze, evaluate, critique, and create all forms of communication;
- Articulate and analyze complex ethical questions related to the development of new media;
- Perform a series of thinking tasks including speculation, analysis, synthesis, and abstract reasoning;
- Create a portfolio of convergence media projects suitable for securing employment in a new media workplace.

Graduates wishing to pursue studies leading to a bachelor's degree can transfer into the junior year at many institutions. Rider University, Temple University, Rutgers, and Pennsylvania State University are among the institutions that have accepted Mercer graduates.

The program may be pursued part-time or full-time. Some courses are offered during the afternoon and early evening. Students are required to attend some day classes in order to complete the program. Admission requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CMN 101	Mass Media (3/0)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CMN 142	Intermediate TV Production (2/2)	3
ENG 101	English Composition I (3/0)	3
PHO 103	Digital Photography I (2/3)	3
SECOND SEMESTER		
ADV 101	Advertising Design I (1/4)	3
CMN 102	Media Issues and Ethics (3/0)	3
CMN 131	Journalism I (3/0)	3
CMN 146	Social Media Technologies (2/2)	3
MAT 120	Mathematics for Liberal Arts (3/0)	3
THIRD SEMESTER		
CMN 147	Introduction to Story (2/2)	3
CMN 153	Digital Audio Production I (2/2)	3
ENG 102	English Composition II (3/0)	3
HIS —	Historical Perspective general ed. elective	3
— —	Lab Science general education elective	3
— —	Science OR Technology elective	3
FOURTH SEMESTER		
CMN 214	Issues in Intercultural Communication in the U.S. (3/0)	
	OR	3
CMN 215	Communication and Gender (3/0)	
CMN 260	Convergence Newsroom (2/2)	3
DMA 145	Web Design I (1/4)	3
HPE 110	Concepts of Health and Fitness (1/2)†	2
— —	Humanities general education elective	3
— —	Social Science general education elective	3
		65

†**CSW 100 is a preferred alternative**; HPE 111 is an acceptable alternative.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Communication: Speech and Theatre

Program **COMM.SPCH.THR.AA**
CIP 240101

Associate in Arts Degree in Liberal Arts and Sciences

The Communication: Speech and Theatre option of the Liberal Arts and Sciences program prepares students to transfer as juniors into bachelor of arts programs in theatre, speech, and communication. The major offers students a creative edge in the marketable field of communication by exposing them to creative training in the performing arts.

Students planning careers in communications should choose elective subjects which best meet their educational needs. All students should determine the requirements of the institution to which they wish to transfer.

PROGRAM OUTCOMES

- Independently interpret dramatic literature for performance;
- Use a variety of acting, movement, and vocal techniques to craft a performance;
- Conduct research in preparation for performing a role or a prepared or extemporaneous speech;
- Work collaboratively with administrative, artistic, and production staff;
- Create successful auditions and/or interviews by preparing materials and exhibiting professional conduct;
- Develop communicative competencies in physical presentation, vocal variety techniques, and anxiety management skills to deliver prepared or extemporaneous speeches;
- Develop effective interpersonal and intrapersonal communication skills.

Successful graduates of the Communication: Speech and Theatre option customarily transfer to four-year institutions such as Temple University, Rider University, The College of New Jersey, and Rutgers University, among others.

The program may be pursued part- or full-time. Theatre courses are offered during the afternoon and early evening. Students are required to attend some day classes in order to complete the program. Admission requires a high school diploma or its equivalent.

Curriculum

Code		Course (lecture/lab hours)	Credits
FIRST SEMESTER			
CSW	100	College Success and Personal Wellness (2/0)†	2
ENG	101	English Composition I (3/0)	3
MAT	125	Elementary Statistics I (3/0)	3
THR	101	Introduction to Theatre (3/0)	3
THR	104	Fundamentals of Acting (2/2)	3
—	—	Social Science general education elective[1]	3
SECOND SEMESTER			
DAN	103	Modern Dance I (0/3)	2
ENG	102	English Composition II (3/0)	3
THR	105	Acting II: Principles of Characterization (2/2)	3
THR	210	Theatre History: Classical to Elizabethan (3/0)	3
HIS	—	Historical Perspective general ed. elective[2]	3
MAT	—	Mathematics elective[3]	3
THIRD SEMESTER			
CMN	101	Mass Media (3/0)	3
CMN	112	Public Speaking (3/0)	3
THR	212	Central Voices in World Drama (3/0)	3
HIS	—	Historical Perspective general ed. elective[2]	3
—	—	Social Science general education elective[1]	3
FOURTH SEMESTER			
CMN	141	Introduction to TV Production (2/2) OR	3
CMN	151	Introduction to Radio (2/2)	
DAN	101	Introduction to Dance and Culture (3/0)	3
THR	102	Stagecraft (2/2)	3
THR	217	Theatre Production (1/5)	3
—	—	Lab Science general education elective[4]	3
—	—	Technology general education elective[5]	3
			67

[1] ANT 101 and PSY 101 recommended.

[2] HIS 112 and 113 recommended.

[3] Select MAT 120 or 126 in consultation with an academic advisor.

[4] Select from among the course categories of BIO (excluding BIO 114 and 115), CHE, or PHY.

[5] IST 101 recommended.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students who forego the courses recommended above should select all other electives in consultation with an academic advisor in order to assure maximum transfer of credits.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Computer Information Systems

Associate in Science Degree in Information Systems
Certificate of Proficiency: Database Administration

Program **INFO.SYS.AS**
CIP 110201
Certificate **INFO.TECH.DB.CERT**
CIP 521201

The associate degree in Computer Information Systems, based on guidelines from the Association for Computing Machinery, prepares students for transfer to business- or technically-oriented four-year degree programs at the junior level.

Careers for graduates from related four-year degree programs include business application programmer, business process specialist, database administrator, information systems analyst, network engineer, and system sales associate.

PROGRAM OUTCOMES

- Transfer to a four-year college as a junior;
- Explain, interpret, and develop computer information policies and procedures;
- Create, edit, and use printed and online technical documentation and literature;
- Understand business organizations and practices, and the role of information technology in organizations;
- Develop, describe, understand, and apply network protocols and technology;
- Determine the feasibility of a computer information system, estimate its cost, and manage its implementation;
- Design, program, implement, and document a computer application or website to install and implement computer systems;
- Work effectively individually and in workgroups to install and implement information systems;
- Communicate in written documents and in oral presentations in technical or business settings.

Admission requires a high school diploma or equivalent, two years of high school algebra, geometry, and computer literacy. Applicants must demonstrate competency in English composition, reading and mathematics as determined by placement testing. Students who are required to complete foundations courses must plan their curriculum with an academic advisor.

Mercer County Community College has articulation agreements for Information Systems graduates to transfer to Drexel University, Fairleigh Dickinson University, and NJIT. Other institutions that students have successfully transferred to include Rider University, Penn State, The University of Maryland, and The University of Delaware.

The Database Administration certificate of proficiency teaches the skills to manage and maintain database management systems (DBMS) software and advanced functionalities of Microsoft Excel to support administrative decision-making, including mainstream products such as Oracle and Microsoft SQL Server. Students who demonstrate solid academic performance will be encouraged to complete the MCDBA core examination and Oracle certification exams.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
NET 102	Introduction to PC Hardware and Software (2/3)	3
IST —	Computer Concepts requirement (2/2)[1]	3
MAT —	Mathematics elective[2]	4
SECOND SEMESTER		
ACC 111	Financial Accounting (4/0)	4
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
— —	Programming elective[3]	3-4
THIRD SEMESTER		
COS 102	Computer Science I (3/2)	4
ECO 111	Macroeconomics (3/0)	3
IST 256	Systems Analysis (2/2)	3
— —	Lab Science elective[4]	3-4
— —	Social Science general education elective	3
FOURTH SEMESTER		
BUS 230	Global Environment of Business (3/0)	3
IST 251	Management of Computer Technology (2/2)	3
IST 253	Database Concepts (2/2)	
	OR	3
CIS 173	PC Applications: Database (2/2)	
— —	IST or NET elective (2/2)	3
— —	IST or NET elective (2/2)	3
— —	Humanities general education elective	3
		65-67

[1] Select from IST 101 or 102.

[2] Select from MAT 151 (preferred), 146.

[3] Select from COS 101; IST 107, 108, or (with IST 109 prerequisite) 123.

[4] PHY 101 or 111 recommended.

†Some exemptions apply. Consult academic advisor for details.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
IST 109	Introduction to Programming (2/2)	3
IST 222	PL/SQL Programming (2/2)	3
IST 250	Decision Support Using MS Excel (3/2)	4
IST 253	Database Concepts (2/2)	3
IST 260	SQL Server Database Design (3/2)	4
IST 261	SQL Server System Administration (3/2)	4
IST 262	Oracle SQL (3/2)[1]	4
IST 263	Database Administration I (3/2)[1]	4
IST 264	Database Administration II (3/2)[1]	4
		36

[1] Must be taken in sequence.

Computer Networking and Technology

Associate in Applied Science Degree in Information Technology
Certificate of Proficiency: Network Engineering Technology

Program **INFO.TECH.AAS**
CIP 110201
Certificate **INFO.TECH.NET.CERT**
CIP 521299

The Computer Networking and Technology associate degree and associated Network Engineering Technology certificate of proficiency, based on guidelines from the Association for Computing Machinery, prepare students for jobs that support computing in a networked environment. These include entry-level positions as PC technicians, network administrators, help desk specialists, technical support specialists, and customer service representatives. The A.A.S. degree may also prepare students for transfer to career-oriented B.S. degree programs in IT administration, network engineering, and computer system support.

PROGRAM OUTCOMES

- Pass industry certifications, including A+, NET+, Linux+, and Security+; Microsoft's MCTS, MCITP, MCSA, and MCSE; and Cisco's CCNA.
- Understand, configure, and install hardware and software, including Internet user software;
- Understand, describe, and apply network protocols and standards;
- Explain computing practices and procedures found in most organizations;
- Use printed and online technical documentation;
- Describe how the Internet works;
- Work effectively individually and in workgroups to install and implement information technology;
- Demonstrate written and oral communication skills.

Admission requires a high school diploma or its equivalent, one year of high school algebra, and computer literacy. Applicants must demonstrate competency in English composition, reading, and mathematics, as determined by placement testing. Students who are required to complete foundations courses must plan their curriculum with an academic advisor.

The A.A.S. in Computer Networking and Technology was not developed as a transfer curriculum; however, students have successfully transferred to, and completed bachelor's degrees at, several technically-oriented institutions including NJIT, Fairleigh Dickinson University, DeVry University, Drexel University, and Pierce College.

The Network Engineering Technology certificate of proficiency is intended to provide the technical material covered in the A.A.S. degree. Certificate coursework may be applied toward the A.A.S. degree.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
NET 102	Introduction to PC Hardware and Software (2/3)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
NET 120	Windows Desktop OS Administration (2/2)	3
IST —	Computer Concepts requirement (2/2)[1]	3
SECOND SEMESTER		
ENG 102	English Composition II (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)[2]	4
NET 103	IT Essentials (2/3)	3
NET 122	Windows Server OS Administration (2/2)	3
NET 130	Routing and Switching Essentials (2/2)	3
THIRD SEMESTER		
ECO 111	Macroeconomics (3/0)[3]	3
NET 124	Windows Network Infrastructure Admin. (2/2)	3
NET 212	Introduction to Linux (2/2)	3
NET 230	Scaling Networks (2/2)	3
NET 244	Network Defense and Countermeasures (2/2)	3
FOURTH SEMESTER		
BUS 230	Global Environment of Business (3/0)[4]	3
HPE 110	Concepts of Health and Fitness (1/2)†	2
NET 126	Windows Directory Service Administration (2/2)	3
NET 239	Connecting Networks (2/2)	3
NET 240	Network Security (2/2)	3
— —	General Education elective[5]	3
		63

[1] Select from IST 101, 102, or in consultation with an academic advisor.
[2] Students not intending to transfer may substitute a lower-level mathematics course.
[3] May be substituted with another Social Science general education elective.
[4] May be substituted with another Diversity and Global Perspective general education elective.
[5] Select course from either Social Science or Humanities general education categories.
†**CSW 100 is a preferred alternative**; HPE 111 is an acceptable alternative.

NOTE: In both the degree and certificate programs, one or more NET courses may be substituted with acceptable IST, CIS, COS, EET or SST courses, in consultation with an academic advisor.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
NET 102	Introduction to PC Hardware and Software (2/3)	3
NET 103	IT Essentials (2/3)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
NET 120	Windows Desktop OS Administration (2/2)	3
NET 122	Windows Server OS Administration (2/2)	3
NET 124	Windows Network Infrastructure Admin. (2/2)	3
NET 130	Routing and Switching Essentials (2/2)	3
NET 230	Scaling Networks (2/2)	3
NET 244	Network Defense and Countermeasures (2/2)	3
NET —	Program elective[1]	3
— —	General Education elective[2]	3
		36

[1] Select from NET 126, 212, 239, 240.
[2] Students intending to apply certificate coursework towards the A.A.S. degree should select a course from either Social Science, Humanities, or Diversity and Global Perspective general education categories, or MAT 135. (Students not intending to transfer may substitute a lower-level mathematics course.)

Computer Science

Associate in Science Degree in Liberal Arts and Sciences
Certificate of Proficiency

Program **CMPTR.SCI.AS**
CIP 240101
Certificate **CMPTR.SCI.CERT**
CIP 110101

The Computer Science programs serve two distinct groups of students. The Associate in Science degree option prepares graduates for transfer as juniors to colleges and universities offering baccalaureate majors in computer science, information systems, and related fields. Mercer has dual admission and articulation agreements with Rutgers University, The College of New Jersey, and New Jersey Institute of Technology (NJIT).

The Certificate of Proficiency program is designed for students who have previously completed degrees in mathematics, science, or engineering. Certificate students gain marketable programming skills which complement their previous academic study. In addition, the Certificate program satisfies many Computer Science master's degree "bridge" requirements.

PROGRAM OUTCOMES

- Apply the fundamental concepts and techniques of computation, algorithms, and software design to a specific problem in a variety of applied fields;
- Provide detailed specifications, analyze the problem, and design a solution that functions as desired, has satisfactory performance, is reliable and maintainable, and meets desired criteria;
- Apply a firm understanding in areas of mathematics and science;
- Discuss the societal implications of computer software.

Admission to the A.S. option requires a high school diploma or equivalent with four years of college-prep mathematics. One or more years of high school science is recommended. While acceptance may be granted for students not prepared to begin the mathematics sequence of courses at the calculus level, these students should begin the mathematics sequence at the level determined by placement test results.

A student must earn a grade of C or higher in core courses to progress in the program. Computer science, mathematics and lab science courses are considered to be curriculum core courses.

A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CMN 111	Speech: Human Communication (3/0)	3
COS 101	Introduction to Computer Science (3/2)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0)	4
SECOND SEMESTER		
COS 102	Computer Science I – Algorithms and Programming (3/2)	4
ENG 102	English Composition II (3/0)	3
MAT 152	Calculus II (4/0)	4
— —	Humanities general education elective	3
— —	Social Science general education elective	3
THIRD SEMESTER		
COS 231	Fundamentals of Computer Architecture and Assembly Language (3/2)	4
MAT 251	Calculus III (4/0) OR	4
MAT 201	Probability and Statistics for Science and Engineering (4/0)	
— —	Science elective[1]	4-5
— —	General Education elective[2]	3
FOURTH SEMESTER		
COS 204	Discrete Mathematical Structures (4/0)	4
COS 210	Computer Science II – Data Structures (3/2)	4
— —	Program elective[3]	3-4
— —	Science elective[1]	4
		63-65

[1] Choose from PHY 101 and 102; PHY 115 and 215; BIO 101 and 102; CHE 101 and 102.
[2] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.
[3] In consultation with an academic advisor, select from the course categories of COS, DMA, IST, or MAT.
† Some exemptions apply. Consult academic advisor for details.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0)	4
MAT 152	Calculus II (4/0)	4
COS 101	Introduction to Computer Science (3/2)	4
COS 102	Computer Science I – Algorithms and Programming (3/2)	4
COS 210	Computer Science II – Data Structures (3/2)	4
COS 231	Fundamentals of Computer Architecture and Assembly Language (3/2)	4
— —	Program elective[1]	3-4
		30-31

[1] In consultation with an academic advisor, select from the course categories of COS, DMA, IST, or MAT.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Criminal Justice

Corrections option*

Associate in Science Degree in Criminal Justice

Program **CRIM.CORR.AS**
CIP 430107

The Corrections option of the Criminal Justice program addresses the professional and educational needs of students interested in careers in corrections and of personnel already employed in the field who desire to increase their proficiency or to improve their professional career opportunities.

PROGRAM OUTCOMES

- Discuss the history and philosophy of the components of the criminal justice system;
- Discuss the role of the corrections officer in contemporary America;
- Compare and contrast historically the philosophies of rehabilitation and punishment;
- Describe both traditional and new practices being employed in correctional institutions.

Although some of the coursework is presented in the daytime, the complete option requires some evening attendance. Corrections may be pursued either full-time or part-time. During the sophomore year, cooperative education is available for students interested in the real-world application of corrections and criminal justice theory to the correctional system.

Admission to the Corrections option requires a high school diploma or equivalent and English competency as demonstrated by placement testing. Graduates of the State and County Basic Training Course of the New Jersey Correctional Staff Training Academy may receive nine credits of advanced standing in the Corrections option.

Applicants should be aware that institutions, agencies, and offices of the criminal justice system establish mental, physical, and character requirements. Persons interested in this option are advised to gain an awareness of the specific requirements for their desired work setting.

Graduates of this option have secured positions with county, state and federal correctional agencies, as well as probation and parole departments. Graduates have also gone on to pursue careers in social welfare, criminology, and law.

Students have transferred to such four-year institutions as The College of New Jersey, Temple University, John Jay College of Criminal Justice, and Rutgers University. To enable transfer to baccalaureate institutions without loss of credit and with full junior status, transfer agreements have been secured with John Jay College of Criminal Justice, Fairleigh Dickinson University, New Jersey City University and Richard Stockton College of New Jersey. Students interested in these opportunities should contact a Criminal Justice program advisor early in their coursework.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CRJ 101	Introduction to the Criminal Justice System (3/0)	3
CRJ 103	Introduction to Corrections (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
SOC 101	Introduction to Sociology (3/0) OR	3
SOC 107	Social Problems (3/0)	
SECOND SEMESTER		
CRJ 105	Criminology (3/0)	3
ENG 102	English Composition II (3/0)	3
HIS 101	History of Western Civilization to 1648 (3/0) OR	3
HIS 102	History of Western Civilization Since 1648 (3/0)	
PSY 101	Introduction to Psychology (3/0)	3
MAT —	Mathematics elective[1]	3-4
THIRD SEMESTER		
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
CRJ 212	Juvenile Justice (3/0)	3
SOC 209	Racial, Ethnic and Minority Groups (3/0)	3
HIS —	Historical Perspective general ed. elective	3
— —	Elective	3
FOURTH SEMESTER		
CRJ 211	Community Corrections (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
POL —	Political Science general education elective	3
— —	Science elective[2]	3
— —	Elective	3
— —	Elective	3
		62-63

[1] Select one from MAT 120, 125, 135, 140, or higher-level mathematics course.

[2] Select one from BIO 101, 113; CHE 101, 106; PHY 101, 111, 112.

† Some exemptions apply. Consult academic advisor for details.

**See also the Law Enforcement option.*

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Criminal Justice

Law Enforcement option*

Associate in Science Degree in Criminal Justice

Program **CRIM.LAW.AS**
CIP 430107

The Law Enforcement option of the Criminal Justice program caters to the professional and educational needs of students interested in careers in law enforcement and of current law enforcement personnel who desire to increase their proficiency or to improve their professional career opportunities.

PROGRAM OUTCOMES

- Discuss the history and philosophy of the components of the criminal justice system;
- Describe the formal and informal political and community structures that affect criminal justice agencies;
- Describe the fundamental concepts and principles of management and administration employed in various police agencies;
- Discuss the roles of various criminal justice professionals.

Although some of the coursework is presented during the day, the complete option requires some evening attendance. The option may be pursued either full-time or part-time. During the sophomore year, cooperative education is available for students interested in the realistic application of law enforcement and criminal justice theory to the criminal justice system.

Admission to Law Enforcement requires a high school diploma or equivalent and English competency as demonstrated by placement testing. Graduates of the Basic Course for Police Officers may receive 12 credits of advanced standing in the Law Enforcement option.

Applicants should be aware that institutions, agencies, and offices of the criminal justice system establish mental, physical, and character requirements. Persons interested in this option are advised to gain an awareness of the specific requirements for their desired work setting.

Graduates of this option have secured positions with city, county, state, and federal law enforcement agencies as well as private security organizations. Graduates have also gone on to pursue careers in law, criminology, and social welfare.

Students have transferred to various baccalaureate institutions such as The College of New Jersey, Temple University, John Jay College of Criminal Justice, and Rutgers University. Transfer agreements with John Jay College of Criminal Justice, Fairleigh Dickinson University, New Jersey City University, and Richard Stockton College of New Jersey help graduates transfer to those institutions with little or no loss of credit and with full junior status. Students interested in transferring should contact a Criminal Justice program advisor early in their coursework.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CRJ 101	Introduction to the Criminal Justice System (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
HIS 101	History of Western Civilization to 1648 (3/0) OR	3
HIS 102	History of Western Civilization Since 1648 (3/0)	
SOC 101	Introduction to Sociology (3/0) OR	3
SOC 107	Social Problems (3/0)	
SECOND SEMESTER		
CRJ 105	Criminology (3/0)	3
ENG 102	English Composition II (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
HIS —	Historical Perspective general ed. elective	3
MAT —	Mathematics elective[1]	3-4
THIRD SEMESTER		
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
CRJ 202	Criminal Law (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
— —	Science elective[2]	3
— —	Elective	3
FOURTH SEMESTER		
CRJ 102	Police in the Community (3/0)	3
CRJ 206	Police Administration (3/0)	3
CRJ —	Criminal Justice elective[3]	3
POL —	Political Science general education elective	3
— —	Elective	3
— —	Elective	3
		62-63

[1] Select one from MAT 120, 125, 135, 140, or higher-level mathematics course.

[2] Select one from BIO 101, 113; CHE 101, 106; PHY 101, 111, 112.

[3] Select one from CRJ 103, 104, 207, 211, 212.

† Some exemptions apply. Consult academic advisor for details.

**See also the Corrections option.*

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Culinology / Food Science

Program **CULIN.AS**
CIP 520905

Associate in Science Degree

Students who complete the degree requirements will be eligible to transfer to Rutgers University to pursue a baccalaureate degree in Interdisciplinary Food Science.

Culinology™ refers to the blending of the disciplines of food science and culinary arts. The term is a trademark of the Research Chefs Association, which has approved MCCC's program (one of only a handful in the nation). By combining the knowledge of basic science with the creativity of culinary arts, students develop a skill set that will enable them to contribute to the creative development of new food products and flavors.

PROGRAM OUTCOMES

- Apply practical culinary techniques that stress creativity and innovation with respect to flavor and texture in food production;
- Create high-quality food products with artistic designs;
- Develop high-quality, consumer-driven menu items;
- Demonstrate proficiency in the culinary arts, including menu and recipe development;
- Critique menu items based upon flavor profile and objective criteria;
- Apply scientific data collection and analysis skills;
- Employ safe and sanitary practices within any food production department.

Students are encouraged to become a member of the Research Chefs Association and work toward becoming a Certified Research Chef. A career in this field can be in the research and development of food, beverage products, new tastes and flavors, and new ways to store manufactured foods.

Admission requires a high school diploma or its equivalent and completion of pre-calculus mathematics. To be admitted to the program, the applicant must demonstrate competency in English, reading, and mathematics as determined by placement testing. Individuals who do not meet these admission requirements should plan a preparatory program with a faculty advisor.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
HOS 101	Food Preparation I (1/4)	3
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 217	Professional Baking I (1/4)	3
MAT 151	Calculus I (4/0)[1]	4
SECOND SEMESTER		
BIO 101	General Biology I (3/3)	4
ENG 102	English Composition II (3/0)	3
HOS 102	Food Preparation II (1/4)	3
HOS 109	Advanced Culinary Arts (1/4)	3
HOS 115	Food and Culture (2/2)	3
THIRD SEMESTER		
BIO 102	General Biology II (3/3)	4
CHE 101	General Chemistry I (3/3)	4
CMN 112	Public Speaking (3/0)	3
HOS 209	Garde Manger (1/4)	
	OR	
HOS 218	Professional Baking II (1/4)	3
	OR	
HOS 116	Techniques of Healthy Cooking (1/4)	
HOS 230	Experimental Kitchen (1/3)	2
FOURTH SEMESTER		
CHE 102	General Chemistry II (3/3)	4
PHY 101	College Physics I (3/3)	4
PSY 101	Introduction to Psychology (3/0)	
	OR	
ECO 111	Macroeconomics (3/0)	3
	OR	
ECO 112	Microeconomics (3/0)	
— —	Humanities general education elective	3
		63

[1] Students who do not place at this mathematics level must meet with their program advisor to develop an academic plan.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Culinary Arts

Associate in Applied Science Degree

Programs **CULA.AAS**
CULA.PASTRY.AAS
CIP 120503

The Culinary Arts program provides training for students who wish to pursue a career in the food service industry as a professional chef or pastry chef. The core curriculum is comprised of 50 credits of general education and hospitality foundation courses, while each of the two concentrations – in **Culinary Arts** (CULA.AAS) and **Pastry Arts** (CULA.PASTRY.AAS) – is comprised of 16 credits that focus on advanced courses in the specialty area selected.

Students in either concentration will demonstrate proficiency in culinary skills and techniques that include the principles and processes of cooking and baking, proper use of knives, food presentation, menu development, and food safety and sanitation.

PROGRAM OUTCOMES

- Demonstrate proficiency in a variety of professionally recognized culinary skills;
- Work in any production or food preparation station within a food service department;
- Use safe and sanitary practices within any food production department;
- Create appropriate menus and recipes;
- Purchase products needed by the food service organization;
- Design and plan buffets and food-related activities and functions;
- Demonstrate professional written and verbal communication and computational skills;
- Effectively supervise and train kitchen personnel;
- Demonstrate a working knowledge of advanced culinary and pastry techniques and methodologies.

Students who complete the Culinary Arts program will be qualified to work in a variety of food service positions and settings, including restaurants, hotels, catering facilities, corporate dining facilities, healthcare food operations, and resorts. Those who complete the Pastry Arts concentration will be qualified for positions in hotels, fine dining restaurants and clubs, as well as a variety of positions with retail and wholesale bakeries.

Graduates of this A.A.S. program also would be eligible to transfer to Fairleigh Dickinson University to pursue a Bachelor of Arts in Individualized Studies offered through the University's Petrocelli College of Continuing Studies. Students may also transfer to Johnson & Wales University, where many credits will be accepted. Other transfer opportunities are being developed.

Admission to the program requires, at minimum, a high school diploma or its equivalent.

Curriculum

Culinary Arts Concentration

Code	Course (lecture/studio hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
HOS 101	Food Preparation I (1/4)	3
HOS 111	Culinary Math (1/0)	1
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 217	Professional Baking I (1/4)	3
MAT 120	Mathematics for Liberal Arts (3/0)	3
SECOND SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
HOS 102	Food Preparation II (1/4)	3
HOS 109	Advanced Culinary Arts (1/4)	3
HOS 185	Table Service (1/3)	2
HOS 231	Meat, Poultry and Fish Fabrication (0/1)	1
HOS 291	Internship (1/0 + internship)[1]	2
SUMMER or WINTER SESSION		
HOS 110	Breakfast/Pantry (1/3)	2
THIRD SEMESTER		
HOS 116	Techniques of Healthy Cooking (1/4)	3
HOS 203	Hospitality Purchasing (3/0)	3
HOS 209	Garde Manger (1/4)	3
HOS 210	Applied Kitchen Skills – Cafe (1/3)	2
HOS 235	American Regional Cuisine (1/3)	2
IST 101	Computer Concepts with Applications (2/2)	3
FOURTH SEMESTER		
HOS 115	Food and Culture (2/2)	3
HOS 205	Menu Planning/Costing and Design (2/0)	2
HOS 230	Experimental Kitchen (1/3)	2
HOS 240	Classical Cuisine / Advanced International (1/3)	2
HOS 251	Culinary Arts Practicum (1/2)	2
— —	General Education elective[2]	3
— —	General Education elective[3]	3
		66

[1] Typically taken during the Summer session between the program's first and second years. Alternatively, may be taken in the third or fourth semester.

[2] Select course from the following general education categories: Social Science, Humanities, Historical Perspective.

[3] Select course from the footnote #2 categories, or from the Diversity and Global Perspective category.

†Some exemptions apply. Consult academic advisor for details.

Curriculum

Pastry Arts Concentration

Code	Course (lecture/studio hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
HOS 101	Food Preparation I (1/4)	3
HOS 111	Culinary Math (1/0)	1
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 217	Professional Baking I (1/4)	3
MAT 120	Mathematics for Liberal Arts (3/0)	3
SECOND SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
HOS 102	Food Preparation II (1/4)	3
HOS 218	Professional Baking II (1/4)	3
HOS 291	Internship (1/0 + internship)[1]	2
IST 101	Computer Concepts with Applications (2/2)	3
SUMMER or WINTER SESSION		
HOS 110	Breakfast/Pantry (1/3)	2
THIRD SEMESTER		
HOS 116	Techniques of Healthy Cooking (1/4)	3
HOS 203	Hospitality Purchasing (3/0)	3
HOS 219	Professional Baking III (1/3)	2
HOS 230	Experimental Kitchen (1/3)	2
HOS 239	Restaurant Desserts (1/3)	2
HOS 246	Artisanal Breads (1/3)	2
— —	General Education elective[2]	3
FOURTH SEMESTER		
HOS 115	Food and Culture (2/2)	3
HOS 205	Menu Planning/Costing and Design (2/0)	2
HOS 245	Chocolates and Confections / Retail Bakeshop (1/4)	3
HOS 249	Advanced Pastry (1/3)	2
HOS 250	Pastry Arts Practicum (1/2)	2
— —	General Education elective[3]	3
		65

[1] Typically taken during the Summer session between the program's first and second years. Alternatively, may be taken in the third or fourth semester.

[2] Select course from the following general education categories: Social Science, Humanities, Historical Perspective.

[3] Select course from the footnote #2 categories, or from the Diversity and Global Perspective category.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Cybersecurity

Program **CYBERSECURITY.AAS**
CIP 111003

Associate in Applied Science Degree in Information Technology

The Cybersecurity associate degree prepares students for jobs protecting computer systems and networks against cyber threats such as viruses, spyware, and intrusion by hackers. These professionals design, install, and manage network control tools and other security mechanisms that protect computer systems from unauthorized access or data loss. Part prevention and part critical response, Cybersecurity supports careers such as network security specialist, security administrator, and network security support engineer.

PROGRAM OUTCOMES

- Describe the elements of information security, including possible threats and attack vectors as well as the motives, goals, and objectives of information security attacks;
- Explain what steps can be taken to secure a system, and provide secure network management and reporting;
- Secure routers and switches and their associated networks, including installing, troubleshooting, and monitoring network devices to maintain integrity, confidentiality, and availability of data and devices;
- Prevent common security threats, including implementing firewall and VPN technologies and perimeter defenses, conducting vulnerability and penetration testing, and scanning networked systems;
- Describe the security weaknesses inherent in wireless networks, and implement solutions to address them;
- Use printed and online technical documentation, and demonstrate written and oral communication skills;
- Work effectively individually and in workgroups to install and implement information security technology;
- Pass industry certifications, including CompTIA's Security+; EC-Council's CEH (Certified Ethical Hacker); and Cisco's CCENT, CCNA, and CCNA: Security.

Admission to the program requires a high school diploma or its equivalent, one year of high school algebra, and computer literacy. Applicants must demonstrate competency in English composition, reading, and mathematics, as determined by placement testing. Students who are required to complete foundations courses must plan their curriculum with an academic advisor.

The A.A.S. in Cybersecurity was not developed as a transfer curriculum; however, students have successfully transferred to, and completed bachelor's degrees at, several technically-oriented institutions including NJIT, Fairleigh Dickinson University, DeVry University, Drexel University, and Pierce College.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
NET 102	Introduction to PC Hardware and Software (2/3)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
NET 120	Windows Desktop OS Administration (2/2)	3
IST —	Computer Concepts requirement (2/2)[1]	3
SECOND SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
MAT 125	Elementary Statistics I (3/0)[2]	3
NET 103	IT Essentials (2/3)	3
NET 122	Windows Server OS Administration (2/2)	3
NET 130	Routing and Switching Essentials (2/2)	3
THIRD SEMESTER		
ECO 111	Macroeconomics (3/0)[3]	3
NET 212	Introduction to Linux (2/2)	3
NET 230	Scaling Networks (2/2)	3
NET 239	Connecting Networks (2/2)	3
NET 240	Network Security (2/2)	3
FOURTH SEMESTER		
BUS 230	Global Environment of Business (3/0)[4]	3
NET 244	Network Defense and Countermeasures (2/2)	3
NET 245	Ethical Hacking (2/2)	3
NET 246	Wireless Security (2/2)	3
NET 298	Information Security Capstone (0/2)	2
PHI 204	Ethics (3/0)[5]	3
		64

[1] Select from IST 101, 102, or in consultation with an academic advisor.

[2] Students intending to transfer should substitute a higher-level mathematics course. Select in consultation with an academic advisor.

[3] May be substituted with another Social Science general education elective.

[4] May be substituted with another Diversity and Global Perspective general education elective.

[5] May be substituted with another Humanities or Social Science general education elective.

† Some exemptions apply. Consult academic advisor for details.

NOTE: One or more NET courses may be substituted with acceptable IST, CIS, COS, EET or SST courses, in consultation with an academic advisor.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Dance

Associate in Arts Degree in Liberal Arts and Sciences
Associate in Fine Arts Degree in Performing Arts

Programs **DAN.AA**
DAN.AFA
CIP 500101

The Dance program offers rounded and intensive study of jazz, ballet, and modern technique. Students also receive training in choreography and perform in student-driven projects as well as the Mercer Dance Ensemble (M.D.E.), Mercer County's own dance company.

The program offers two degree options, A.A. or A.F.A., both of which combine conservatory training in the performing arts with academic education in the liberal arts. The A.A. allows students to transfer as juniors into bachelor of arts programs. The A.F.A. includes additional training in performing arts and prepares students for work as well as further study in the field.

PROGRAM OUTCOMES

- Master the physical discipline and time investment necessary to carry out professional concerts;
- Choreograph independently to create their own dances;
- Work collaboratively with artistic and production staff;
- Create successful auditions by preparing materials and exhibiting professional conduct.

Graduates have transferred to four-year institutions including Rider University, George Mason University, Montclair State University, and Rutgers University Mason Gross School of the Arts, among others. Dance program students have also gone on to perform with Tsunami Productions, Nicholas Rodriguez and Company, Six Flags Great Adventure, and Sesame Street Live.

The program may be pursued part- or full-time. Dance courses are offered during the morning and afternoon. Students are required to attend some evening classes in order to complete the program. Admission requires a high school diploma or its equivalent.

Curriculum

Associate in Arts degree

Code	Course (lecture/studio hours)	Credits
CMN 112	Public Speaking (3/0)	3
DAN 101	Introduction to Dance and Culture (3/0)	3
DAN 116	Studio Dance Technique I (0/6)	3
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)	3
MUS 103	Introduction to Music (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
DAN 117	Studio Dance Technique II (0/6)	3
DAN 120	Choreography I (2/2)	3
ENG 102	English Composition II (3/0)	3
THR 101	Introduction to Theatre (3/0)	3
HIS —	Historical Perspective general ed. elective[1]	3
BIO 106	Human Anatomy (3/2)	4
DAN 118	Studio Dance Technique III (0/6)	3
THR 212	Central Voices in World Drama	3
VPA 228	Artistic Collaboration Workshop (2/2)	3
MAT —	Mathematics elective[2]	3
— —	Technology general education elective[3]	3
DAN 113	Modern Dance II (1/2)	2
DAN 119	Studio Dance Technique IV (0/6)	3
HIS —	Historical Perspective general ed. elective[1]	3
— —	Social Science general education elective[4]	3
— —	Social Science general education elective[4]	3
		68

[1] HIS 112 and 113 recommended.

[2] Select MAT 120 or 126 in consultation with an academic advisor.

[3] IST 101 recommended.

[4] ANT 101 and PSY 101 recommended.

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students who forego the courses recommended above should select all other electives in consultation with an academic advisor in order to assure maximum transfer of credits.

Curriculum

Associate in Fine Arts degree

Code	Course (lecture/studio hours)	Credits
CMN 112	Public Speaking (3/0)	3
DAN 101	Introduction to Dance and Culture (3/0)	3
DAN 112	Ballet II (1/2)	2
DAN 116	Studio Dance Technique I (0/6)	3
ENG 101	English Composition I (3/0)	3
MUS 103	Introduction to Music (3/0)	3
BIO 106	Human Anatomy (3/2)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
DAN 117	Studio Dance Technique II (0/6)	3
DAN 120	Choreography I (2/2)	3
ENG 102	English Composition II (3/0)	3
THR 101	Introduction to Theatre (3/0)	3
DAN 118	Studio Dance Technique III (0/6)	3
DAN 285	Special Studies: Dance	3
THR 104	Fundamentals of Acting (2/2)	3
VPA 228	Artistic Collaboration Workshop (2/2)	3
— —	Social Science general education elective[1]	3
DAN 113	Modern Dance II (1/2)	2
DAN 115	Jazz Dance II (1/2)	2
DAN 119	Studio Dance Technique IV (0/6)	3
MAT 125	Elementary Statistics I (3/0)	3
THR 105	Acting II: Principles of Characterization (2/2)	3
HIS —	Historical Perspective general ed. elective[2]	3
		66

[1] ANT 101 or PSY 101 recommended.

[2] HIS 112 recommended.

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students who forego the courses recommended above should select all other electives in consultation with an academic advisor in order to assure maximum transfer of credits.

Digital Media Arts

Associate in Applied Science Degree in Visual Arts

Programs **DMA.3D.AAS**
DMA.WEB.AAS
DMA.MULT.AAS
CIP 500402

The Digital Media Arts A.A.S. option of the Visual Arts program prepares students for entry-level positions in three areas: 3-D Animation, Web Design, and Multimedia.

The computer is the primary tool of expression in the program; however, emphasis is placed on the development of creative thinking and art and design skills. Most course work takes place in a studio using regularly updated professional-quality hardware and software on both Macintosh and PC computer platforms.

The program may be pursued full-time or part-time. Some courses may be offered only during the evening.

The **3-D Animation** concentration (DMA.3D.AAS) prepares students for positions as 3-D production artists, animators, and modelers. Typical employers include animation studios; advertising agencies; design firms; television, film and video effects houses; and other branches of the entertainment industry.

PROGRAM OUTCOMES

- Understand the pre-production process, including character design and storyboarding;
- Visualize and animate story ideas;
- Apply animation and storytelling principles to specific animation projects;
- Use design principles to create 3-D computer animations that communicate effectively;
- Use professional 3-D modeling and animation software applications;
- Solve design problems, which contain change over time, 3-D models, camera positions, lighting, and textures;
- Create a professional portfolio to serve in the pursuit of further education or employment.

The **Web Design** concentration (DMA.WEB.AAS) prepares students for positions as web designers, web animators, and interactive art directors – positions most often found in interactive multimedia studios, advertising agencies, and design firms. It also prepares students for advanced study in interactive media design.

PROGRAM OUTCOMES

- Design an architectural plan for a website;
- Use professional software applications to create a website with advanced design and content;
- Use professional software to create interactive games and educational modules;
- Use professional software to edit digital video and audio;
- Use design principles to create web pages that communicate effectively;
- Use the principles of user interaction and usability to create user-friendly websites;
- Create websites that are accessible to and serve a variety of different user needs and technologies;
- Develop and present ideas in both written and oral formats;
- Create a professional portfolio to serve in the pursuit of further education or employment.

The **Multimedia** concentration (DMA.MULT.AAS) prepares students for positions as multimedia designers, graphic artists, and production artists. Typical employers include advertising agencies; design firms; television, film and video effects houses; and other branches of the entertainment industry. It also prepares students for advanced study in computer graphics or digital media arts.

PROGRAM OUTCOMES

- Produce and manage two- and three-dimensional digital imagery using professional digital manipulation and illustration software;
- Produce and manage moving imagery using professional animation, video, and motion graphics software;
- Apply design principles in the design and creation of digital imagery;
- Apply animation and storytelling principles in the design and creation of animation and video projects;
- Understand the different phases of digital production;
- Use a variety of digital input and output technologies;
- Develop and present ideas in both written and oral formats;
- Create a professional portfolio to serve in the pursuit of further education or employment.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Core Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ART 102	Basic Drawing (1/4)	3
ART 105	Two-Dimensional Design (1/4)	3
ART 106	Three-Dimensional Design (1/4)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
DMA 105	Introduction to Computer Art (1/4)	3
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
ART 123	History of Modern Art (3/0)	3
DMA 120	3-D Modeling I (1/4)	3
DMA 144	Internet Tools and Techniques (1/4)	3
DMA 145	Web Design I (1/4)	3
ENG 102	English Composition II (3/0)	3
— —	Professional elective[1]	3
THIRD SEMESTER		
DMA 135	Digital Narrative (1/4)	3
ART —	Art History elective (3/0)[2]	3
MAT —	Mathematics elective[3]	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
FOURTH SEMESTER		
CMN 112	Public Speaking (3/0)	3
DMA 250	Digital Portfolio Seminar (1/4)	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
		65

Concentrations

3-D Animation (electives)

ART 104	Life Drawing (1/4)	3
DMA 220	3-D Modeling II (1/4)	
	OR	3
DMA 224	Rigging for Animation and Games (1/4)	
DMA 225	Computer Animation I (1/4)	3
DMA 210	Motion Graphics (1/4)	3
DMA 226	Computer Animation II (1/4)	3

Web Design (electives)

DMA 110	Digital Imaging I (1/4)	3
DMA 140	Interactive Web Animation (1/4)	3
DMA 245	Web Design II (1/4)	3
DMA 246	Web Design III: Advanced Project (1/4)	
	OR	3
DMA 290	Digital Media Arts Internship	
— —	Web Design elective[4]	3

Multimedia (electives)

DMA 110	Digital Imaging I (1/4)	3
DMA 140	Interactive Web Animation (1/4)	3
— —	Multimedia elective[5]	3
DMA 210	Motion Graphics (1/4)	3
— —	Multimedia elective[5]	3

NOTE: Students must earn a minimum grade of C in all ADV, ART, CMN, DMA, IST, and PHO courses.

[1] Select from ADV 222; DMA 247, 275, 290; GAM 120.

[2] Select from ART 121, 122, 124, 125, 126; PHO 110.

[3] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[4] Select from ADV 110, 210; IST 108.

[5] Select from any 200-level DMA course or the following courses from other programs: ADV 210; CMN 141, 142; GAM 120; MUS 230; PHO 202, 203.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Digital Film

Associate in Applied Science Degree

Program **DMA.FILM.AAS**
CIP 100201

The A.A.S. degree program in Digital Film prepares students to create, interpret, and analyze visual language through the study of aesthetic and technical concepts applied in the making and producing of films. Students learn all aspects of digital film including directing, producing, editing, cinematography, and screenwriting.

Each course connects to another course in the curriculum in some unique way and provides a solid foundation for students to achieve successful careers in the highly competitive film industry. The curriculum has been designed to encourage collaboration throughout the college on several levels, enabling learning opportunities beyond the classroom experience.

The Digital Film program offers a variety of courses that are production-oriented, as well as those exploring film history, theory, and criticism. The program also includes training in all aspects of new media technologies including state-of-the-art, high-definition digital acquisition.

PROGRAM OUTCOMES

- Write, produce, direct, and edit a variety of digital film productions;
- Achieve entry-level professional competence for a position in commercial or film productions;
- Apply narrative structures in the development of short films;
- Choose and analyze scripts, and evaluate the potential of auditioning talent;
- Effectively direct actors to illustrate dramatic action and character;
- Design and implement mood-setting lighting design;
- Evaluate film scripts and select appropriate camera lenses for storytelling;
- Assemble production teams to work on short films.

Curriculum

Code	Course (lecture/studio hours)	Credits
FIRST SEMESTER		
CMN 101	Mass Media (3/0)	3
CMN 112	Public Speaking (3/0)	3
CMN 141	Introduction to TV Production (2/2)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
CMN 142	Intermediate TV Production (2/2)	3
CMN 146	Social Media Technologies (2/2)	3
CMN 147	Introduction to Story (2/2)	3
ENG 102	English Composition II (3/0)	3
— —	Social Science general education elective	3
THIRD SEMESTER		
CMN 144	Screenwriting (2/2)	3
CMN 153	Digital Audio Production I (2/2)	3
CMN 241	Applied Field Production (2/2)	3
CMN 243	Cinematography (2/2)	3
MAT 125	Elementary Statistics I (3/0)[1]	3
FOURTH SEMESTER		
CMN 107	Cinema (3/0)	3
CMN 242	Advanced Film Production (2/2)	3
DMA 210	Motion Graphics (1/4)	3
PHO 103	Digital Photography I (2/3)	3
— —	Science OR Technology elective	3
SUMMER SESSION		
CMN 285	Special Studies in Television Production OR	3
CMN 290	Internship: Communications (3/0)	
		62

[1] MAT 120 is an acceptable alternative.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Early Childhood Education / Special Education Assistant

Program **EDU.SPEC.ED.AAS**
CIP 440000

Associate in Applied Science in Human Services

The Education/Special Education Assistant option of the Human Services program is designed to meet the needs of students interested in careers as education assistants or teacher aides in schools, day care centers, or similar institutions. Individuals currently holding paraprofessional positions in education may use this option to enhance classroom and related skills.

PROGRAM OUTCOMES

- Identify and explain the historical and philosophical foundations of American education;
- Interpret current issues facing educators on the basis of study and research;
- Evaluate how students differ in their approaches to learning and create instructional opportunities that are adapted to diverse learners;
- Conduct small instructional groups under the supervision of a teacher;
- Tutor individual students in selected subjects;
- Implement lesson plans that have specific learning outcomes and procedures, support inclusion, and reflect differentiation of instruction;
- Demonstrate the use of classroom technology for instructional, adaptive, and enhancement purposes.

Although some of the required courses are offered in the evening, the complete option will require daytime attendance either full-time or part-time. During the Spring semester of the sophomore year, the student has an intensive 15 to 20 hours per week field experience in classrooms under the supervision of skilled teachers. Arrangements for the field experience must be made during the preceding Fall semester.

By careful selection of electives, students interested in working with special populations may become qualified as special education assistants. Consult an Education program advisor for more information.

Admission to the program requires a high school diploma or its equivalent and competency in English as demonstrated through placement testing.

Students who have completed this program have found employment in public and private schools, day care centers, and similar institutions.

Graduates of the program have transferred to various four-year colleges and universities including The College of New Jersey, Rowan University, Georgian Court University, Rider University, and Rutgers University. This program is not, however, designed for transfer, and some loss of credit may be expected depending upon the transfer institution and the intended program of baccalaureate study.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
EDU 109	Introduction to Education: Foundations, History, and Trends of American Education (3/0)	3
ENG 101	English Composition I (3/0)	3
MAT 120	Mathematics for Liberal Arts (3/0)	
	OR	3
MAT 125	Elementary Statistics I (3/0)	
PSY 101	Introduction to Psychology (3/0)	3
SECOND SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
EDU 102	Introduction to Exceptional Children (3/0)	3
ENG 102	English Composition II (3/0)	3
PSY 206	Child Development (3/0)	3
SOC 101	Introduction to Sociology (3/0)	
	OR	3
SOC 104	Sociology of Education (3/0)	
THIRD SEMESTER		
EDU 120	Introduction to Early Childhood Education (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
HIS —	Historical Perspective general ed. elective[1]	3
— —	Science OR Technology general ed. elective	3-4
— —	Diversity and Global Perspective elective	3
FOURTH SEMESTER		
EDU 210	Education Field Experience (15-20 hours per week)	6
EDU 211	Education Seminar (3/0)	3
EDU 214	Curriculum and Methods for Early Childhood (3/0)	3
ENG —	Literature elective[2]	3
— —	Visual Arts or Music elective	3
		62-63

[1] Select from HIS 101, 102, 105, 106, 109, 112, 113.

[2] ENG 222 recommended.

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students who have completed the Child Development Associate (CDA) or Certified Childcare Professional (CCP) certificate can receive 6 education credits for that work after having satisfied English and math requirements.

NOTE: Students must earn a minimum grade of C in all EDU courses to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Education (K-12)

Program **EDU.AA**
CIP 240101

Associate in Arts Degree in Liberal Arts and Sciences

The Education option of the Liberal Arts and Sciences program introduces students to the field of teaching and prepares them to enter a baccalaureate degree program from k-12 including specialized programs for students with special needs and most secondary subject areas. In addition to studying the history, philosophy, and practices of education, students are offered the opportunity to engage in service learning or field experience in school settings under the supervision of experienced classroom teachers.

Students should determine the requirements of the college to which they wish to transfer and, with the aid of college advising and counseling services, select elective subjects accordingly.

PROGRAM OUTCOMES

- Identify and explain the historical and philosophical foundations of American education;
- Interpret current issues facing educators on the basis of study and research;
- Take responsibility for their own learning as they make the transition from learners to teacher/learners;
- Analyze how children learn and develop, and provide learning opportunities that support a child's intellectual, social, and personal development;
- Evaluate how students differ in their approaches to learning and create instructional opportunities that are adapted to diverse learners;
- Demonstrate effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom;
- Describe and demonstrate a variety of teaching techniques and strategies;
- Create and implement planned instructional activities for individuals, small and large groups;
- Identify and apply assessment measures;
- Articulate their own teaching proficiency base.

This option may be pursued part-time or full-time and may be completed by day or night attendance.

Admission requires a high school diploma or its equivalent, one year of science, and two years of mathematics. To be admitted, an applicant must demonstrate competency in English and reading as determined by placement testing.

Although this option is designed as a transfer program, some students may find paraprofessional employment in public or private schools. Individuals currently holding paraprofessional positions in education may use this program to enhance their professional development.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
HIS —	Historical Perspective general education elective[1]	3
MAT —	Mathematics elective[2]	3-4
SECOND SEMESTER		
EDU 109	Introduction to Education: Foundations, History, and Trends of American Education (3/0)	3
ENG 102	English Composition II (3/0)	3
PSY 206	Child Development (3/0)	3
SOC 101	Introduction to Sociology (3/0)	
	OR[3]	3
SOC 104	Sociology of Education (3/0)	
MAT —	Mathematics elective[2]	3-4
THIRD SEMESTER		
EDU —	Education elective[4]	3
HIS —	United States History elective (3/0)[5]	3
— —	Lab Science elective	3-4
— —	Diversity and Global Perspective elective[6]	3
— —	Humanities general education elective[7]	3
FOURTH SEMESTER		
— —	Lab Science elective	3-4
— —	Humanities general education elective[7]	3
— —	Humanities general education elective[7]	3
— —	Program elective[8]	3
— —	Elective[2]	3
		62-66

[1] Select from HIS 101, 102, 112, 113.

[2] Select in consultation with an academic advisor.

[3] Students who plan to continue at Mercer's University Center in the William Paterson University program should take SOC 104.

[4] Students planning to continue in the William Paterson University program should choose EDU 102 (Introduction to Exceptional Children). Otherwise, select from EDU 102, 120, or 130. Consultation with an academic advisor is strongly recommended.

[5] Select from HIS 105, 106, 109, 214.

[6] ENG 222 (Children's Literature) is recommended for students interested in elementary or early childhood education. Those planning to continue in the William Paterson University program should choose a globally-focused elective including ART 124; ENG 203, 204, 214; HIS 112, 113, 206, 218; or REL 102.

[7] Students planning to continue in the William Paterson University program should take two semesters of a world language. Otherwise, select from Art (ART 101, 121, 123, 124, 125), Music (MUS 103), Literature, or Philosophy electives.

[8] Students are encouraged to consider PSY 201 (Educational Psychology). Those planning to continue in the William Paterson University program should choose a course relevant to their second major (English, History, Social Science).

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all EDU courses to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Electronics Engineering Technology

Program **ENGR.ELCT.AAS**
CIP 150303

Associate in Applied Science Degree

The Electronics Engineering Technology (EET) program is primarily a transfer program. Successful graduates may transfer to a college or university which offers a four-year bachelor's degree in electronics engineering technology.

Mercer County Community College's EET program maintains a transfer agreement with the ECET program of NJIT. Other options for EET graduates include Rowan, Drexel, and Rutgers universities. Several of these institutions have programs which allow EET graduates to complete the requirements for a BSET degree in two years or a Master of Science (MSEE) in three years.

Options among four-year transfer programs include Biomedical Engineering, for job opportunities at the various New Jersey pharmaceutical companies; Computer Engineering, for positions ranging from programmers to systems administrators; General Electrical Engineering, for opportunities at the various electronics companies in New Jersey and the surrounding states; and Telecommunications Engineering, for positions with companies employing fiber optics or networking systems.

PROGRAM OUTCOMES

- Communicate effectively in English, both orally and in written form;
- Demonstrate an understanding of the fundamentals of AC and DC electricity;
- Work as a team with fellow workers;
- Use a computer to access information from the Internet;
- Demonstrate mastery of college algebra and trigonometry;
- Demonstrate mastery of job skills such as soldering, metalworking, and PC board repair;
- Demonstrate an understanding of fundamental digital circuits;
- Demonstrate an understanding of analog circuits, including linear integrated circuits;
- Set up and operate modern electronic equipment such as DMM, oscilloscope, and signal generators.

Admission requires a high school diploma or its equivalent, with two years of algebra desired. One year of laboratory science (chemistry or physics) is strongly recommended for students who intend to transfer to a baccalaureate degree program.

Graduates may begin work directly as electronic technicians, electronic technologists, engineering aides, customer engineers, field service engineers, junior engineers, associate engineers, sales engineers, and systems test technicians. These positions are in the electronics industry, communications, medical instrumentation, energy technology, digital and computer technology, and scientific or technological research and development.

Students planning to transfer should achieve mathematics proficiency at the calculus level and should select physics as their science/technology electives. They will be advised individually during their first session with an EET program advisor.

The college offers a related certificate program in Electronics Engineering Technology, which may be a desirable option for employed persons attending college part-time.

In a particular year, some required courses may be available only during the day or evening.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
EET 138	Introduction to Electronics I (3/3)	4
EET 140	Electronic Construction (1/3)	2
ENG 101	English Composition I (3/0)	3
MAT —	Mathematics elective[1]	4
SECOND SEMESTER		
EET 139	Introduction to Electronics II (3/3)	4
EET 215	Fiber Optics (3/2)	4
ENG 102	English Composition II (3/0)	3
— —	General Education elective[2]	3
— —	General Education elective[3]	3
THIRD SEMESTER		
EET 219	Electronic Networks (3/3)	4
EET 251	Digital Circuit Fundamentals (3/3)	4
— —	Science OR Technology elective[4]	3
— —	General Education elective	3
FOURTH SEMESTER		
EET 214	Communications Electronics (3/3)	4
EET 230	Linear Integrated Circuits (3/3)	4
EET 263	Digital Technology (3/3)	4
— —	Science OR Technology elective[4]	3
		61

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Minimum mathematics requirement for students who do not plan to transfer to a bachelor degree program is MAT 146. Students who plan to transfer, working in consultation with an EET program advisor, should achieve MAT 151 level of proficiency or higher.

[2] Select course from either Social Science or Humanities general education categories.

[3] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[4] Minimum requirement for students who do not plan to transfer is 6 credits selected from the approved list of general education science/technology electives. Students who plan to transfer to bachelor degree programs should complete PHY 101-102. Selection of courses should be made in consultation with an EET program advisor.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Electronics Engineering Technology

Program **ENGR.ELCT.CERT**
CIP 150303

Certificate of Proficiency

The Electronics Engineering Technology certificate program provides students with the level of technical competency normally required of technicians in the field of digital/microcomputer electronics.

Students may be eligible for credit or advanced standing for work experience in electronics.

PROGRAM OUTCOMES

- Analyze, test, troubleshoot, and repair electronic circuits;
- Operate modern electronics test equipment to diagnose, troubleshoot, and repair electronic circuits;
- Display knowledge of basic analog and digital communication systems.

All courses in this program completed with a grade of C or better may be applied toward the Electronics Engineering Technology Associate in Applied Science degree program.

Admission to the certificate program requires a high school diploma or equivalent with two years of algebra and one year of laboratory science (chemistry or physics preferred). In a particular year, some required courses may be available only during the day or evening.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
EET 138	Introduction to Electronics I (3/3)	4
EET 139	Introduction to Electronics II (3/3)	4
EET 251	Digital Circuit Fundamentals (3/3)	4
EET 219	Electronic Networks (3/3)	4
MAT —	Mathematics elective[1]	4
— —	Technical electives[2]	12
		35

[1] MAT 146 or higher depending on placement.

[2] All electives must be selected with the approval of an EET advisor. Suggested electives include EET 140, 214, 215, 230, 263.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Engineering Science

Associate in Science Degree

Program **ENGR.SCI.AS**
CIP 141301

The Engineering Science A.S. degree program prepares students to transfer to a baccalaureate degree program in Engineering. Students develop a strong foundation in mathematics, physics and chemistry, with emphasis on engineering applications and use of the computer as a problem-solving tool. A strong general education curriculum helps students develop communication and analytical skills.

Engineering is a profession that integrates science and mathematics with design and laboratory study. It is and will continue to be the profession upon which the United States depends for its growth and ability to compete in world markets. Engineering offers more career options than any other discipline. Engineers are behind almost all of today's exciting technology. Engineers are problem solvers who search for quicker, better, and less expensive ways to use the forces and materials of nature to meet today's challenges.

PROGRAM OUTCOMES

- Analyze engineering drawings, demonstrating an understanding of the concept of scale and orthographic projection;
- Assist engineers and technologists in performing tasks relevant to the chosen branch of engineering;
- Complete written engineering reports;
- Write computer programs to solve engineering-based problems;
- Complete computer-aided design (CAD) drawings;
- Communicate effectively both verbally and in writing;
- Demonstrate effective mathematical skills and application of scientific principles in solving engineering problems;
- Apply critical thinking and problem-solving skills in the analysis of data, design of experimental procedures, and evaluation of outcomes;
- Transfer to a four-year institution in an ABET-accredited engineering program with a major in civil, computer, electrical, industrial, mechanical, biomedical, chemical, environmental, or architectural engineering.

A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CHE 101	General Chemistry I (3/3)	4
CMN 112	Public Speaking (3/0)	3
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0)	4
PHY 115	University Physics I (3/3)	4
SECOND SEMESTER		
CHE 102	General Chemistry II (3/3)	4
CIV 103	Statics (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 152	Calculus II (4/0)	4
PHY 215	University Physics II (3/3)	4
THIRD SEMESTER		
CIV 230	Mechanics of Solids (3/3)	4
ECO 112	Microeconomics (3/0)	3
ENT 116	Engineering Graphics (1/2)	
	OR	2
DRA 190	Introduction to Computer-Aided Drafting (1/2)	
MAT 251	Calculus III (4/0)	4
PHY 225	University Physics III (3/3)	4
FOURTH SEMESTER		
COS 101	Introduction to Computer Science (3/2)	4
MAT 252	Differential Equations (4/0)	4
— —	General Education elective[1]	3
— —	General Education elective[1]	3
		67

NOTE: Select courses in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Select courses from either Humanities or Historical Perspective general education categories.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Engineering Science

Transfer Certificate

Program **ENGR.SCI.CERT**
CIP 141301

The certificate program in Engineering Science generally prepares students for transfer to the sophomore year of a four-year college in a specific engineering program major.

PROGRAM OUTCOMES

- Apply the principles of physics to the solution of engineering problems;
- Use calculus in the solution of engineering problems;
- Present information in written or graphic form.

The complete program is available full-time or part-time. Day students usually complete several required courses in the evening.

Admission requires a high school diploma or its equivalent with the mathematical preparation (advanced algebra and trigonometry) needed for college-level calculus. At least one year of a laboratory science (chemistry or physics) is required. Both sciences are preferred. Applicants will be evaluated according to test scores or other available indicators of potential success in this demanding university-parallel program.

Those who do not meet established admission criteria are strongly advised to enroll in Civil Engineering Technology or Electronics Engineering Technology. These engineering technology programs help students determine their skills in engineering while they are developing their English and/or math skills. After one successful year in an engineering technology program, students may reapply to the Engineering Science program.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
CHE 101	General Chemistry I (3/3)	4
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0)[1]	4
PHY 115	University Physics I (3/3)	4
COS —	Elective[2]	4
CHE 102	General Chemistry II (3/3)	4
ENG 102	English Composition II (3/0)	3
ENT 116	Engineering Graphics (1/2)	
	OR	2
DRA 190	Introduction to Computer-Aided Drafting (1/2)	
MAT 152	Calculus II (4/0)	4
PHY 215	University Physics II (3/3)	4
		36

NOTE: Select courses in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Provisional acceptance may be granted to students not prepared for MAT 151, but serious consideration should be given to entering an engineering technology program. Provisionally accepted students should select MAT entry level from MCCC placement guidelines and must be alert to MAT pre/corequisites for other desired courses.

[2] COS 101 or another computer science course approved by an advisor. Students wishing to transfer to Rutgers University should take COS 102.

Exercise Science

Associate in Science Degree

Program **EXER.SCI.AS**
CIP 310505

The Exercise Science program provides the opportunity for students to acquire the skills, knowledge, and experience necessary to enter the continually evolving field of exercise science and to transfer into related baccalaureate programs.

Exercise Science offers a variety of career opportunities, such as those involving coaching, education, exercise physiology, exercise research, health promotion and program management, personal training, rehabilitative exercise, and sport-specific athletic performance.

The program prepares students to take the National Strength and Conditioning Association's Certified Personal Trainer (NSCA-CPT) exam. It also incorporates certification for First Aid Cardio-Pulmonary Resuscitation (CPR) for the Professional, and Automated External Defibrillator (AED).

Admission to the program requires a high school diploma or its equivalent.

PROGRAM OUTCOMES

- Succeed academically upon transfer to a baccalaureate program related to exercise science;
- Secure employment in the field of exercise science;
- Demonstrate the knowledge, skills, and ethical integrity necessary to succeed and grow as a health, wellness, fitness, and/or athletic performance professional;
- Apply scientific and physiological principles to the promotion and enhancement of health, wellness, fitness, and athletic performance;
- Assess and evaluate an individual's health and performance;
- Prescribe workouts for generally healthy individuals as well as for athletic populations and those with special considerations;
- Conduct safe and effective training sessions with generally healthy individuals.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
ENG 101	English Composition I (3/0)	3
HPE 151	Introduction to Exercise Science (1/0)	1
HPE 110	Concepts of Health and Fitness (1/2)	
	OR	2-3
HPE 111	Living with Health (3/0)	
MAT —	Mathematics elective[1]	3-4
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
ENG 102	English Composition II (3/0)	3
HPE 134	Prevention, Assessment and Care of Athletic Injuries (3/0)	
	OR	3
HPE 105	First Aid, CPR, and AED (2/2)	
IST 101	Computer Concepts with Applications (2/2)	3
PSY 101	Introduction to Psychology (3/0)	3
THIRD SEMESTER		
HPE 140	Kinesiology for Exercise Science (3/0)	3
HPE 163	Principles of Coaching (2/0)	2
HPE 242	Exercise Measurement and Prescription (2/3)	3
MAT —	Mathematics elective[1]	3-4
— —	General Education elective[2]	3
FOURTH SEMESTER		
HPE 101	Basic Concepts of Nutrition (3/0)	3
HPE 241	Applied Exercise Physiology (2/2)	3
HPE 243	Exercise Science Field Experience (225 hours)[3]	3
— —	Humanities general education elective	3
— —	General Education elective[4]	3
		61-64

[1] Select from MAT 120, 125, 126, 135, 140, 146, 151, 152, 200, 205.

[2] Select course from either Social Science or Humanities general education categories.

[3] 15 hours per week for 15 weeks.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

NOTE: Students must earn a minimum grade of C in all required BIO, PTA, and HPE courses to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Entertainment Technology

Associate in Applied Science Degree

Programs **ETT.THR.AAS**
ETT.MUS.AAS
CIP 509999

The Associate in Applied Science in Entertainment Technology prepares students for careers in the entertainment industry. There are two concentrations:

The **Technical Theatre** concentration (ETT.THR.AAS) prepares graduates for careers as lighting and sound technicians, technical managers, equipment marketing representatives, and technical personnel for distributors and rental houses. Additional career options include the allied fields of film and television production; trade show exhibition; club, casino, and theme park operations; and all related performing arts production.

PROGRAM OUTCOMES

- Demonstrate entry-level professional competence as a lighting and sound technician;
- Write lighting and sound cues for all related performing arts productions;
- Design lights or sound for concert, stage, and video;
- Work cooperatively with colleagues;
- Create a soundtrack for theatre, film, or concert performances;
- Set up and operate lighting and sound control systems;
- Demonstrate basic proficiency using digital audio workstations and professional sound editing programs;
- Troubleshoot common technical problems encountered when using complex combinations of lighting, sound, and video equipment.

Students are expected to become involved in the technical, managerial, and performance aspects of college theatre productions and other entertainment activities. All students are required to complete a practicum in entertainment technology.

The **Music Technology** concentration (ETT.MUS.AAS) integrates music theory and performance with a comprehensive array of technical and business skills that enable the graduate to pursue a variety of career tracks in the music industry such as record producer, recording engineer, remix engineer, sound technician for live shows and concerts, as well as careers in the field of film scoring and film music editing. Other career options in the music entertainment industry include artist development and management, promotion, and marketing.

PROGRAM OUTCOMES

- Demonstrate basic proficiency at the piano keyboard;
- Demonstrate a working knowledge of music theory, including note reading, scale and chord construction, and the principles of voice leading and composition;
- Understand the history of African American music of the 20th century and its relevance to contemporary popular music;
- Create original musical compositions and record those compositions using MIDI sequencing software, a Macintosh computer and Windows-based PC, and MIDI synthesizer keyboard;
- Demonstrate a working knowledge of the music business, including copyright and contract law, artist management, and marketing strategies;
- Demonstrate entry-level professional competence as a sound technician;
- Set up sound reinforcement equipment;
- Demonstrate entry-level competence as a technical manager in the entertainment industry.

Since most business- and technology-related careers in the entertainment industry require additional training and experience, students may take advantage of the many internship programs now available, such as those offered by Sony Music in New York, Disney Productions in Florida, and Passage Theatre as well as Boehme Opera Company in Trenton.

Alternatively, students may choose to matriculate at one of the growing number of four-year institutions now offering a baccalaureate degree in music business and technology or entertainment technology. Students have transferred to Stockton State University, Ramapo College, Temple University, Mercy College in Westchester, NY, and The College of New Jersey.

The latest equipment and software is provided for student use in both concentrations. Professional equipment includes the latest high-end moving lights, color changers, color mergers, lighting control, digital and analog sound mixers, signal processors, sound production software, sequencing software, MIDI controllers, and multi-track digital recording.

Our facilities include a black box theatre fully equipped with lighting and sound equipment, a sound lab with 14 high-end digital audio workstations and three control surfaces, in addition to studios for multi-track live recording.

The Entertainment Technology program may be pursued part-time or full-time and may be completed by daytime or evening attendance. Admission requires a high school diploma or its equivalent.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Curriculum

Technical Theatre Concentration

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
ETT 102	Introduction to Entertainment Industry (2/2)	3
THR 101	Introduction to Theatre (3/0)	
	OR	3
MUS 103	Introduction to Music (3/0)	
MAT —	Mathematics elective[1]	3
SECOND SEMESTER		
CMN 153	Digital Audio Production I (2/2)[2]	3
ENG 102	English Composition II (3/0)	3
ETT 200	Technical Production (1/90 hours)	1
THR 102	Stagecraft (2/2)	3
THR 152	Lighting Technology (2/2)	3
THR 210	Theatre History: Classical to Elizabethan (3/0)	
	OR	3
THR 212	Central Voices in World Drama (3/0)	
THIRD SEMESTER		
ART 122	History of Art II (3/0)	
	OR	3
CMN 107	Cinema (3/0)	
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CMN 254	Live Sound Reinforcement (2/2)	3
THR 150	Scenic Techniques (2/2)	3
— —	Social Science general education elective	3
FOURTH SEMESTER		
CMN 255	Sound Design (1/4)	3
ETT 205	Arts and Entertainment Management (3/0)	3
ETT 290	Entertainment Technology Internship	
	OR	2-3
DMA 250	Digital Portfolio Seminar (2/2)	
THR 252	Lighting Design (2/2)	3
PHY —	Lab Science elective[3]	3-4
— —	Diversity and Global Perspective elective	3
		62-64

[1] Select MAT 125 or 146. Students intending to transfer to an audio engineering baccalaureate program should take MAT 146.

[2] Students in the Entertainment Technology program take ETT 102 (not CMN 151) as a prerequisite for CMN 153.

[3] Select from the PHY category of general education courses. PHY 111 recommended.

† Some exemptions apply. Consult academic advisor for details.

Curriculum

Music Technology Concentration

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
ETT 102	Introduction to Entertainment Industry (2/2)	3
MAT 120	Mathematics for Liberal Arts (3/0)[1]	3
MUS 105	Fundamentals of Music Theory (3/0)	3
THR 101	Introduction to Theatre (3/0)	
	OR	3
MUS 103	Introduction to Music (3/0)	
MUS —	Piano elective (0/2)	1
SECOND SEMESTER		
CMN 153	Digital Audio Production I (2/2)[2]	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
MUS 123	Music Business (3/0)	3
MUS 127	Music Theory I (2/2)	3
MUS 155	History of Jazz and Blues (3/0)	3
MUS 167	Musicianship I (0/2)	1
THIRD SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CMN 253	Digital Audio Production II (2/2)	3
CMN 254	Live Sound Reinforcement (2/2)	3
MUS —	Piano elective (0/2)	
	OR	1
MUS 142	Guitar Class I (1/1)	
— —	Social Science general education elective	3
FOURTH SEMESTER		
CMN 255	Sound Design (1/4)	3
ETT 205	Arts and Entertainment Management (3/0)	3
MUS 156	The History of American Pop Music (3/0)	3
MUS 235	Music Composition in the Virtual Studio (2/2)	3
PHY —	Lab Science elective[3]	3-4
— —	Diversity and Global Perspective elective	3
		65-66

[1] MAT 108 can be substituted. Students intending to transfer to an audio engineering baccalaureate program should take MAT 146.

[2] Students in the Entertainment Technology program take ETT 102 (not CMN 151) as a prerequisite for CMN 153.

[3] Select from the PHY category of general education courses. PHY 111 recommended.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Fashion/Apparel Design

Program **FASH.APP.AAS**
CIP 500407

Associate in Applied Science Degree in Visual Arts

The Fashion/Apparel Design A.A.S. degree prepares students for entry into the dynamic world of fashion or for further study at a four-year institution. The tri-state metro area of New York, New Jersey, and Pennsylvania is one of the nation's largest regions for the fashion/apparel industry, where skilled students can seek opportunities as assistant fashion designers, stylists, visual display artists, product and merchandise managers, and fashion illustrators.

The Fashion/Apparel Design program is highly interdisciplinary, providing a strong foundation in art, design, and technical studies while developing a perspective on both the creative and business aspects of the industry. The program also prepares students for advanced study at four-year colleges by paralleling the first two years of course requirements at several institutions. While the design sequence emphasizes core creative art skills, technical training focuses on computer applications used in the industry and sewing labs structured to mirror those of actual fashion/apparel studios.

In addition to coursework, students focus on portfolio development throughout the program, and finalize a professional product in both hard copy and digital format in a capstone course. Students take advantage of field studies at design and/or production houses and have an opportunity to showcase their work in an annual fashion show.

The program may be pursued full-time or part-time. Some courses may only be offered during the day.

PROGRAM OUTCOMES

- Develop foundation art skills to apply to fashion/apparel design development;
- Develop and present ideas effectively in both written and oral formats;
- Understand current trends in the fashion industry from a global perspective;
- Demonstrate knowledge of a wide range of textiles and manufacturing processes;
- Use specialized computer applications to create fashion/apparel design elements;
- Drape fabrics on a dress form in preparation for pattern-making and sewing;
- Develop sewing skills/techniques to produce finished garments;
- Design and produce individual fashion and apparel pieces;
- Understand the basic principles of merchandising;
- Create a portfolio for use in transferring or gaining employment.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ART 102	Basic Drawing (1/4)	3
ART 105	Two-Dimensional Design (1/4)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
FAS 105	Fashion: The Global Marketplace (3/0)	3
SECOND SEMESTER		
ART 104	Life Drawing (1/4)	3
ART 106	Three-Dimensional Design (1/4)	3
ART 123	History of Modern Art (3/0)	3
ENG 102	English Composition II (3/0)	3
FAS 110	Introduction to Fashion Drawing (1/4)	3
FAS 130	Introduction to Textiles for Fashion (3/0)	3
THIRD SEMESTER		
ART 125	Topics in Contemporary Art (3/0)	3
FAS 120	Introduction to Fashion Design I (1/4)	3
FAS 140	Computerized Fashion Drawing (1/4)	3
FAS 150	Technical Skills for Apparel Production I (1/4)	3
HIS 113	World History Since 1500 (3/0)	3
— —	Science OR Technology general ed. elective[1]	3
FOURTH SEMESTER		
FAS 205	Fashion Merchandising (3/0)	
	OR	3
FAS 220	History of Costume Design (3/0)	
FAS 250	Technical Skills for Apparel Production II (1/4)	3
FAS 260	Fashion Design II: Portfolio (1/4)	3
MAT —	Mathematics elective[2]	3
		65

[1] Select from BIO 114; IST 101, 140.

[2] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

†Some exemptions apply. Consult academic advisor for details.

NOTE: The above curriculum sequence presents an example of how this degree can be completed in two years – based on fulfillment of all foundation skills requirements and prerequisites, and presuming a Fall Term start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your academic advisor for other options and to monitor your progress.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Fashion Merchandising

Program **FASH.MRCH.AAS**
CIP 521902

Associate in Applied Science Degree in Business Management

The Fashion Merchandising option of the Business Management A.A.S. degree prepares students for careers in fashion/apparel sales, marketing, buying, and merchandising. Positions available to those with this educational specialization include retail merchandiser, planning and allocation, fashion/apparel sourcing specialist, and wholesale or retail buying manager.

The program also prepares students for advanced study in business or marketing in a fashion/apparel-related program. The MCCC Fashion Merchandising curriculum parallels the first two years of education at a majority of undergraduate universities and art colleges, with an emphasis on career training for gainful employment. The two-year experience allows students to develop a perspective by combining fashion studies with business and general education courses.

Successful graduates of the Fashion Merchandising option will be qualified for entry-level positions in the field of fashion merchandising, buying, retail planning, and marketing. After graduation, students may either begin their careers or choose to transfer to bachelor degree programs at colleges offering Fashion Merchandising degrees.

PROGRAM OUTCOMES

- Apply computational skills relevant to the fashion and retail industries;
- Demonstrate knowledge of the fashion industry from concept to consumer;
- Use the principles of marketing to perform duties required of entry-level fashion merchandising/marketing positions;
- Develop an appreciation for style and product quality;
- Communicate and present ideas in both written and oral formats;
- Demonstrate customer service and management techniques applicable to the fashion industry;
- Understand how the global economy and international events affect domestic business decisions.

Students may study full-time or part-time and may receive credit for previous training by applying for credit-by-experience, credit-by-articulation, or credit-by-examination. Some courses may only be offered during the day. Students should consult with their academic advisor to ensure adherence to the correct sequence of courses.

Admission to the program requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BUS 101	Introduction to Business (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
FAS 105	Fashion: The Global Marketplace (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
SECOND SEMESTER		
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
FAS 130	Introduction to Textiles for Fashion (3/0)	3
MKT 101	Principles of Marketing (3/0)	3
MKT 230	Principles of Retailing (3/0)	3
MAT —	Mathematics elective[1]	3
THIRD SEMESTER		
ACC 106	Office Accounting I (3/0) OR[2]	3
BUS 103	Business Mathematics (3/0)	
CIS 175	PC Applications: Spreadsheets (2/2)	3
FAS 205	Fashion Merchandising (3/0)	3
FAS 220	History of Costume Design (3/0)	3
— —	General Education elective[3]	3
FOURTH SEMESTER		
BUS 230	Global Environment of Business (3/0)	3
BUS 239	Entrepreneurship (3/0)	3
ECO 103	Basic Economics (3/0) OR[4]	3
ECO 112	Microeconomics (3/0)	
FAS 230	Fundamentals of Fashion Buying (3/0)	3
PHI 204	Ethics (3/0)	3
		62

NOTE: Select courses in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Select in consultation with an academic advisor. MAT 135 or 140 recommended.

[2] Students planning to transfer to a four-year college should take BUS 103.

[3] Choose from the following approved general education electives: ART 101, 121, 123, 124, 125; HIS 101, 102, 106, 113.

[4] Students planning to transfer to a four-year college should take ECO 112.

†Some exemptions apply. Consult academic advisor for details.

NOTE: The above curriculum sequence presents an example of how this degree can be completed in two years – based on fulfillment of all foundation skills requirements and prerequisites, and presuming a Fall Term start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your academic advisor for other options and to monitor your progress.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Fire Science Technology

Associate in Applied Science Degree

Program **FIRE.SCI.AAS**
CIP 430201

The associate degree program in Fire Science Technology provides students with the skills and knowledge to become highly competitive candidates for entry and/or advancement as professional and volunteer fire and emergency services personnel.

The FIR 107 course (Fire Prevention and Code Enforcement I) meets the educational requirements of the New Jersey Division of Fire Safety for Fire Inspector. FIR 209 (Fire Prevention and Code Enforcement II) meets the educational requirements for Fire Official. Students seeking a career in fire code enforcement are encouraged to check with the New Jersey Division of Fire Safety for other certification requirements.

Based on a national curriculum that promotes learning and advocacy of critical emergency service leadership and fire safety principles, the associate degree program integrates technical study with coursework in mathematics, English, physical science, and liberal arts to provide graduates with the necessary ancillary knowledge to advance into supervisory and/or management-level positions.

PROGRAM OUTCOMES

- Discuss the history, support organizations, resources, incident management, training, and emergency operations and relate how each plays a role within the fire service;
- Define and use basic terms and concepts associated with the chemistry and dynamics of fire;
- Apply principles of hydraulics, building construction, strategy, and tactics to fireground operations;
- Communicate the relationship of fire prevention and fire inspection;
- Demonstrate the importance of public education in relation to fire prevention;
- Evaluate facilities to appraise code compliance and potential hazards, building construction issues, and presence of appropriate fire protection systems to help ensure life safety both pre-incident and during an incident;
- Employ safe work practices using recognized standards and regulations.

Students pursuing programs in fire science should be aware that various municipal and industrial fire service agencies establish physical, mental, and character requirements. Persons interested in this option are advised to gain an awareness of the specific requirements for their desired work setting. MCCC graduates are employed by city, state, and federal departments dedicated to the fire services field.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
FIR 101	Introduction to Fire Science (3/0)	3
FIR 104	Building Construction (3/0)	3
MAT —	Mathematics elective[1]	3
SECOND SEMESTER		
ENG 112	English Composition II with Speech (3/0)	3
FIR 202	Water Supply for Fire Protection (3/0)	3
FIR 204	Fire Fighting Tactics (3/0)	3
FIR —	Fire Science elective[2]	3
— —	General Education elective[3]	3
— —	Elective[4]	3
THIRD SEMESTER		
PHY 111	Physical Science Concepts (2/2)	3
FIR 107	Fire Prevention and Code Enforcement I (4/2)	5
FIR —	Fire Science elective[2]	3
— —	General Education elective[5]	3
— —	Elective[4]	3
FOURTH SEMESTER		
FIR 201	Hazardous Materials I (3/0)	3
FIR 203	Fire Protection Systems (3/0)	3
FIR —	Fire Science elective[2]	3
FIR —	Fire Science elective[2]	3
— —	General Education elective[5]	3
		64

[1] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[2] Select from FIR 205, 206, 208, 209, 211.

[3] Select course from either Social Science or Humanities general education categories.

[4] Current certification as an EMT or EMPT may be substituted for 6 credits.

[5] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

†Some exemptions apply. Consult academic advisor for details.

Since the degree program is designed to meet the needs of the part-time student, it normally will take a minimum of three years to complete. All fire science courses are offered in the evening.

Fire Science Technology is not designed as a transfer program and some credit loss may occur for those who intend to continue their education at a four-year institution. Students interested in transferring should contact the program advisor early in their coursework at MCCC.

Admission to the program requires a high school diploma or its equivalent and competency in English and mathematics as demonstrated by placement testing.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Funeral Service

Associate in Applied Science Degree

Program **FUNERAL.AAS**
CIP 120301

The goals and objectives of the MCCC Funeral Service programs are: to provide students with professional training in preparation for licensure in Funeral Service; to prepare students to embark upon a career in a service-oriented, care-giving profession; to provide an academic environment which encourages student research and successfully integrates the theoretical, practical, and technical aspects of funeral service; and to foster the concept of education as a life-long process necessary to meet the demands of an evolving workplace with current emphasis on emerging ethical, environmental, and social issues.

Academic emphasis includes the areas of business management; public health; the social, behavioral, and natural sciences; as well as the legal, technical, and regulatory aspects of funeral service.

Students have two options for completion of their professional education: Funeral Service Certificate and Funeral Service Associate in Applied Science degree. Both programs can be completed either full- or part-time.

Following consultation with the Program Director, the A.A.S. degree program may be selected as a graduation option (not an admissions option) in order to ensure that candidates have the requirements for licensure in their selected state.

Students are responsible for securing part-time employment in an approved New Jersey or eastern Pennsylvania funeral home in order to complete the field experience and practicum courses. This requires the student to be registered as an Intern with the New Jersey State Board of Mortuary Science or as a Funeral/Student Trainee with the Pennsylvania Board of Funeral Directors.

Upon completion of all coursework, graduates will be eligible to take the National Board Exam (NBE). Following the NBE, graduates will be cleared to take state licensing examinations.

PROGRAM OUTCOMES

- Evaluate the service needs for the pre-need, at-need, and aftercare time frames;
- Create and plan activities and ceremonies designed to meet the needs of those who mourn;
- Educate the consumer regarding funeral and cremation memorialization and merchandise options;
- Evaluate and describe solutions to current embalming and restorative art situations;
- Assemble and formulate appropriate information for death certificates, obituaries, and other necessary forms and documents;
- Evaluate legal, professional, and ethical issues facing funeral service;
- Demonstrate effective verbal and written communication skills in face to face meetings, in front of small groups, and via electronic means.

The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE website (www.abfse.org).

National Board Examination pass rates, graduation rates (beginning in 2015), and employment rates (beginning in 2015) for this and other ABFSE-accredited programs are available at www.abfse.org. To request a printed copy of this program's pass rates and graduation rates, go to the Business Building at the West Windsor Campus room BS 105, e-mail daleym@mccc.edu or rosenbej@mccc.edu, or telephone (609) 570-3472 or 570-3474.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
MAT —	Mathematics elective[1]	3-4
— —	General Education elective[2]	3
SECOND SEMESTER		
ACC 106	Office Accounting I (3/0)	3
BIO 106	Human Anatomy (3/2)[3]	4
BUS 107	Business Law I (3/0)	3
ENG 112	English Composition II with Speech (3/0)	3
CHE —	Chemistry elective[4]	3
THIRD SEMESTER		
FUN 203	Funeral Service Principles (3/0)	3
FUN 206	Introduction to Funeral Service (3/0)	3
FUN 215	Funeral Service Law (3/0)	3
FUN 247	Principles of Embalming I (3/0)	3
FUN 223	Funeral Service Pathology (3/0)	3
FUN 251	Embalming Lab and Practicum (0/3/2 days)[5]	3
FOURTH SEMESTER		
FUN 217	Funeral Service Management (3/0)	3
FUN 227	Restorative Art (2/2)	3
BIO 215	Principles of Microbiology (3/0)	3
FUN 249	Principles of Embalming II (2/0)	2
FUN 229	Funeral Service Counseling (3/0)	3
FUN 220	Funeral Service Laws, Rules and Regulations (1/0)	1
FUN 295	Funeral Service Field Experience (2/0/2 days)[5]	3
		66-67

NOTE: Enrollment in any FUN course requires approval of the Director of Funeral Service Programs. New Jersey and Pennsylvania students must complete 60 college credits before enrolling in FUN courses. At the conclusion of the program, the student will have a minimum of 96 credits.

[1] College (100-level or higher) math course.

[2] Select course from the following general education categories: Humanities, Historical Perspective, Diversity and Global Perspective.

[3] BIO 103 and 104 may be substituted.

[4] CHE 100 or higher.

[5] In addition to lab and/or seminar, these courses include two days (16 hours per week) of supervised off-campus field experience in an approved funeral service firm for each semester. Students must also be registered as an intern with the New Jersey State Board of Mortuary Science or as a student trainee with the Pennsylvania Board of Funeral Directors. Registration with the New Jersey State Board of Mortuary Science enables the student to receive credit toward the New Jersey internship requirement.

† Some exemptions apply. Consult academic advisor for details.

The Funeral Service program at Mercer County Community College is accredited by the
American Board of Funeral Service Education (ABFSE)
992 Mantua Pike, Suite 108
Woodbury Heights, NJ 08097
816-233-3747 / exdir@abfse.org / www.abfse.org

Funeral Service

Certificate of Proficiency

Program **FUNERAL.CERT**
CIP 120301

The Funeral Service certificate program completes the educational requirements for licensure in Funeral Service. Admission to the certificate program and/or enrollment in any FUN course requires two years (60 credits) of prior college education at a regionally accredited institution of higher education (or completion of the Funeral Service Preparatory program). Class size is limited.

Applicants to the certificate program must complete prerequisite courses of Anatomy and Physiology I and II (BIO 106 fulfills this requirement), accounting, business law, chemistry, psychology, and English composition with a minimum grade of C. An overall C+ cumulative grade point average is required for admission.

Students are responsible for securing part-time employment in an approved New Jersey or eastern Pennsylvania funeral home in order to complete the field experience and practicum courses. This requires the student to be registered as an Intern with the New Jersey State Board of Mortuary Science or as a Funeral/Student Trainee with the Pennsylvania Board of Funeral Directors.

The goals and objectives of the MCCC Funeral Service programs are: to provide students with professional training in preparation for licensure in funeral service; to prepare students to embark upon a career in a service-oriented, care-giving profession; to provide an academic environment which encourages student research and successfully integrates the theoretical, practical, and technical aspects of funeral service; and to foster the concept of education as a life-long process necessary to meet the demands of an evolving workplace with current emphasis on emerging ethical, environmental, and social issues.

Academic emphasis includes the areas of business management; public health; the social, behavioral, and natural sciences; as well as the legal, technical, and regulatory aspects of funeral service.

Upon completion of all coursework, graduates will be eligible to take the National Board Exam. Following the NBE, graduates will be cleared to take state licensing examinations.

PROGRAM OUTCOMES

- Evaluate the service needs for the pre-need, at-need, and aftercare time frames;
- Create and plan activities and ceremonies designed to meet the needs of those who mourn;
- Educate the consumer regarding funeral and cremation memorialization and merchandise options;
- Evaluate, describe, and implement solutions to current embalming and restorative art situations;
- Assemble and formulate appropriate information for death certificates, obituaries, and other necessary forms and documents;
- Evaluate legal, professional, and ethical issues facing funeral service;
- Demonstrate effective verbal and written communication skills in face to face meetings, in front of small groups, and via electronic means.

National Board Examination pass rates, graduation rates (beginning in 2015), and employment rates (beginning in 2015) for this and other ABFSE-accredited programs are available at www.abfse.org. To request a printed copy of this program's pass rates and graduation rates, go to the Business Building at the West Windsor Campus room BS 105, e-mail daleym@mccc.edu or rosenbej@mccc.edu, or telephone (609) 570-3472 or 570-3474.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
FUN 206	Introduction to Funeral Service (3/0)	3
FUN 247	Principles of Embalming I (3/0)	3
FUN 203	Funeral Service Principles (3/0)	3
FUN 223	Funeral Service Pathology (3/0)	3
FUN 215	Funeral Service Law (3/0)	3
FUN 295	Funeral Service Field Experience (2/0/2 days)[1]	3
ENG —	English Composition elective (3/0)[2]	3
FUN 249	Principles of Embalming II (2/0)	2
FUN 217	Funeral Service Management (3/0)	3
FUN 227	Restorative Art (2/2)	3
FUN 229	Funeral Service Counseling (3/0)	3
BIO 215	Principles of Microbiology (3/0)	3
FUN 251	Embalming Lab and Practicum (0/3/2 days)[1]	3
FUN 220	Funeral Service Laws, Rules and Regulations (1/0)	1
		39

NOTE: Enrollment in any FUN course requires the approval of the Director of Funeral Service Programs.

[1] In addition to lab and/or seminar, these courses include two days (16 hours per week) of supervised off-campus field experience in an approved funeral service firm for each semester. Students must also be registered as an intern with the New Jersey State Board of Mortuary Science or as a student trainee with the Pennsylvania Board of Funeral Directors. Registration with the New Jersey State Board of Mortuary Science enables the student to receive credit toward the New Jersey internship requirement.

[2] Students having completed ENG 101, 102, 112, 209, 215, or 224 have fulfilled this requirement.

Note: With proper planning, students anticipating Fall matriculation into the certificate program can normally complete the prerequisites in one Spring semester. Full-time matriculation in the day program is only available beginning in Fall semesters; full-time matriculation in the night program is only available in the Spring semester; part-time night matriculation is available both Spring and Fall semesters.

The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE website (www.abfse.org).

The Funeral Service program at Mercer County Community College is accredited by the
American Board of Funeral Service Education (ABFSE)
992 Mantua Pike, Suite 108
Woodbury Heights, NJ 08097
816-233-3747 / exdir@abfse.org / www.abfse.org

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Funeral Service Preparatory

Program **FUNERAL.PRE.AAS**
CIP 520201

Associate in Applied Science Degree in Business Management

High school graduates and students with fewer than 30 college credits should select the Funeral Service Preparatory option of the Management program. This program prepares students for admission to the Funeral Service certificate program. Combining business subjects, health sciences and behavioral sciences, the option is designed to meet the New Jersey and Pennsylvania requirement for two years of college prior to the Funeral Service certificate program. (Funeral Service Preparatory or its equivalent must be completed in order to enter the Funeral Service certificate program or to take any FUN course.)

The goals and objectives of the MCCC Funeral Service programs are: to provide students with professional training in preparation for licensure in funeral service; to prepare students to embark upon a career in a service-oriented, care-giving profession; to provide an academic environment which encourages student research and successfully integrates the theoretical, practical, and technical aspects of funeral service; and to foster the concept of education as a life-long process necessary to meet the demands of an evolving workplace with current emphasis on emerging ethical, environmental, and social issues.

Academic emphasis includes the areas of business management; public health; the social, behavioral, and natural sciences; as well as the legal, technical, and regulatory aspects of funeral service.

Students in the program who have an affiliation with an approved funeral service firm can receive college credit for their work experience. These supervised, off-campus internship courses require 16 hours per week, and students must be registered with the New Jersey State Board of Mortuary Science or the Pennsylvania Board of Funeral Directors. Placement is each student's responsibility.

An advisory commission, consisting of active participants in funeral service, offers expertise to ensure that the Funeral Service programs meet the educational needs of future funeral directors.

PROGRAM OUTCOMES

- Develop the foundation for academic success in the Funeral Service program;
- Identify the economic, social, and ethical environment in which business entrepreneurs must operate;
- Investigate computer applications that will aid a successful funeral business;
- Demonstrate verbal and written communication skills in face to face meetings, in front of small groups, and via electronic means.

Admission to this program requires a high school diploma or its equivalent. Students should have two years of high school mathematics. Also recommended is one year each of high school laboratory science in biology and chemistry.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BUS 101	Introduction to Business (3/0)	3
ENG 101	English Composition I (3/0)	3
CMN 111	Speech: Human Communication (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
MAT —	Mathematics elective[1,2]	3-4
BUS 211	Funeral Service Internship I (1/0/2 days)[2,3]	
— —	OR Elective	2
SECOND SEMESTER		
ACC 106	Office Accounting I (3/0)[2]	3
ENG 102	English Composition II (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
SOC 101	Introduction to Sociology (3/0)	3
CHE —	Chemistry elective[4]	3
BUS 212	Funeral Service Internship II (1/0/2 days)[2,3]	
— —	OR Elective	2
THIRD SEMESTER		
BUS 210	Principles of Management (3/0)	3
BIO 106	Human Anatomy (3/2)	4
MKT 101	Principles of Marketing (3/0)	3
— —	General Education elective[5]	3
BUS 213	Funeral Service Internship III (1/0/2 days)[2,3]	
— —	OR Elective	2
FOURTH SEMESTER		
BUS 107	Business Law I (3/0)	3
ECO 103	Basic Economics (3/0)[2]	3
IST 101	Computer Concepts with Applications (2/2)	3
BUS —	Business elective[2,6]	3
BUS 214	Funeral Service Internship IV (1/0/2 days)[2,3]	
— —	OR Elective	2
		62-63

[1] College (100-level or higher) math course.

[2] Students planning to attend a four-year college should discuss transfer options with an academic advisor.

[3] Supervised off-campus work experience in an approved funeral service firm for 16 hours per week. Students must also register with the New Jersey State Board of Mortuary Science or the Pennsylvania Board of Funeral Directors (depending upon the state in which they will be working). This registration enables New Jersey interns to receive credit toward their State internship requirement. Students may select a total of eight credits of electives in place of BUS 211, 212, 213, and 214 if they are not registered as interns or student trainees in Funeral Service Internship.

[4] CHE 100 or higher.

[5] Select course from the following general education categories: Humanities, Historical Perspective, Diversity and Global Perspective.

[6] Recommended business electives: BUS 108, 109, 209, 225, 240; MKT 106, 230.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Game Design

Associate in Applied Science Degree

Program **GAME.DESIGN.AAS**
CIP 360113

The A.A.S. degree program in Game Design helps to prepare graduates for careers in the video game software industry, a relatively new and rapidly expanding industry. The New York City / northern New Jersey metro region is one of the ten largest in the country for video game design and development. Game Design is a highly interdisciplinary field drawing from a number of diverse areas such as art, writing, sound design, sociology, anthropology, computer technology, and programming.

The computer is the primary tool of expression in the program; however, emphasis is placed on the development of creative thinking as well as art and design skills. Students should expect to use and develop skills with scripting tools to program interactive functionality. Most coursework takes place in a studio using regularly updated professional-quality hardware and software on both Macintosh and PC computer platforms.

The Game Design program prepares graduates for positions as game designers, level designers, interface designers, producers, production assistants, and game artists. Typical employers include game design firms, entertainment software companies, educational resource development companies, interactive design companies, game development companies and research, government, and military organizations.

The Game Design program may be pursued full-time or part-time. Some courses may be offered only during the evening.

PROGRAM OUTCOMES

- Understand the historical development of game play;
- Apply the design process to the research and development of professional video game concepts;
- Apply narrative structures in the design of video games and levels;
- Describe and reference industry trends and technologies in video gaming;
- Design meaningful video game experiences and game mechanics appropriate to context;
- Create diagrams, storyboards, and prototypes to specify game design concepts;
- Develop games with level editing and scripting tools within industry standard game engines;
- Understand basic programming concepts and apply scripting languages to create interaction in game environments;
- Create 2D and 3D game art assets from game concepts, utilizing professional 2D digital imaging and 3D modeling and animation software;
- Work effectively on interdisciplinary teams producing functioning games and levels.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ART 102	Basic Drawing (1/4)	3
ART 105	Two-Dimensional Design (1/4)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
DMA 105	Introduction to Computer Art (1/4)	3
ENG 101	English Composition I (3/0)	3
GAM 120	Game Theory and Culture (1/4)	3
SECOND SEMESTER		
ART 106	Three-Dimensional Design (1/4)	3
COS 101	Introduction to Computer Science (3/2)	4
DMA 120	3-D Modeling I (1/4)	3
ENG 102	English Composition II (3/0)	3
GAM 140	Game Design I (1/4)	3
THIRD SEMESTER		
ART 104	Life Drawing (1/4)	3
DMA 135	Digital Narrative (1/4)	3
GAM 145	Game Programming I (2/2)	3
GAM 240	Game Design II (1/4)	3
MAT —	Mathematics elective[1]	3
FOURTH SEMESTER		
ART 125	Topics in Contemporary Art (3/0)	3
DMA 225	Animation I (1/4)	3
GAM 260	Game Development (1/4)	3
— —	Science elective[2]	4
— —	General Education elective[3]	3
		64

[1] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[2] BIO 103 or 106, or PHY 101 recommended. Select in consultation with an academic advisor.

[3] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all COS, DMA, and GAM courses.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Game Programming

Associate in Applied Science Degree

Program **GAME.PROG.AAS**
CIP 500411

The A.A.S. degree in Game Programming prepares students for careers in the video game industry. With advances in online social networks as well as console, stereoscopic, and smart phone technology fueling rapid expansion, the video game industry boasts revenues of around $24 billion in the United States alone, according to the newly formed Congressional Caucus for Competitiveness in Entertainment Technology (E-Tech Caucus).

The Game Programming program prepares students for a number of career options, including game designer, software engineer, artificial intelligence programmer, graphics engineer, physics programmer, and user interface scripter.

Typical employers include game design studios, entertainment software companies, and online entertainment and education companies. The New York City / northern New Jersey metro region is one of the ten largest in the country for video game development, accounting for more than 70 game-affiliated companies.

Students explore and analyze professional game engines, scripting languages, graphics, networks, physics, and other components of game development. Most coursework takes place in a studio using regularly updated professional-quality hardware and software on PC computer platforms. Moreover, in their last year of study, Game Programming students collaborate with students from the Game Design program to produce a full, playable video game.

PROGRAM OUTCOMES

- Understand the historical development of games;
- Describe and reference industry trends and technologies in video gaming;
- Apply the design process to research and develop professional video game concepts;
- Create diagrams and prototypes to specify game design concepts;
- Create a professional sales pitch for a game concept;
- Program game engine components such as resource management, entity-based systems, physics simulation, and user interfaces;
- Create a custom 2-D game engine;
- Develop skills to be a self-learner and problem solver;
- Work effectively on interdisciplinary teams producing functioning games and levels.

The Game Programming program may be pursued full-time or part-time. Admission requires a high school diploma or its equivalent and competency in English and mathematics as demonstrated by placement testing.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
COS 101	Introduction to Computer Science (3/2)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
DMA 105	Introduction to Computer Art (1/4)	3
ENG 101	English Composition I (3/0)	3
GAM 120	Game Design Theory and Culture (1/4)	3
SECOND SEMESTER		
COS 102	Computer Science I – Algorithms and Programming (3/2)	4
ENG 102	English Composition II (3/0)	3
GAM 145	Game Programming I (2/2)	3
IST 108	Introduction to Programming with Mobile Application Development (3/2)	4
MAT 146	Pre-Calculus (4/0)[1]	4
THIRD SEMESTER		
COS 210	Computer Science II – Data Structures (3/2)	4
GAM 240	Game Design II (1/4)	3
GAM 245	Game Programming II (2/2)	3
IST 218	iOS Application Development (3/2)	4
— —	Technical elective[2]	3-4
FOURTH SEMESTER		
GAM 260	Game Development (1/4)	3
— —	Technical elective[2]	3-4
— —	General Education elective[3]	3
— —	General Education elective[3]	3
		62-64

[1] Or higher-level mathematics course.

[2] Select from CMN 153; COS 204, 231; DMA 120, 135, 225; MAT 151, 208.

[3] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all COS, DMA, GAM, and IST courses.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Health Information Technology

in cooperation with Camden County College

Associate in Applied Science Degree

Program **HLTH.INFO.TECH.AAS**
CIP 510706

The A.A.S. degree in Health Information Technology, offered jointly with Camden County College, is designed for the student seeking a professional career based in the healthcare arena. Health information technology deals with the gathering, storage, and abstraction of health data that can be transformed into meaningful and useful information utilized by various professionals for a variety of purposes.

Students educated in the field can perform various job duties and are employed in a variety of settings. Acute care hospitals, long-term care facilities, rehabilitation facilities, insurance agencies, and pharmaceutical companies are just a sampling of employers. Positions include EHR (electronic health records) specialist, clinical data specialist, medical record coder, APC (ambulatory payment classification) coordinator, privacy officer, compliance specialist, and data quality manager.

The health information technology profession offers opportunities with a wide scope of responsibility, flexible hours, and considerable potential for growth. The American Health Information Management Association (AHIMA; www.ahima.org), a national professional organization with approximately 50,000 members, maintains current information regarding growth of the field, salaries, and employers.

Graduates of this program will receive a joint degree from both Camden County College and Mercer County Community College. MCCC provides courses for the first year of study; Camden offers the remaining courses (all available online) to complete program requirements.

The Health Information Technology program at Camden County College is accredited by the American Health Information Management Association (AHIMA) and the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM), 233 N. Michigan Ave., Suite 2150, Chicago, IL 60601; 312-233-1100 www.cahiim.org

PROGRAM OUTCOMES

- Meet the entry-level competencies and become gainfully employed in the health information technology field;
- Seek Registered Health Information Technologist (RHIT) certification through AHIMA;
- Transfer to a baccalaureate degree program at surrounding universities including Temple, Gwynedd Mercy, and Rutgers.

After completing a four-year degree, students may continue their education to the master's degree level either in health information management or a related field.

Curriculum

Mercer County Community College Courses

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
ENG 101	English Composition I (3/0)	3
HPE 113	Medical Terminology (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
BUS 230	Global Environment of Business (3/0)	3
ENG 102	English Composition II (3/0)	3
MAT 200	Statistics for Social and Health Sciences I (3/0)	3
MOA 101	Medical Ethics and Office Procedures (3/0)	3
	Credits Subtotal:	29

Camden County College Courses

Code	Course	Credits
SUMMER SESSION		
HIT 101	Introduction to Health Information	3
HIT 132	Basic Pharmacology	3
THIRD SEMESTER (Fall)		
HIT 110	Health Informatics	4
HIT 115	Healthcare Reimbursement	3
HIT 130	Introduction to Ambulatory Coding	3
HIT 134	Basic Pathophysiology	3
HIT 140	Diagnostic and Procedural Coding I	3
HIT 150	Technical Practice Experience	1
FOURTH SEMESTER (Spring)		
HIT 202	Statistical Methods for Health Information	3
HIT 215	Advanced Ambulatory Coding	3
HIT 235	Organizational Resources, QI/PI	4
HIT 240	Diagnostic and Procedural Coding II	4
HIT 220	Professional Practice Experience	2
	Credits Subtotal:	39

Courses for the first two semesters are taken at Mercer County Community College. Those for the last two – as well as two Summer courses between the first and second years of the program – are taken through Camden County College, all available online.

Total Credits: 68

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Health Science

Associate in Applied Science Degree

Program **HLTH.SCI.AAS**
CIP 511004

The Health Science meta major provides a common pathway within the first two semesters for students interested in pursuing a degree or working in an allied health career area. The core curriculum consists of general education, mathematics, and science courses.

For subsequent semesters, students select from among three pathway options leading to an Associate in Applied Science or Associate in Science degree. Total credits required for each option vary, consistent with the area of study and/or associated accrediting agency.

PROGRAM OUTCOMES

- Develop the knowledge, skills, and professional requirements of an allied health professional;
- Demonstrate the ability to apply the scientific method to gather and use information;
- Integrate critical thinking and problem solving appropriate for student's allied health discipline;
- Exhibit proficiency in the scientific area of student's licensure/certification.

Core Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)	
	OR	3-4
MAT 125	Elementary Statistics I (3/0)	
PSY 101	Introduction to Psychology (3/0)	3
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
ENG 102	English Composition II (3/0)	3
— —	General Education elective[1]	3
— —	General Education elective[1]	3
		28-29

[1] Refer to requirements specified in chosen pathway option (below).

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all science and math core courses. Students interested in the Rider University guaranteed transfer for the Allied Health Studies B.S. degree must see the Health Science program coordinator.

PATHWAY OPTIONS FOR FOLLOWING SEMESTERS

HEALTH SCIENCE A.A.S. DEGREE

An opportunity for eligible health care professionals to earn the Associate in Applied Science degree and prepare for transfer to a four-year institution offering a baccalaureate program in the health sciences. This program is designed for individuals already possessing allied health credentials, or current students seeking a program change. Professional core credits are awarded for previously held licenses or certification according to the didactic and clinical hours of study.

COURSES	CREDITS
Core Curriculum[1]	28-29
Science elective[2]	4
Technical and Professional electives[3]	*minimum of* 11
Professional Core credits[4] and/or Technical and Professional electives[3]	1-18
Total Degree Credits:	61-62

[1] SECOND SEMESTER: Select courses from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[2] Select from Microbiology (BIO 201), Genetics (BIO 208), Organic Chemistry I (CHE 201).

[3] Select from BIO 101, 102, 201, 208, 217; BUS 105, 209; CHE 101, 102, 107, 201; CIS 173, 175; CMN 111, 112; HPE 101, 105, 113, 151, 241; MAT 125, 126, 135, 140, 146, 200; MLT 112; NUR 151; PBH 101; PHI 205; PHY 101, 102, 109, 111; PTA 105; SPA 101, 102, 121, 122.

[4] Consult Health Science program coordinator for details.

HEALTH PROFESSIONS PROGRAMS

For complete details on each option, refer to the pages in this catalog (28-128) dedicated to each program:

- Exercise Science
- Medical Laboratory Technology (MLT)*
- Nursing*
- Occupational Therapy Assistant* (with Rutgers University)
- Physical Therapist Assistant (PTA)*
- Public Health
- Radiography*
- Respiratory Care* (with Brookdale Community College)

*Admission to licensure-based programs is limited to a specific number of candidates due to accrediting and clinical agency requirements. Students must petition for entry, completing application requirements by the end of the first semester of meta major Core Curriculum. Once accepted, students follow the degree requirements for their chosen program.

COURSES	CREDITS
Core Curriculum[1]	28-29
Total Degree Credits:	*vary, depending on chosen program*

[1] SECOND SEMESTER: Select general education courses in accordance with requirements stipulated in the chosen Health Professions program. Consult coordinator of that specific program for details.

The two-semester (or less) **Certificate of Proficiency in Medical Office Assistant** (page 96) can also be started following the meta major's *first semester*.

RADIOGRAPHY CONCENTRATION at St. Francis Medical Center

This Health Science degree with a JRCERT (Joint Review Committee on Education in Radiologic Technology) accredited Hospital Based Radiography Diploma Program concentration allows graduates to meet eligibility requirements for the American Registry of Radiologic Technologists (ARRT) certification examination and prepares students for transfer into a four-year program. Students must apply for acceptance from the SFMC (Trenton) School of Radiologic Technology.

COURSES	CREDITS
Core Curriculum[1]	28-29
Science elective[2]	3
SFMC Technical and Professional courses[3]	12
Diploma from SFMC	18
Total Degree Credits:	61-62

[1] SECOND SEMESTER: Select from PHI 204 or 205 along with one course from Diversity and Global Perspective general education category.

[2] Select from BIO 115, 201; PHY 109 (preferred).

[3] St. Francis Medical Center School of Radiologic Technology approved courses:

RAD CT	Computerized Tomography and Cross Sectional Anatomy
RAD PRO201	Radiographic Procedures 201
RAD MT	Medical Terminology
RAD PC I	Patient Care I
RAD PC II	Patient Care II

Heating, Refrigeration and Air Conditioning

Program **HRAC.AAS**
CIP 150501

Associate in Applied Science Degree

The Heating, Refrigeration and Air Conditioning program prepares a student for such positions as service representative, service supervisor, estimator, system designer, and laboratory technician. Graduates assume supervisory, management and technical responsibility.

The HRA courses are part of a joint program between Mercer County Community College and the Mercer County Technical Schools.

PROGRAM OUTCOMES

- Perform all service functions of a graduate of the certificate program;
- Communicate effectively by oral, written, or graphic means;
- Produce basic mechanical drawings and sketches needed to communicate concepts and designs;
- Understand the laws of physics as they apply to the subject field;
- Perform computations necessary to solve basic load sizing problems;
- Apply the fundamental laws of thermodynamics and the basic principles of heat flow as they apply to HRAC;
- Determine proper air distribution in HRAC systems.

The program may be pursued part-time or full-time, but most required courses are available only in the evening.

Admission to the program requires a high school diploma or its equivalent with one year of algebra or applied mathematics.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
EET 130	Fundamentals of Electronics (2/2)	3
ENG 101	English Composition I (3/0)	3
ENT 116	Engineering Graphics (1/2)	2
HRA 101	Principles of Refrigeration/ Air Conditioning I (1/2)	2
HRA 102	Principles of Refrigeration/ Air Conditioning II (1/2)	2
MAT —	Mathematics elective[1]	3-4
SECOND SEMESTER		
ECO 103	Basic Economics (3/0)	3
ENG 102	English Composition II (3/0)	3
HRA 103	Refrigeration/Air Conditioning Electrical Controls (2/4)	4
IST 101	Computer Concepts with Applications (2/2)	3
— —	Electives	4-5
THIRD SEMESTER		
EET 140	Electronic Construction (1/3)	2
HRA 104	Domestic Heating and Air Conditioning Systems (2/4)	4
PHY 111	Physical Science Concepts (2/2)	3
— —	Technical electives[2]	3-5
FOURTH SEMESTER		
HRA 202	Light Commercial Systems I (1/2)	2
HRA 203	Light Commercial Systems II (1/2)	2
HRA 205	Heavy Commercial Systems (1/4)	4
ERG —	Energy elective[3]	3
— —	General Education elective[4]	3
		60-64

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Select in consultation with an academic advisor.

[2] Select technical electives in consultation with an academic advisor. Recommended: DRA 190; ERG 111, 112, 113.

[3] Select from ERG 111, 112, 113.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Heating, Refrigeration and Air Conditioning

Program **HRAC.CERT**
CIP 150501

Certificate of Proficiency

Heating, Refrigeration and Air Conditioning is a joint program between Mercer County Community College and the Mercer County Technical Schools. It is designed to prepare students for employment in commercial establishments and industry, in such positions as refrigeration mechanic, commercial air conditioning mechanic, furnace installer and repairer, oil burner installation and service technician, gas heating system servicer, and mobile air conditioning system mechanic.

Admission to the certificate program requires a high school diploma or its equivalent with one year of algebra or applied mathematics. Students must demonstrate mathematics proficiency at the MAT 037 level to qualify for the certificate.

The program is part-time only and most courses are offered only during the evening.

PROGRAM OUTCOMES

- Explain the basic theories and fundamental principles of heat transfer;
- Service, troubleshoot, and repair domestic and commercial refrigeration and air conditioning systems and components;
- Use electrical and mechanical test equipment and metering devices;
- Utilize a working knowledge of control circuitry, instrumentation and ladder diagram/schematic interpretation;
- Determine heating and air conditioning size requirements for a building of specific volume, orientation on lot, and geographic location.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
EET 130	Fundamentals of Electronics (2/2)	3
ENT 116	Engineering Graphics (1/2)	2
HRA 101	Principles of Refrigeration/ Air Conditioning I (1/2)	2
HRA 102	Principles of Refrigeration/ Air Conditioning II (1/2)	2
MAT —	Mathematics elective[1]	3-4
HRA 103	Refrigeration/Air Conditioning Electrical Controls (2/4)	4
HRA 104	Domestic Heating and Air Conditioning Systems (2/4)	4
EET 140	Electronic Construction (1/3)	2
ENG 101	English Composition I (3/0)	3
HRA 202	Light Commercial Systems I (1/2)	2
HRA 205	Heavy Commercial Systems (1/4)	4
ERG —	Energy elective[2]	3
		34-35

[1] Select in consultation with an academic advisor.

[2] Select from ERG 111, 112, 113.

NOTE: Students must earn a minimum grade of C in all HRA courses to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Hotel, Restaurant and Institution Management

Program **HRIM.AAS**
CIP 520904

Associate in Applied Science Degree

The Hotel, Restaurant and Institution Management program prepares students for employment in various entry-level management careers in the lodging and food service industries. Areas of employment include assistant manager in hotel/motel operations; club, restaurant or banquet manager of commercial eating establishments; and assistant food service management positions in hospitals, schools and other institutions.

PROGRAM OUTCOMES

- Demonstrate principles of effective human resource management in the supervision of employees;
- Plan and develop appropriate menus which meet the criteria of hotels, restaurants and/or institutions;
- Apply cost control techniques in various operations;
- Demonstrate ability to communicate effectively through oral, written or graphic means;
- Demonstrate knowledge of various laws and regulations affecting food service operations;
- Plan and direct food production and service in a variety of settings;
- Supervise employees in the front desk operation of a hotel;
- Analyze computer data for hotel registration, accounts receivable, billing, etc.

The program includes an internship in a hotel, restaurant or institutional food service facility. Placement assistance is offered by program faculty and available through cooperative agreements with hotels, food service facilities, and restaurants in the Mercer County area.

Students may study full-time or part-time. Most courses are offered both day and evenings.

Most of the credits earned in acquiring the A.A.S. degree in Hotel, Restaurant and Institution Management can be applied to the B.S. degree offered through articulation agreements with Fairleigh Dickinson University and Johnson & Wales University.

Admission to the program requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
HOS 101	Food Preparation I (1/4)	3
HOS 111	Culinary Math (1/0)	1
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 120	Introduction to the Hospitality Industry (3/0)	3
MAT 120	Mathematics for Liberal Arts (3/0)[1]	3
SECOND SEMESTER		
ENG 102	English Compostion II (3/0) OR	3
ENG 112	English Composition II with Speech (3/0)	
HOS 102	Food Preparation II (1/4)	3
HOS 104	Hotel Management and Lodging Operations (3/0)	3
HOS 204	Hospitality Marketing (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
THIRD SEMESTER		
ACC 108	Hospitality Accounting (3/0)[2]	3
BUS 240	Human Resource Management (3/0)	3
HOS 203	Hospitality Purchasing (3/0)	3
HOS 208	Hospitality Law (3/0)	3
— —	General Education elective[3]	3
FOURTH SEMESTER		
ACC 109	Food, Beverage and Labor Cost Control (3/0)[3]	3
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
HOS 115	Food and Culture (2/2)	3
HOS 267	Event Planning (3/0)	3
HOS 290	Internship in Hotel, Restaurant, and Institution Management (1/0 + internship)	2
— —	General Education elective[4]	3
		64

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Or higher-level mathematics course.

[2] ACC 111 and 112 are acceptable alternatives.

[3] Select course from either Social Science or Humanities general education categories.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Illustration

Program **ILLUST.AAS**
CIP 500402

Associate in Applied Science Degree in Visual Arts

The Illustration program prepares students for entry-level positions as illustrators or graphic designers in advertising agencies, design firms, publishing houses, production studios, or corporate environments. It also parallels the first two years of study in illustration at many undergraduate universities and art colleges.

As visual communicators, illustrators must learn the same basic design principles as graphic designers and fine artists. The design sequence of courses emphasizes the development of fine art skills as well as creative thinking for visual solutions. Skills and techniques in both traditional and computer-generated forms are introduced and emphasized. Most coursework takes place in a studio using current professional-quality equipment, artistic techniques, and technology.

An advisory commission composed of active design professionals works with the faculty to ensure that the program stays current with the changing technological advances in the illustration field.

PROGRAM OUTCOMES

- Apply computer applications to design principles;
- Illustrate and practice professional design principles;
- Recognize elements of proper design in professional-quality work;
- Design professional-quality concepts, both traditional and digital;
- Demonstrate competence in the design and production of illustrations;
- Develop and present ideas in both written and oral formats;
- Create a professional portfolio to serve in the pursuit of further education or employment.

The program may be pursued full-time or part-time. Some courses may only be offered during the day. Students are advised not to take visual art courses out of sequence.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ADV 110	Typography I: Basics of Graphic Design (1/4)	3
ART 102	Basic Drawing (1/4)	3
ART 105	Two-Dimensional Design (1/4)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
DMA 105	Introduction to Computer Art (1/4)	3
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
ADV 101	Advertising Design I (1/4)	3
ART 104	Life Drawing (1/4)	3
ART 130	Painting I (1/4)	3
ENG 102	English Composition II (3/0)	3
— —	Art History elective (3/0)[1]	3
THIRD SEMESTER		
ADV 201	Advertising Design II (1/4)	3
ADV 220	Illustration I (1/4)	3
ART 106	Three-Dimensional Design (1/4)	3
ART 123	History of Modern Art (3/0)	3
DMA 110	Digital Imaging (1/4)	
	OR	3
ART 150	Printmaking I (1/4)	
FOURTH SEMESTER		
ADV 202	Advertising Design III: Portfolio (1/4)	3
ADV 222	Illustration II: Digital Drawing (1/4)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
MAT —	Mathematics elective[2]	3
— —	Science OR Technology elective[3]	3
— —	Professional elective[4]	3
		65

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Select from ART 121, 122, 124, 125; PHO 110.

[2] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[3] Select from BIO 114, DMA 144, IST 102.

[4] Select from ADV 210; ART 141, 145, 146, 230, 233; DMA 145; PHO 103.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in ART 105; DMA 105; ADV 101, 201, 202, 220, and 222 to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Liberal Arts

Program **LA.AA**
CIP 240101

Associate in Arts Degree in Liberal Arts and Sciences

The Liberal Arts program offers a variety of courses that prepare students to transfer into the junior year at four-year colleges and universities in such fields as English, history, humanities, journalism, world languages, pre-law, literature, psychology, sociology, political science, anthropology, philosophy, and education. Liberal Arts can be a valuable, flexible path allowing students to explore many subject areas before choosing a more specific discipline upon transfer.

The Liberal Arts program is fundamentally cross-disciplinary; this broad perspective provides students with a strong foundation in humanities, social science, natural science, and mathematics. Using a variety of cross-disciplinary approaches, students work together to explore what we share and how we differ, developing the skills needed for engaged, responsible, global citizenship.

An associate degree in Liberal Arts is most effective as a step toward transfer and further academic work. Students enrolled in the Liberal Arts program who intend to transfer to four-year colleges or universities are strongly advised to discuss their general education electives with a faculty advisor.

Almost all baccalaureate institutions prefer coursework for a student's major field to be completed at that institution. Therefore, it is better for students to fulfill the general education requirements that make up the core of Liberal Arts at Mercer, working with faculty advisors to select courses with an eye toward full transferability. All students should determine the requirements of the transfer institutions they would like to attend and consult with Transfer Services about available articulation agreements and transfer options.

Liberal Arts majors have transferred to Rider University, The College of New Jersey, Rutgers University, Temple University, and many other institutions.

The program may be pursued part-time or full-time and may be completed by daytime or evening attendance, or fully online.

PROGRAM OUTCOMES

- Understand the vocabulary, methods, and the major concepts present in the humanities, the social sciences, and the natural sciences;
- Articulate complex ideas clearly and effectively, both verbally and in writing;
- Perform a series of thinking tasks including speculation, analysis, and synthesis (i.e., abstract reasoning);
- Utilize research materials and methodologies;
- Speak, write, read, and comprehend a world language commensurate with the level of study.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)	3
HIS —	Historical Perspective general ed. elective[1]	3
— —	Social Science general education elective[2]	3
SECOND SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
HIS —	Historical Perspective general ed. elective[1]	3
MAT —	Mathematics elective[3]	3
— —	Diversity and Global Perspective elective	3
— —	Social Science general education elective[2]	3
THIRD SEMESTER		
ENG —	Literature elective[4]	3
— —	Science laboratory elective	3-4
— —	Social Science elective[5]	3
— —	World Language elective[6]	3
— —	Program elective[7]	3
FOURTH SEMESTER		
PHI —	Philosophy elective[8]	3
— —	Science OR Technology elective[9]	3-4
— —	Social Science or Humanities elective[10]	3
— —	World Language elective[6]	3
— —	Program elective[7]	3
		62-64

[1] Select from HIS 101, 102, 112, 113.

[2] Recommended: PSY 101 or SOC 101 or 107. These courses can be taken in any order.

[3] MAT 126 recommended. MAT 120 or higher-level mathematics courses are acceptable alternatives. Consult your academic advisor and the institution(s) to which you plan to apply for transfer regarding their math requirements.

[4] Select any 200-level ENG literature course (not limited to general education listings).

[5] Select from the list of 200-level Social Science electives – whether or not a general education course – available in the Liberal Arts Division or from any academic advisor. No more than six credits may be taken in any one Social Science discipline.

[6] Courses must be taken in a progressive sequence limited to one language; start at 101 only if this is a new language for you. Choose carefully with a faculty advisor regarding the transferability of language courses. If language courses are CLEPed, you must meet with a Liberal Arts faculty advisor and/or the World Languages coordinator.

[7] Any 101-level or higher course required in an A.A., A.F.A, or A.S. degree program qualifies, as do DMA 105 and 120 as well as PHO 101, 103, and 110.

[8] Select any 200-level Philosophy course.

[9] Choose carefully with assistance from a faculty advisor or transfer counselor. May be a second laboratory science or another general education Natural Science or Technology elective.

[10] Any Social Science, ENG, HIS, or PHI course qualifies.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Liberal Arts: Global Studies

in cooperation with Rider University's Global Studies baccalaureate program

Associate in Arts Degree in Liberal Arts and Sciences

Program **LA.GLOB.AA**
CIP 240101

The Liberal Arts concentration in Global Studies prepares students who plan to graduate from Mercer with an A.A. degree in Liberal Arts and Sciences for guaranteed transfer to Rider University's Global Studies baccalaureate program. Students are encouraged to read details of the Mercer/Rider guaranteed transfer articulation agreement posted on the MCCC Transfer Services website.

The objectives of a Global Studies concentration are the same as those for a general Liberal Arts degree.

PROGRAM OUTCOMES

- Understand the vocabulary and the major concepts present in the humanities, the social sciences, and the natural sciences;
- Articulate complex ideas clearly and effectively, both in speech and in writing;
- Perform a series of thinking tasks including speculation, analysis, and synthesis (i.e., abstract reasoning);
- Utilize research materials and approaches;
- Speak, write, read, and comprehend a world language commensurate with the level of study.

Some differences specific to a Global Studies concentration are the requirement of four semesters of world language study along with introductory coursework in Economics and Anthropology, a mandatory course taken at Rider University in the third semester, and a specific emphasis on World History and World Literature.

Students must complete all specified coursework for the Liberal Arts Global Studies concentration and graduate from MCCC with a cumulative 2.5 or higher GPA for guaranteed transfer to Rider University's Global Studies program.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Curriculum

Global Studies Concentration

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ANT 101	Anthropology (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)	3
— —	World Language elective[1]	3
SECOND SEMESTER		
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
HIS 112	World History to 1500 (3/0)	3
MAT —	Mathematics elective[2]	3
— —	World Language elective[1]	3
THIRD SEMESTER		
ECO 103	Basic Economics (3/0)	3
GLS 285	The Student Global Village[3]	3
HIS 113	World History Since 1500 (3/0)	3
ENG —	Literature elective[4]	3
— —	World Language elective[1]	3
— —	Science laboratory elective	3-4
FOURTH SEMESTER		
— —	Philosophy OR Religious Studies OR History elective[5]	3
— —	World Language elective[1]	3
— —	Science OR Technology elective[6]	3-4
— —	Social Science elective[7]	3
— —	Program elective[8]	3
		62-64

[1] Courses must be taken in a progressive sequence limited to one language; start at 101 only if this is a new language for you. Choose carefully with a faculty advisor regarding the transferability of language courses.

[2] MAT 126 recommended. MAT 120 or higher-level mathematics courses are acceptable alternatives. Consult your academic advisor and the institution(s) to which you plan to apply for transfer regarding their math requirements.

[3] Students must take this course at Rider University. For details, see the Rider University guaranteed transfer articulation document on the MCCC Transfer Services website.

[4] Select from ENG 203 (World Literature I), ENG 204 (World Literature II), or ENG 232 (Post-Colonial Women Writers).

[5] Select carefully, with assistance from an academic advisor or transfer counselor.

[6] Choose carefully with assistance from a faculty advisor or transfer counselor. May be a second laboratory science or another general education Natural Science or Technology elective.

[7] Select from all Social Science general education electives as well as some – not necessarily general education – in ANT, CMN, POL, PSY, SOC, and WGS course categories. One elective must be at the 200 level. The list of acceptable Social Science electives is available in the Liberal Arts Division or from any academic advisor.

[8] Recommended: ART 124 (History of Non-Western Art), BUS 230 (Global Environment of Business), HIS 215 (The Holocaust and Other Genocides), HOS 115 (Food and Culture), SOC/WGS 132 (Introduction to Women's and Gender Studies), SOC 201 (Marriage and the Family).

† Some exemptions apply. Consult academic advisor for details.

Mathematics

Program **MATH.AS**
CIP 240101

Associate in Science Degree in Liberal Arts and Sciences

The Mathematics option of the Liberal Arts and Sciences program prepares graduates for transfer into the junior year of a baccalaureate degree program in mathematics or a related area.

PROGRAM OUTCOMES

- Apply a range of mathematical skills spanning fundamental concepts to more advanced mathematical concepts;
- Apply quantitative knowledge, including the required technological skills and theoretical knowledge;
- Demonstrate critical thinking skills to solve real world problems using mathematical modeling;
- Communicate methods of solutions and results to problems using mathematical language and notation.

Admission to the program requires a high school diploma or its equivalent with one year of laboratory science (biology, chemistry, physics) and four years of mathematics including algebra I and II, plane geometry, and algebra with trigonometry; two years of a world language are recommended. Students who have not taken these courses or who have not completed them within the last five years may take appropriate preparatory courses at the college.

This program may be pursued part-time or full-time, and may be completed by daytime or evening attendance. It is recommended that students plan coursework and electives carefully and consult an academic advisor regularly.

Mathematics students have successfully transferred to colleges and universities throughout New Jersey and across the nation.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0)	4
— —	Science elective[1]	4
— —	Social Science general education elective	3
SECOND SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
MAT 152	Calculus II (4/0)	4
— —	Science elective[1]	4
— —	Humanities general education elective	3
THIRD SEMESTER		
MAT 251	Calculus III (4/0)	4
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
— —	World Language elective[2]	3
— —	General Education elective[3]	3
— —	Elective	3
FOURTH SEMESTER		
MAT 252	Differential Equations (4/0)	4
MAT —	Mathematics elective[4]	3-4
— —	World Language elective[2]	3
— —	General Education elective[5]	3
— —	Elective	3
		62-63

[1] University Physics recommended. Select also from BIO 101, 102, 201, 202; CHE 101, 102, 201, 202.

[2] With advisor approval, the following may be substituted: COS 101, 102; PHI 102.

[3] Select course from either Social Science or Humanities general education categories.

[4] Select from MAT 201, 208; COS 204.

[5] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Medical Laboratory Technology

Program **MED.LAB.B.AAS**
CIP 511004

Associate in Applied Science Degree

Medical laboratory technology is a field of professional study involving students in the exciting and challenging world of science and medicine. Laboratory professionals perform diagnostic laboratory tests on medical specimens which provide information used to diagnose health and disease.

Combining courses in general education and medical laboratory science with a clinical practice conducted at an approved area healthcare facility, the Medical Laboratory Technology program prepares students for careers as medical laboratory technicians. It is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont IL 60018; 773-714-888 www.naacls.org.

A graduate of the program is eligible for certification by successfully completing the examination given by the American Society for Clinical Pathologists. Graduates are eligible for immediate employment in hospital labs, physician offices, public health labs, as well as pharmaceutical and research companies.

PROGRAM OUTCOMES

- Integrate knowledge learned and experienced in the disciplines of general education, mathematics, science, and medical laboratory science;
- Achieve entry-level career competencies of a medical laboratory technician by testing biological samples using current technology to generate accurate, quality-assured laboratory results used for health and disease evaluation;
- Utilize critical-thinking skills to assess and problem-solve laboratory data for patient diagnoses;
- Maintain familiarity with the profession's code of ethics and consistently act within those standards during interactions with fellow classmates and working professionals in the clinical setting;
- Describe the importance of continuing education in lifelong learning and in obtaining and upholding professional credentialing;
- Demonstrate academic and technical competence in the professional courses of the curriculum through college and applied clinical education experiences;
- Take the national ASCP certification exam.

Admission to the Medical Laboratory Technology program requires a high school diploma or its equivalent, satisfactory performance on the MCCC college skills placement test, and completion of any required academic foundation courses.

Applicants are encouraged to consult their academic advisor. For further information, contact the MLT program coordinator or visit www.mccc.edu/mltp.

Curriculum

Code	Course (lecture/lab/clinical hours)	Credits
	PRE-PROFESSIONAL PHASE	
	FIRST SEMESTER	
BIO 103	Anatomy and Physiology I (3/3)[1]	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
PSY 101	Introduction to Psychology (3/0)[2]	3
MAT —	Mathematics elective (4/0)[3]	4
	SECOND SEMESTER	
BIO 104	Anatomy and Physiology II (3/3)[1]	4
BIO 201	Microbiology (3/3)	4
CHE 101	General Chemistry I (3/3)	
	OR	4
CHE 107	General and Physiological Chemistry (3/2)	
CMN 111	Speech: Human Communication (3/0)	
	OR[4]	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
	PROFESSIONAL PHASE	
	SUMMER, FALL, SPRING	
MLT 112	Introduction to Medical Laboratory Technology (2/3)	3
MLT 200	Clinical Chemistry (3/2)	4
MLT 207	Clinical Immunohematology (3/3)	4
MLT 212	Clinical Hematology (3/3)	4
MLT 214	Clinical Microbiology (5/3)	6
MLT 215	Clinical Practice (560 hours)	10
		65

[1] BIO 103 and 104 are acceptable alternatives for BIO 101 and 102. Consult academic advisor for details.

[2] PSY 101 is the preferred Social Science elective. Consult academic advisor for details.

[3] Select from MAT 135, 140, 146, 200.

[4] CMN 111 or 112 is the preferred general education elective. Consult academic advisor for details.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all BIO, CHE, MAT, and general education courses within two attempts. Students must earn a minimum grade of C+ in all MLT courses during the professional phase within two attempts.

B.S. (Bachelor of Science) Degree Completion

In addition to acquiring certification, successful graduates of the Medical Laboratory Technology A.A.S. program can apply to bachelor's degree completion programs through established articulation agreements arranged with MCCC and a variety of four-year colleges. Students follow the standard MLT curriculum (above), with course substitutions and additional coursework as follows:

- **FIRST SEMESTER:** select MAT 146 as the Mathematics elective
- **SECOND SEMESTER:** select CHE 101 instead of 107
- **additional science courses:** BIO 101, 102, 208; CHE 102
- **additional general education courses:** HIS 112, 113; MAT 200; world language levels I and II

Medical Office Assistant

Certificate of Proficiency

Program **MED.OA.CERT**
CIP 510716

The Certificate of Proficiency in Medical Office Assistant prepares students to enter or transition into health professions careers including but not limited to medical assistant (depends on the setting), medical biller, medical coder, and medical office assistant. Graduates are prepared for employment in medical settings of all sizes to help others and support the distribution of health information, and to pursue further education.

This two-semester (or less) credit program is ideal for those seeking to immediately enter the healthcare field. Students who complete this certificate can consider taking the Certified Medical Administrative Assistant (CMAA) and Certified Professional Coder (CPC) exams.

PROGRAM OUTCOMES

Successful graduates of this program will be able to understand and apply concepts learned in:

- Anatomy and physiology
- Oral and written communication
- Microsoft applications
- Medical terminology
- Medical ethics
- Medical office procedures
- Medical billing and coding

Every effort is made to keep current with the constant changes in government and insurance regulations in order to ensure that program content reflects up-to-date requirements and procedures.

Paid internships may be available exclusively for Medical Office Assistant majors. Depending on the healthcare employer, future tuition toward degrees may be partially reimbursed. Medical Office Assistant students who meet One-Stop Career Center qualifications may receive up to $4000 in financial support toward completing this certificate.

Admission to the program requires a high school diploma or its equivalent. MCCC may accept and award some credits earned from other accredited schools and the MCCC Center for Continuing Studies toward this credit certificate. At least 15 credits must be completed at MCCC. Visit www.mccc.edu/moa for details.

Upon successful completion of the Certificate of Proficiency in Medical Office Assistant, students can complete MCCC's **Health Science A.A.S. degree** in only two additional semesters, and at least half of the certificate's credits may count toward most other associate degrees in MCCC's Health Professions Division.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER: 16 credits		
BIO 103	Anatomy and Physiology I (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra (4/0)[1]	4
PSY 101	Introduction to Psychology (3/0)	3
SECOND SEMESTER: 15 credits		
CMN 111	Speech: Human Communication (3/0)	3
HPE 113	Medical Terminology (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
MOA 101	Medical Ethics and Office Procedures (3/0)[2]	3
MOA 103	Medical Billing and Coding Procedures (3/0)[2]	3
		31

AWARDED: Certificate of Proficiency in Medical Office Assistant

Students who graduate will receive 1 credit toward the A.A.S. in Health Science professional core.

[1] MAT 125 may be an acceptable substitution, with approval from the Medical Office Assistant program coordinator.

[2] Offered every Fall and Spring on both campuses. Prerequisites: BIO 103, CSW 100, ENG 101, MAT 135, PSY 101. Credits for MOA 101 and 103 can alternatively be earned through completing Center for Continuing Studies classes. Consult program coordinator for details.

† Some exemptions apply. Consult program coordinator for details.

NOTE: Students must earn a minimum grade of C in HPE 113 and all MOA courses to graduate. Students must also earn a minimum grade of C in all science and math courses to graduate with the A.A.S. in Health Science.

Health Science A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
THIRD SEMESTER: 16-17 credits		
BIO 104	Anatomy and Physiology II (3/3)	4
ENG 102	English Composition II (3/0)	3
— —	General Education Elective[1]	3
— —	Technical and Professional Elective[2]	3
— —	Technical and Professional Elective[2]	3-4
FOURTH SEMESTER: 16-17 credits		
BIO 201	Microbiology (3/3)[3]	4
— —	General Education Elective[1]	3
— —	Technical and Professional Elective[2]	3
— —	Technical and Professional Elective[2]	3
— —	Technical and Professional Elective[2]	3-4
		64-66

AWARDED: Associate in Applied Science degree in Health Science

[1] Select courses from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[2] Approved electives include BIO 101, 102, 201, 208, 217; BUS 105, 209; CHE 101, 102, 107, 201; CIS 173, 175; CMN 111, 112; HPE 101, 105, 113, 151, 241; MAT 125, 126, 135, 140, 146, 200; MLT 112; OST 219; NUR 151; PBH 101; PHI 205; PHY 101, 102, 109, 111; PTA 105; SPA 101, 102, 121, 122.

[3] BIO 208 and CHE 201 are acceptable alternatives.

NOTE: Students must earn a minimum grade of C in all science and math courses to graduate. Students interested in the Rider University guaranteed transfer for the Allied Health Studies B.S. degree must see the Health Science program coordinator.

Microcomputer Applications

Program **MICRO.APP.CERT**
CIP 110601

Certificate of Proficiency

The Microcomputer Applications certificate program prepares students for intelligent and efficient use of personal computer systems and commercial software for business applications in an office environment.

The program is primarily designed for upgrading the skills of persons employed in clerical, technical or managerial positions. It also provides skills which are helpful in securing entry-level employment in these fields.

PROGRAM OUTCOMES

- Demonstrate knowledge of PC operating systems, networking essentials, and applications software;
- Demonstrate mastery of one major business application product for word processing, database, spreadsheet, and presentation applications;
- Apply PC skills together with other technical/ business knowledge toward advancement or employment in a technology-intensive office environment.

Admission to the program requires a high school diploma or its equivalent.

Note: Because of the focus on PC applications in this program, students must possess keyboarding skills. See OST 111.

Note: Computer application courses are mapped to Microsoft certification exams.

Also see:
- Administrative Support certificate program

Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
IST 101	Computer Concepts with Applications (2/2)[1]	3
OST 219	Word Processing Concepts and Applications (2/2)	3
NET 102	Introduction to PC Hardware and Software (2/2)[2]	3
BUS 103	Business Mathematics (3/0)	
	OR	3-4
MAT —	Mathematics elective[3]	
CIS 173	PC Applications: Database (2/2)	3
CIS 175	PC Applications: Spreadsheets (2/2)	3
CIS 182	PC Applications: Presentations (2/2)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
NET 120	Windows Desktop Operating System Administration (2/2)	3
— —	Technical elective[4]	3
		33-34

[1] May be substituted with another Technology general education elective if student shows competency in Microsoft Office applications.

[2] Students may sit for the A+ certification exam after completion of NET 102 and 103.

[3] Students intending to transfer to a baccalaureate program should consider MAT 108, 135, or higher-level mathematics course. Others should take MAT 140.

[4] Select from DMA 145, IST 140, NET 103, OST 223.

Mobile and Web Computing

Program **MOBILE.WEB.COMP.CERT**
CIP 522101

Certificate of Proficiency

The Mobile and Web Computing certificate program teaches the skills needed to enter the mobile and web computing fields and prepares students for entry-level positions such as computer programmer, mobile app developer, and web application developer.

PROGRAM OUTCOMES

- Analyze computer application requirements;
- Design, write, test, and debug mobile and web applications.

All courses in this program completed with a grade of C or better may be applied toward the Computer Information Technology A.A.S., or Computer Information Systems or Computer Science A.S. degree programs.

Admission requires a high school diploma or its equivalent. Prior programming experience is helpful, but not necessary. Some required courses may be offered only during the evening, and some may be offered only in alternate semesters. It is essential that students plan ahead in consultation with the program coordinator.

Curriculum

Code	Course (lecture/lab hours)	Credits
COS 102	Computer Science I – Algorithms and Programming (3/2)	4
ENG 101	English Composition I (3/0)	3
IST 108	Introduction to Programming with Mobile Application Development (3/2)	4
IST 144	Website Development (3/2)	4
IST 208	Android Application Development (3/2)	4
IST 218	iOS Application Development (3/2)	4
IST 244	Web Application Development (3/2)	4
— —	Program elective[1]	3-4
		30-31

[1] In consultation with an academic advisor, select from the course categories of COS, DMA, GAM, IST, or NET.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Music

Program **MUSIC.AS**
CIP 500101

Associate in Science Degree in Liberal Arts and Sciences

The Music A.S. option of the Performing Arts program provides the prospective graduate with the theoretical and practical training necessary to transfer at the junior level in most baccalaureate music programs by way of a comprehensive curriculum that encompasses the same rigor and scope as that encountered in the first two years of a typical four-year program.

Core curriculum requirements include four semesters of Music Theory studies encompassing ear training and sight singing; two semesters of Music History; four semesters of piano training; four semesters of one-on-one study of a primary instrument (or voice) with a highly trained and well credentialed private instructor; four semesters of participation in one or more of the program's performing ensembles.

Additional course offerings in jazz history, jazz improvisation, music business, and digital recording technology further prepare many music majors for a wider variety of transfer options and eventual career choices.

PROGRAM OUTCOMES

- Demonstrate a professional level of fluency in both the reading and writing of musical notation;
- Demonstrate a working knowledge of the theoretical principles that underlie all the primary genres of music of Western culture, including scale and chord construction; the tonal system of keys and chord relationships; harmonic analysis; figured bass; the principles and procedures of four-part writing; and modulation;
- Analyze excerpts of musical compositions, working from a printed score, on the levels of harmony, rhythm, melodic contour, phrase structure, and large scale formal structure;
- Notate short melodic fragments of two to four measures in length upon hearing them performed;
- Sing at sight melodies of intermediate difficulty in both major and minor keys;
- Identify and distinguish the major periods in the history of Western music from the Middle Ages into the 21st century and cite the primary composers whose works exemplify the stylistic trends of each period;
- Demonstrate a level of proficiency at the piano keyboard suitable for teaching, arranging, composing, and analyzing music;
- Cultivate and demonstrate a level of proficiency on a chosen primary instrument (or voice) suitable for transfer to a baccalaureate music program;
- Apply his/her instrumental or vocal skill in the context of ensemble performance.

Admission to the Music program requires a high school diploma (or equivalent), at least a rudimentary proficiency on a musical instrument, and some degree of aural acuity. Graduates of the program typically transfer successfully to such highly regarded institutions as Rutgers University, New York University, The College of New Jersey, Rowan University, Montclair State University, and William Paterson University.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MUS 103	Introduction to Music (3/0)	3
MUS 105	Fundamentals of Music Theory (2/2)	3
MUS 121	Piano Class I (0/2)	1
MUS 109	Applied Music I (.5/1)	1
MUS —	Performing Group (0/3)[1]	2
SECOND SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
MUS 127	Music Theory I (2/2)	3
MUS 167	Musicianship I (0/2)	1
MUS 122	Piano Class II (0/2)	1
MUS 110	Applied Music II (.5/1)	1
MUS —	Performing Group (0/3)[1]	2
MAT —	Mathematics elective[2]	3
THIRD SEMESTER		
MUS 128	Music Theory II (2/2)	3
MUS 168	Musicianship II (0/2)	1
MUS 221	Piano Class III (0/2)	1
MUS 209	Applied Music III (.5/1)	1
MUS 224	Music History and Literature I (3/0)	3
MUS —	Performing Group (0/3)[1]	2
— —	Lab Science elective	3
FOURTH SEMESTER		
MUS 227	Music Theory III (2/2)	3
MUS 267	Musicianship III (0/2)	1
MUS —	Piano elective (0/2)[3]	1
MUS 210	Applied Music IV (.5/1)	1
MUS 225	Music History and Literature II (3/0)	3
MUS —	Performing Group (0/3)[1]	2
— —	Mathematics[2] OR	
	Science OR Technology elective	3
— —	Social Science general education elective	3
		63

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] Chamber Ensemble, Jazz Band, or Chorus (one semester of Chamber Ensemble minimum).

[2] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[3] MUS 222 (Piano Class IV) or MUS 223 (Jazz Keyboard Harmony and Improvisation).

†Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all MUS courses to graduate.

The Music A.S. degree may be pursued on a full-time or part-time basis, with most course offerings available during daytime hours only.

Nursing

Associate in Science Degree

Program **NUR.B.AS**
CIP 513801

The Associate Degree Nursing (ADN) program combines coursework in nursing and general education with clinical experiences in area healthcare facilities under the supervision of college faculty.

The Nursing program is accredited by the New Jersey Board of Nursing, 124 Halsey Street, 6th Floor, Newark, NJ 07102, 973-504-6430; and by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Rd. NE, Suite 850, Atlanta, GA 30326, 404-975-5000.

The ADN program faculty is committed to providing high-quality nursing education to meet the diverse and changing healthcare needs of the community and to promote the development of qualified students prepared for the professional role of the entry-level registered nurse. Students are challenged to achieve their goals in a caring, creative, and engaged learning environment.

The foundation for the curriculum is based on the principles of patient-centered care, teamwork and collaboration, clinical reasoning, quality improvement, leadership, information technology, and safety. Based on these principles, faculty mentor, teach, and encourage students to develop competency in the knowledge, skills, and attitudes required to provide safe and effective nursing care.

PROGRAM OUTCOMES

- Provide safe, quality, evidence-based, patient-centered nursing care in a variety of healthcare settings to diverse patient populations across the lifespan;
- Engage in clinical reasoning to make patient-centered care decisions;
- Participate in quality improvement processes to improve patient care;
- Collaborate with members of the interprofessional team, the patient, and the patient's support persons;
- Use information management (informatics) principles, techniques, and systems as well as patient care technology to communicate, manage knowledge, mitigate error, and support decision-making;
- Assimilate leadership, management, legal, and ethical guidelines in practice as a Registered Nurse.

The Nursing program offers both a daytime and an evening/weekend option. Upon enrollment in the college, students must declare their program of study (major) as Health Science - Nursing. Students must be a U.S. citizen or permanent resident. Qualified out-of-county applicants will be considered for admission only after all qualified Mercer County residents are accommodated.

Admission to the college requires a high school diploma or its equivalent, satisfactory performance on the college skills placement test, and completion of any required academic foundations courses.

Curriculum

Code	Course (lecture/lab/clinical hours)	Credits
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
CHE 107	General and Physiological Chemistry (2/1/2)	4
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)[1]	3-4
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
ENG 102	English Composition II (3/0)	
	OR	3
ENG 112	English Composition II with Speech (3/0)	
NRS 111	Clinical Reasoning in Nursing Practice (1/0)	1
NRS 112	Concepts of Nursing Practice I (3/3/6)	6
THIRD SEMESTER		
BIO 201	Microbiology (3/3)	4
NRS 125	Concepts of Nursing Practice II (3/3/12)	8
PSY 101	Introduction to Psychology (3/0)	3
FOURTH SEMESTER		
NRS 225	Concepts of Nursing Practice III (3/3/12)	8
PSY 207	Developmental Psychology:	
	Across the Life Span (3/0)	
	OR	3
SOC 101	Introduction to Sociology (3/0)	
FIFTH SEMESTER		
NRS 235	Concepts of Nursing Practice IV (3/3/12)	8
— —	General Education elective[2]	3
		65-66

[1] MAT 135, 140 (4 credits), or 200 (3 credits) are acceptable alternatives.
[2] PHI 102 or 205 recommended.

Admission to the Nursing program requires a cumulative (transfer or Mercer) minimum GPA of 2.5 or higher; an 80% or higher in the English Language Composite and 80% or higher on the math portion of the HESI Admission Assessment Exam; completion of first semester courses (ENG 101, CHE 107, BIO 103 and math elective) with a C or higher, with the exception of BIO 103 (requiring a C+ or higher); and attendance at a mandatory Nursing program information session. The program also offers an LPN-RN Advanced Placement option (see following page).

Students must earn a minimum grade of C in all required general education courses and C+ or higher in BIO 103, 104, and 201 as well as all nursing courses in order to progress through the curriculum and graduate.

Upon completion of the program, graduates can apply for licensure as a Registered Nurse through the New Jersey Board of Nursing and are prepared to take the National Council of State Boards of Nursing Licensure Exam (NCLEX-RN). The New Jersey Board of Nursing reserves the right to determine the eligibility for licensure of any student with a history of substance abuse or criminal offenses.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

LPN-RN Advanced Placement

The LPN-RN Advanced Placement option offers licensed practical nurses (LPNs) the opportunity to gain experiential credit for their LPN license and receive 6 credits for Concepts of Nursing Practice I (NRS 112). Applicants must possess a high school diploma (or equivalent), have graduated from an accredited LPN school, and possess a valid New Jersey LPN license.

Admission to the LPN-RN Advanced Placement option requires a cumulative (transfer or MCCC) minimum GPA of 2.5 or higher; an 80% or higher in the English Language Composite and 80% or higher on the math portion of the HESI Admission Assessment Exam; attendance at a mandatory Nursing program information session; and completion of prerequisite courses as outlined on the Nursing program website. LPN candidates will also be required to pass a comprehensive skills assessment exam, a Dosage Calculation exam, and complete the HESI Fundamentals of Nursing Exam. The successful candidate will be enrolled in Concepts of Nursing Practice II (NRS 125).

LPN candidates are required to meet the same residency and immigration requirements as generic applicants.

BSN Completion

MCCC students have the opportunity to apply to a variety of BSN completion programs through the college's partnership with four-year Nursing programs, including those of Rutgers University and Felician College, both of which offer RN-BSN completion programs on-campus at Mercer County Community College.

For **further information** on these opportunities as well as details concerning admission to MCCC's Nursing program, visit the Nursing program website: www.mccc.edu/nursing. Applicants are strongly encouraged to make advisement appointments with the Nursing program office.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Nursing

Cooperative Program with St. Francis Medical Center

Associate in Science Degree in Liberal Arts and Sciences

Programs **NURS.B.COOP.AS**
CIP 513801

Mercer County Community College, in collaboration with the diploma school of nursing at St. Francis Medical Center, awards the Associate in Science degree to students who successfully complete their program of study. Students also receive a diploma from the school of nursing and are eligible to sit for the National Council Licensure Examination (NCLEX) to earn licensure as a registered nurse. St. Francis is accredited by the New Jersey Board of Nursing and the Accreditation Commission for Education in Nursing.

St. Francis combines mathematics, science, and general education courses at the college with nursing courses conducted at their school. The nursing courses integrate classroom activities with clinical experiences in the home hospital and at other agencies in the area. The cooperative program with St. Francis requires attendance for two consecutive years, including summers.

Candidates must meet the admissions requirements of the college and additional requirements specific to the program. Details regarding admission standards, grading and retention policies, and graduation requirements are available from the cooperating nursing school. The cooperative program also maintains a list of baccalaureate nursing programs for students who contemplate transfer.

PROGRAM OUTCOMES

- Pass the National Council Licensure Examination – Registered Nurse;
- Integrate concepts from the sciences and evidence-based nursing practice in the care of diverse patients, families, and communities;
- Effectively communicate and collaborate as a member of the health care team, incorporating technological resources to deliver quality patient-centered care;
- Practice within the legal and ethical parameters of the profession;
- Function competently and safely, incorporating professional standards in the delivery of patient-centered care;
- Employ leadership and management skills in the delivery of patient-centered care;
- Exhibit responsible behavior that is self-directive and encompasses personal and professional growth.

Students must earn a minimum grade of C in all nursing, science, and general education courses to graduate.

Curriculum

Code	Course (lecture/lab/clinical hours)	Credits
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
ENG 101	English Composition I (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
NSG 131	Concepts of Nursing I (4/0/8)	6
NSG 137	Physical Assessment (2/1)	3
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
PSY 207	Developmental Psychology: Across the Life Span (3/0)	3
NUR 151	Pharmacology in Nursing (3/0)	3
NSG 133	Concepts of Nursing III (2/0/5)	3
NSG 135	Concepts of Nursing II (4/0/12)	7
THIRD SEMESTER		
ENG 102	English Composition II (3/0)	3
NSG 234	Concepts of Nursing IV (6/0/12)	9
BIO —	Lab Science elective[1]	4
MAT —	Mathematics elective[2]	3-4
FOURTH SEMESTER		
PHI 204	Ethics (3/0) OR	3
PHI 205	Moral Choices (3/0)	
NSG 232	Concepts of Nursing V (6/0/12)	9
		70-71

[1] Any course in the field of microbiology.

[2] Algebraic or Statistical math at 100 level or higher.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Occupational Therapy Assistant

in cooperation with the School of Health Related Professions at Rutgers, The State University of New Jersey

Program **OCC.THPY.AS**
CIP 519999

Associate in Science Degree

The Occupational Therapy Assistant (OTA) program prepares students for a profession serving people of all ages who experience illness, disease, disability, and challenging life circumstances to adapt by participating in meaningful occupations. The program cultivates OTAs as professionals who will contribute to the health and well-being of individuals, groups, and populations in New Jersey and beyond, practicing as dynamic and inter-professional team members within health care, educational, and other community settings.

Students may complete the liberal arts component of the program at Mercer County Community College and take the specialized OTA courses at Rutgers. Admission to the Rutgers program is competitive and not guaranteed. In addition to the pre-professional coursework at MCCC, a number of strict Rutgers entry requirements must be satisfied. Specific admission criteria are outlined in the Rutgers School of Health Professions catalog. In addition, Rutgers maintains student policies related to the OTA program. Contact the MCCC OTA program coordinator or division dean for details.

Upon completion of the program, students are eligible to sit for the national certifying examination offered by the National Board for Certifying Occupational Therapy. Those who pass the test are awarded the title Certified Occupational Therapy Assistant (COTA).

The OTA program at Rutgers is accredited by ACOTE (AOTA); (301) 652-AOTA; www.acoteonline.org

PROGRAM OUTCOMES

- Have acquired an educational foundation in the liberal arts and sciences, including a focus on issues related to diversity;
- Be educated as a generalist with a broad exposure to the delivery models and systems used in settings where occupational therapy is currently practiced and where it is emerging as a service;
- Have achieved entry-level competency through a combination of academic and fieldwork education;
- Be prepared to articulate and apply occupational therapy principles and intervention tools to achieve expected outcomes as related to the occupation;
- Be prepared to be a lifelong learner and keep current with best practices;
- Uphold the ethical standards, values, and attitudes of the occupational therapy profession;
- Understand the distinct roles and responsibilities of the occupational therapist and occupational therapy assistant in the supervisory process;
- Be prepared to advocate as a professional for occupational therapy services offered and for the recipients of those services.

Curriculum

Mercer County Community College Courses

Code	Course (lecture/lab hours)	Credits
BIO 103	Anatomy and Physiology I (3/3)	4
ENG 101	English Composition I (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
SOC 101	Introduction to Sociology (3/0)	3
— —	Diversity and Global Perspective elective	3
BIO 104	Anatomy and Physiology II (3/3)	4
ENG 102	English Composition II (3/0)	3
MAT 125	Elementary Statistics I (3/0)	3
PHI 204	Ethics (3/0)	3
PSY 207	Developmental Psychology: Across the Life Span (3/0)	3
	Credits Subtotal:	32

Rutgers University Courses

Code	Course	Credits
OCTH 1010	Occupational Therapy Foundations for the OTA	3
OCTH 1019	Level I Fieldwork A: Integration and Practice Applications	1
OCTH 1020	Occupational Performance and Participation: Skills and Client Factors	3
OCTH 1031	Conditions Impacting Occupation, Participation, and Health I: Adult/Older Adult	2
PRST 1102	Communication Techniques	3
OCTH 1029	Level I Fieldwork B: Integration and Practice Applications	1
OCTH 1040	Occupational Performance and Participation: Therapeutic Applications	3
OCTH 1051	Principles and Practices I: Wellness and Mental Health	2
OCTH 1052	Principles and Practices II: Rehabilitation, Disability, Aging, and Participation	3
PRST 1103	Group Dynamics	3
OCTH 1032	Conditions Impacting Occupation, Participation, and Health II: Child/Adolescent	2
OCTH 1039	Level I Fieldwork C: Integration and Practice Applications	1
OCTH 1053	Principles and Practices III: Children and Youth	2
OCTH 1071	Professional Seminar I	1
OCTH 2019	OTA Practice, Fieldwork II: Adult/Older Adult	5
OCTH 2029	OTA Practice, Fieldwork II: Child/Adolescent	5
OCTH 2072	Professional Seminar II	2
	Credits Subtotal:	42

Rutgers courses are offered starting in the Fall of the second year through Fall of the third year. A minimum of 15 credits must be completed through Mercer County Community College to satisfy residency requirements.

Total Credits: 74

Ornamental Horticulture

Associate in Applied Science Degree
Certificate of Proficiency

Programs **HORT.ORN.AAS**
HORT.LAND.AAS
HORT.FLOR.AAS
Certificate **HORT.CERT**
CIP 010603

Horticulture is a profession that combines the creativity of design with the knowledge of science and the practical experience of making projects successful. The Ornamental Horticulture A.A.S. degree program trains students in the areas of landscape design, floral design, landscape maintenance, nursery and greenhouse production, and turf maintenance.

Hands-on classes conducted in a complex of two greenhouses, surrounding gardens, and an extensive campus grounds are designed to prepare graduates to excel in a rapidly expanding horticulture industry. Excellent positions are available for trained professionals with strong backgrounds in the specialties covered at Mercer.

PROGRAM OUTCOMES

- Identify, propagate, and care for at least 300 different woody and herbaceous plant specimens;
- Implement a soils management plan using modern irrigation and nutrient control techniques;
- Properly apply common pesticides and fertilizers to achieve optimum growing conditions for plants and crops;
- Produce and manage common greenhouse crops;
- Practice integrated pest management.

Some graduates enter the profession immediately upon graduation, securing employment in nurseries, greenhouses, garden centers, landscape firms, golf courses, flower shops, and a variety of other businesses. Others elect to transfer to four-year institutions such as Delaware Valley University, Temple University, and Rutgers University.

At Mercer, many students work in the industry while pursuing their degree as evening students. In addition to gaining broad knowledge through the Ornamental Horticulture A.A.S. degree core curriculum, students select from among three study concentrations:

The **Ornamental Horticulture** concentration (HORT.ORN.AAS) focuses on the production and use of plant material for aesthetic purposes. This concentration offers a wide variety of elective courses to choose from, so students can pursue the area of horticulture that most interests them.

Through the **Landscape Design** concentration (HORT.LAND.AAS), students learn how to measure a site, draw a base map, draw a design to scale, develop a plant list, color render the design, and work within a budget. Students also gain experience interviewing and presenting to clients.

The **Floral Design** concentration (HORT.FLOR.AAS) teaches how to identify and order flowers used for designs, process flowers, price arrangements, make corsages and boutonnières, design various arrangements, work with a variety of materials, and gain experience doing more advanced work like wedding and funeral arrangements.

Another practical option for some students is the Certificate of Proficiency in Ornamental Horticulture, which emphasizes concentration in horticulture electives and preparation for direct entry into a career in horticulture. Credits earned can be applied toward the Ornamental Horticulture A.A.S. degree.

See also:

Mercer's Plant Science A.S. degree closely parallels a degree program in biology. With its emphasis on botany and plant materials, this program is especially suited for students planning to transfer into environmental and natural resource management programs at four-year colleges.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
OHT 101	Plant Science (2/2)	3
CHE —	Chemistry elective[1]	3-4
MAT —	Mathematics elective[2]	4
SECOND SEMESTER		
BIO 202	Woody Plants (3/3)	4
ENG 102	English Composition II (3/0)	3
OHT 102	Ornamental Horticulture (2/2)	3
OHT 108	Soil and Plant Nutrition (3/3)	4
— —	General Education elective[3]	3
SPRING, SUMMER, or FALL		
OHT 291	Ornamental Horticulture Cooperative Education I	3
THIRD SEMESTER		
OHT 121	Herbaceous Plants (2/2)	3
OHT 219	Plant Propagation (2/2)	3
OHT —	**Concentration elective**	3
OHT —	**Concentration elective**	3
— —	General Education elective[4]	3
FOURTH SEMESTER		
BIO 101	General Biology I (3/3)	4
OHT 241	Equipment and Integrated Pest Management (2/2)	3
OHT —	**Concentration elective**	3
OHT —	**Concentration elective**	3
— —	General Education elective[4]	3
		66-67

Concentrations

Ornamental Horticulture (electives)

OHT 204	Plant Diseases (2/2)	3
OHT 232	Nursery Management I (2/2)	3
OHT —	Technical elective[5]	3
OHT —	Technical elective[5]	3

Landscape Design (electives)

OHT 201	Basic Landscaping and Planning I (2/3)	3
OHT 202	Basic Landscaping and Planning II (2/3)	3
OHT 204	Plant Diseases (2/2)	3
OHT —	Technical elective[5]	3

Floral Design (electives)

OHT 207	Floral Design I (2/2)	3
OHT 208	Floral Design II (1/3)	2
OHT 226	Interior Landscape Design (2/2)	3
OHT —	Technical elective[5]	3

[1] Select from CHE 100, 101, 105.

[2] College-level math course required. Select in consultation with an academic advisor.

[3] Select course from either Social Science or Humanities general education categories.

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective. Spanish is strongly recommended.

[5] Select from OHT 201, 202, 204, 207, 208, 223, 226, 231, 232, 292; BIO 203, 204.

†Some exemptions apply. Consult academic advisor for details.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
OHT 101	Plant Science (2/2)	3
OHT 102	Ornamental Horticulture (2/2)	3
OHT 291	Ornamental Horticulture Cooperative Education I	3
— —	Science elective[1]	3-4
— —	Technical electives[2]	17-18
		32-34

[1] Select from BIO 101, 114, 203, 204; CHE 101, 105.

[2] Select from all OHT courses; BIO 202; CHE 100.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Paralegal

Associate in Applied Science Degree

Program **PARLGL.AAS**
CIP 220302

The Paralegal program prepares students for various positions as paralegals. Employment is obtained primarily in private law offices with additional opportunities in government agencies, private corporations, banks, title companies, and insurance companies. The program is approved by the American Bar Association.

PROGRAM OUTCOMES

- Understand the role of the paralegal;
- Demonstrate practical skills in a wide range of substantive legal areas including wills and probate, family law, real estate, civil litigation and commercial law.

The specialized paralegal courses are offered in the evening; the remainder of the program is available through daytime and/or evening attendance and may be pursued either full-time or part-time. All legal specialty courses are taught by attorneys. The college maintains an extensive collection of volumes related to New Jersey and federal law and offers instruction in computer-based legal research.

This program of study is career oriented and not designed specifically for students who plan to transfer to a four-year institution or attend law school. The Paralegal program is not for training lawyers or legal administrators. Paralegals (as nonlawyers) are prohibited from engaging in the practice of law or giving legal advice, setting legal fees, or representing clients in court.

Students must take a minimum of 12 credits of legal specialty courses through traditional, on-campus instruction.

Admission to the program requires a high school diploma or its equivalent.

A.A.S. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
LEG 129	Role of the Paralegal (3/0)	3
LEG 130	Civil Litigation I (3/0)	3
MAT —	Mathematics elective[1]	3
SECOND SEMESTER		
BUS 107	Business Law I (3/0)	3
CMN 112	Public Speaking (3/0)	
	OR	3
CMN 111	Speech: Human Communication (3/0)	
ENG 102	English Composition II (3/0)	3
LEG 132	Civil Litigation II (3/0)	3
LEG 143	Family Law (3/0)	3
THIRD SEMESTER		
CRJ 202	Criminal Law (3/0)	3
LEG 133	Legal Research and Writing (3/0)	3
LEG 208	Wills and Probate (3/0)	3
LEG 232	Civil Litigation III (2/2)	3
— —	Science elective[2]	3
— —	General Education elective[3]	3
FOURTH SEMESTER		
BUS 108	Business Law II (3/0)	3
LEG 201	Commercial Law (3/0)	3
LEG 212	Field Experience/Paralegal (1/0/210 work hours)	3
OST 219	Word Processing Concepts and Applications (2/2)[4]	
	OR	3
— —	General Education elective[5]	
— —	Diversity and Global Perspective elective	3
		65

NOTE: Electives should be selected in consultation with the program coordinator in order to assure maximum transfer of credits. Students require a minimum of 18 hours of ABA recognized general education electives.

[1] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[2] BIO 114 is the recommended elective for those students who plan to transfer to a four-year institution. Those planning to transfer should determine if a lab science is required before choosing the Science elective.

[3] Select course from either Social Science or Humanities general education categories.

[4] Students who cannot type at a rate of at least 35 words per minute must enroll in OST 111, which is a prerequisite for OST 219.

[5] Select course from the following general education categories: Social Science, Humanities (except DAN 101 or PHO 110), Historical Perspective, Diversity and Global Perspective (except BUS 230).

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Paralegal

Certificate of Proficiency

Program **PARLGL.CERT**
CIP 220302

The Certificate of Proficiency program for paralegals generally includes only legal specialty and law related courses and is relatively short in duration. Individuals who do not already possess an associate or bachelor's degree are not eligible to enroll in the Certificate of Proficiency program. Proof of a prior associate or bachelor's degree is required and, if the associate degree is in science or applied science, students must have at least 18 credits of approved general education coursework in that prior degree.

The Paralegal Certificate prepares students for various positions as paralegals. Employment is obtained primarily in private law offices with additional opportunities in government agencies, private corporations, banks, title companies, and insurance companies. The program is approved by the American Bar Association.

PROGRAM OUTCOMES

- Understand the role of the paralegal;
- Demonstrate practical skills in a wide range of substantive legal areas including wills and probate, family law, real estate, civil litigation and commercial law.

The specialized paralegal courses are offered in the evening; the remainder of the program is available through daytime and/or evening attendance and may be pursued either full-time or part-time. All legal specialty courses are taught by attorneys. The college maintains an extensive collection of volumes related to New Jersey and federal law and offers instruction in computer-based legal research.

This program of study is career oriented and not designed specifically for students who plan to transfer to a four-year institution or attend law school. The Paralegal program is not for training lawyers or legal administrators. Paralegals (as nonlawyers) are prohibited from engaging in the practice of law or giving legal advice, setting legal fees, or representing clients in court.

Students must take a minimum of 12 credits of legal specialty courses through traditional, on-campus instruction.

Certificate Curriculum[1]

Code	Course (lecture/lab hours)	Credits
*LEG 129	Role of the Paralegal (3/0)	3
*LEG 130	Civil Litigation I (3/0)	3
*LEG 133	Legal Research and Writing (3/0)[2]	3
LEG/BUS	Elective[3]	3
LEG/BUS	Elective[3]	3
LEG 132	Civil Litigation II (3/0)	3
LEG 232	Civil Litigation III (2/2)	3
LEG 212	Field Experience/Paralegal (1/0/210 work hours)	3
OST 219	Word Processing Concepts and Applications (2/2)[4]	3
LEG/BUS	Elective[3]	3
		30

*** Must be first three courses taken.**

[1] Prior to enrolling in this Certificate program, students must present proof of award of an associate or bachelor's degree and must have successfully completed (C grade or better) a basic English composition course and at least one other General Education course.

[2] ENG 101 or its equivalent is a prerequisite for LEG 133; consequently, the student's prior degree must include an English composition course equivalent to Mercer's ENG 101 with a C grade or better.

[3] Select any three of the following approved courses:

BUS 107	Business Law I
BUS 108	Business Law II
CRJ 202	Criminal Law
LEG 143	Family Law
LEG 201	Commercial Law
LEG 206	New Jersey Real Estate Transactions
LEG 208	Wills and Probate

[4] Students who cannot type at a rate of at least 35 words per minute must enroll in OST 111 which is a prerequisite for OST 219.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Photography

Program **PHOTO.AFA**
Certificate **PHOTO.CERT**
CIP 500101

Associate in Fine Arts Degree in Visual Arts
Certificate of Proficiency

The Photography program provides for development of skills and creativity in both film-based and digital photography. Topics covered include camera operation, exposure, processing, retouching, manipulation/montage, printing and other forms of media output as well as the use of artificial and natural lighting.

The program incorporates a balance of traditional and digital photographic techniques allowing students to understand technology's role in photography. It encourages aesthetic growth while creating a balance between personal expression and commercial application. Emphasis on experiences in the darkroom, digital laboratory, on location, and in the studio develops both the creative ability and the technical skills essential to photography careers and transfer to four-year institutions.

Some courses are offered both day and evening. If the required courses are taken starting in the summer, the certificate can be completed in one year of full-time study. The Associate in Fine Arts degree is a two-year program. Before completion of either program, students are required to develop a portfolio to serve in the pursuit of further education or employment.

PROGRAM OUTCOMES - *degree*

- Demonstrate proficiency with photographic capture devices;
- Process, manipulate, and print images in photographic labs;
- Practice archival image work flow;
- Identify and explain the significant events in art history as well as contemporary practices;
- Integrate different techniques and approaches to photography and digital imaging;
- Analyze and evaluate images in the context of group critiques;
- Create a portfolio for education transfer.

PROGRAM OUTCOMES - *certificate*

- Demonstrate proficiency with photographic capture devices;
- Practice archival image work flow;
- Integrate different techniques and approaches to photography and digital imaging;
- Analyze and evaluate images in the context of group critiques;
- Create a portfolio for employment, or artistic venues.

Students from the degree program have transferred to major art schools such as the School of Visual Arts and Mason Gross School of the Arts / Rutgers. Students wishing to transfer should consult the program coordinator or their academic advisor concerning transfer agreements with four-year institutions.

A.F.A. Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
DMA 110	Digital Imaging (1/4)	3
ENG 101	English Composition I (3/0)	3
PHO 101	Black & White Film Photography I (2/3)	3
PHO 103	Digital Photography I (2/3)	3
SECOND SEMESTER		
ART 105	Two-Dimensional Design (1/4)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
PHO 110	History of Photography (3/0)	3
PHO 203	Photography II (1/4)	3
— —	Social Science general education elective	3
THIRD SEMESTER		
ART 125	Topics in Contemporary Art (3/0)	3
CMN 146	Social Media Technologies (2/2)	3
DMA 250	Digital Portfolio Seminar (1/4)	3
ENG 102	English Composition II (3/0)	3
PHO 202	Studio Photography (1/4)	3
ART —	Humanities general education elective[1]	3
FOURTH SEMESTER		
ADV 210	Typography II: Publication Design (1/4)	3
PHO 251	Documentary Photography (1/4)	3
MAT —	Mathematics elective[2]	3
— —	Science OR Technology general ed. elective[3]	3
— —	General Education elective[4]	3
		62

[1] Select from ART 121, 122, 123.

[2] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[3] DMA 144 recommended.

[4] Select course from the following general education categories: Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
DMA 110	Digital Imaging I (1/4)	3
ENG 101	English Composition I (3/0)	3
PHO 103	Digital Photography I (2/3)	3
ADV 210	Typography II: Publication Design (1/4)	3
CMN 146	Social Media Technologies (2/2)	3
PHO 202	Studio Photography (1/4)	3
PHO 203	Photography II (1/4)	3
DMA 250	Digital Portfolio Seminar (1/4)	3
PHO 110	History of Photography (3/0)	3
PHO 251	Documentary Photography (1/4)	3
		30

Physical Therapist Assistant

Associate in Applied Science Degree

Program **PTA.B.AAS**
CIP 510806

The Physical Therapist Assistant (PTA) program combines courses in general education and physical therapy with supervised clinical experiences in area clinics, hospitals, and private practices. The PTA program at Mercer County Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, VA 22314; 703-706-3245 www.capteonline.org

Graduates are eligible to take the National Physical Therapy Examination for licensure as physical therapist assistants and be recognized by the State of New Jersey Department of Law & Public Safety, Division of Consumer Affairs, State Board of Physical Therapy Examiners, which regulates the practice of physical therapy in the state of New Jersey.

PTAs work under the supervision and direction of a physical therapist and are employed by hospitals, pediatric, geriatric, and private practice physical therapy facilities.

PROGRAM OUTCOMES

- Communicate effectively with other members of the health care team, patients and their families;
- Provide patient care and physical therapy services under the direction and supervision of a physical therapist;
- Perform patient assessment techniques including joint range of motion, manual muscle testing, and measurement for assistive devices;
- Assist patients in gait training activities, body mechanics principles, and therapeutic exercise;
- Utilize clinical decision-making skills in the performance of physical therapy interventions.

Applicants must have a high school diploma or the equivalent with at least one year of a high school laboratory science. Students who did not complete at least one year of a high school laboratory science and those students whose background in the sciences is old or weak may be expected to complete one or more of the following courses: Physical Science Concepts (PHY 111), Introductory Chemistry (CHE 100), Biological Science Concepts (BIO 113). Full acceptance into the program requires satisfactory performance on the college skills placement test or completion of any required remediation.

Enrollment in the program is limited and based upon a petitioning process. If the number of qualified applicants for the Physical Therapist Assistant program exceeds available openings, acceptance will be made in accordance with procedures published separately. Contact the Enrollment Services office or the Health Professions division for a copy of the eligibility requirements and acceptance procedure.

All Health Profession majors are required to undergo a criminal background check prior to commencing the clinical portion of the professional phase of their respective program. A prior criminal history may prevent applicants from participation in the PTA program and ultimately licensure.

Curriculum

Code	Course (lecture/lab/clinical hours)	Credits
PRE-PROFESSIONAL PHASE		
BIO 103	Anatomy and Physiology I (3/3)	4
ENG 101	English Composition I (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
MAT —	Mathematics elective (3/0)[1]	3
BIO 104	Anatomy and Physiology II (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
PTA 105	Kinesiology (3/0)	3
— —	General Education elective[2]	3
PROFESSIONAL PHASE		
PTA 107	Therapeutic Measurement (1/2)	2
PTA 112	Pathology for PTAs (3/0)	3
— —	First Aid and CPR Certification[3]	–
PTA 201	Therapeutic Exercise (1/2)*	2
PTA 210	PTA Techniques (3/2)*	4
PTA 211	Physical Agents (3/3)*	4
PTA 224	PTA Clinical Education I (160 hours)	3
PTA 227	PTA Seminar (3/0)*	3
PTA 205	Motor Development (1/0)	1
PTA 213	PTA Therapy Clinic (3/3)*	3
PTA 216	Orthopedics in PTA (1/2)*	2
PTA 235	PTA Clinical Education II (200 hours)	4
PTA 237	PTA Professional Development (3/0)*	3
PTA 240	PTA Clinical Education III (240 hours)	5
		67

[1] Select from MAT 115, 125, 140, 200, or approved alternative.

[2] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[3] Students must hold current certifications in First Aid and CPR for Professionals prior to the start of the Clinical Education courses.

† Some exemptions apply. Consult academic advisor for details.

* *Courses are interrupted* for either four weeks (for PTA 201, 210, 211 and 227) or five weeks (for PTA 213, 216 and 237) for the Clinical Education course included in the semester. Class times have been adjusted accordingly.

NOTE: Students must earn a minimum grade of C+ in all PTA and science courses. All PTA courses may only be attempted twice.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Physics

Program **PHYSICS.AS**
CIP 240101

Associate in Science Degree in Liberal Arts and Sciences

The Physics option of the Liberal Arts and Sciences program prepares students to enter the junior level of a baccalaureate degree program leading to careers in the fields of physics and engineering.

This program conforms to the provisions of the New Jersey Statewide Transfer Agreement. An A.S. degree in Physics from Mercer County Community College will be fully transferable as the first two years of a baccalaureate degree program at New Jersey public four-year institutions. Students also have transferred to other four-year institutions throughout the country.

Students may complete the degree in two years, and in less time by taking advantage of summer courses.

PROGRAM OUTCOMES

- Understand the basic laws and principles of physics and engineering;
- Demonstrate working knowledge of scientific instruments through hands-on laboratory experience;
- Exhibit strong problem-solving and critical thinking skills;
- Communicate effectively both with the scientific community and the general public.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0)	4
— —	Science elective[1]	4
SECOND SEMESTER		
ENG 102	English Composition II (3/0)	3
MAT 152	Calculus II (4/0)	4
PHY 115	University Physics I (3/3)	4
— —	Science elective[1]	4
— —	Technology elective[2]	4
THIRD SEMESTER		
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
MAT 251	Calculus III (4/0)	4
PHY 215	University Physics II (3/3)	4
— —	Humanities general education elective	3
— —	Social Science general education elective	3
FOURTH SEMESTER		
MAT 252	Differential Equations (4/0)	4
PHY 225	University Physics III (3/3)	4
— —	Science elective[1]	4
— —	General Education elective[3]	3
		64

[1] Select from CHE 101, 102, 201, 202, 205; BIO 101, 102, 201, 202, 203, 204, 208; or other course by advisor approval.

[2] Select COS 101 or 102 or other technology course as appropriate for intended transfer institution.

[3] Select course from either Social Science or Humanities general education categories.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Plant Science

Associate in Science Degree

Program **PLANT.SCI.AS**
CIP 011101

The Plant Science program prepares students for the junior year of study at a college or university offering such fields as horticulture, botany, conservation, environmental science, ecology, and forestry. Horticulture students who plan to pursue a baccalaureate degree should consider this alternative.

Facilities to support the program include well-equipped biology and chemistry laboratories, a modern greenhouse complex, and an extensive woody plants collection throughout the 292-acre West Windsor Campus. Occasional field trips to Longwood Gardens, the New Jersey Pine Barrens, Marquand Park, and elsewhere offer additional opportunities for specialized study of plant specimens.

PROGRAM OUTCOMES

- Explain the structures and processes related to plant growth and function;
- Identify common insects, diseases, and woody plants found in our region;
- Understand key environmental issues as they relate locally, nationally, and globally;
- Exhibit proficiency in the laboratory and in the field by using standard equipment and measurement and observation techniques that allow one to gather, analyze, and interpret qualitative and quantitative data;
- Transfer and successfully pursue a baccalaureate degree in a related field.

Admission to the Plant Science program requires a high school diploma or its equivalent with at least one year of science (biology or chemistry) and two years of algebra.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 101	General Biology I (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
OHT 101	Plant Science (2/2)	3
— —	Social Science general education elective	3
SECOND SEMESTER		
BIO 102	General Biology II (3/3)	4
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
MAT 146	Pre-Calculus (4/0)	4
— —	General Education elective[1]	3
THIRD SEMESTER		
BIO 203	Entomology (3/3)	4
BIO 204	Ecology (3/3)	4
CHE 101	General Chemistry I (3/3)	4
OHT 204	Plant Diseases (2/2)	3
FOURTH SEMESTER		
BIO 202	Woody Plants (3/3)	4
CHE 102	General Chemistry II (3/3)	4
OHT 108	Soil and Plant Nutrition (3/3)	4
— —	Humanities general education elective	3
		62

[1] Select course from either Social Science or Humanities general education categories.
†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Professional Baking

Certificate of Proficiency

Program **CUL.PROF.BAKE.CERT**
CIP 120501

The Professional Baking certificate program prepares graduates for employment in individual bake shops or in the bakery production departments of healthcare institutions, restaurants, supermarkets, hotels, catering businesses or cruise ships.

PROGRAM OUTCOMES

- Prepare a wide variety of foodservice bakery products;
- Use safe and sanitary methods in the production of a wide variety of bake shop goods within many commercial and noncommercial bakery production businesses;
- Use basic, intermediate and advanced baking techniques and tools within any bake shop operation;
- Assess overall quality of the baked goods produced and served;
- Use standardized recipes;
- Apply culinary terminology used within the food service industry;
- Appraise the needs of and have the ability to purchase food and nonfood supplies for commercial bakery operations.

Most of the credits earned in acquiring the Professional Baking Certificate can be applied towards the college's associate degree programs.

Admission to the program requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
HOS 100	Hospitality Success Skills (1/0)	1
HOS 101	Food Preparation I (1/4)	3
HOS 110	Breakfast / Pantry (1/3)	2
HOS 111	Culinary Math (1/0)	1
HOS 115	Food and Culture (2/2)	3
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 217	Professional Baking I (1/4)	3
HOS 218	Professional Baking II (1/4)	3
HOS 219	Professional Baking III (1/3)	2
HOS 239	Restaurant Desserts (1/3)	2
HOS 246	Artisanal Breads (1/3)	2
HOS 290	Internship in Hotel, Restaurant, and Institution Management (1/0 + internship)	2
MAT 120	Mathematics for Liberal Arts (3/0)	3
		32

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Professional Cooking

Certificate of Proficiency

Program **CUL.PROF.COOK.CERT**
CIP 120505

The Professional Cooking certificate program prepares individuals for professional entry into the food service industry. It provides a working knowledge of commercial preparation of a wide variety of food products combined with hands-on skills.

Graduates can participate professionally in the food production departments of restaurants, hotels, conference centers, hospitals and nursing homes, catering operations, and many other types of food service businesses. In some cases, this education prepares students to enter supervisory positions.

PROGRAM OUTCOMES

- Prepare a wide variety of food products used in the food service industry;
- Prepare a wide variety of food service bakery goods;
- Use standardized recipes;
- Apply the culinary terminology used within the food service industry;
- Plan and develop appropriate menus which meet the criteria of commercial food operations;
- Demonstrate the techniques necessary to prepare healthful food products for commercial food operations;
- Plan and direct food production in commercial food operations;
- Appraise the needs of, and have the ability to purchase food and nonfood supplies for, commercial food operations;
- Apply the requirements for operating a safe and sanitary food service operation including Hazard Analysis and Critical Control Points (HACCP).

Most of the credits earned in acquiring the Professional Cooking Certificate can be applied towards the college's associate degree programs and for transfer to Johnson & Wales University.

Admission to the program requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
HOS 100	Hospitality Success Skills (1/0)	1
HOS 101	Food Preparation I (1/4)	3
HOS 102	Food Preparation II (1/4)	3
HOS 109	Advanced Culinary Arts (1/4)	3
HOS 110	Breakfast / Pantry (1/3)	2
HOS 111	Culinary Math (1/0)	1
HOS 115	Food and Culture (2/2)	
	OR	3
HOS 116	Techniques of Healthy Cooking (1/4)	
HOS 118	Sanitation and Safety in Food Service Operations (2/0)	2
HOS 210	Applied Kitchen Skills – Cafe (1/4)	3
HOS 217	Professional Baking (1/4)	3
HOS 235	American Regional Cuisine (1/3)	2
HOS 290	Internship in Hotel, Restaurant, and Institution Management (1/0 + internship)	2
MAT 120	Mathematics for Liberal Arts (3/0)	3
		34

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Public Health

Associate in Science Degree

Program **PUBLIC.HEALTH.AS**
CIP 512201

Public health is the practice of maintaining a healthy population through education, research, public policy, regulation of health systems and working health professionals. Public health professionals protect the health of the community, promote healthy lifestyles, and prevent disease and injury through research and education. Public health has been a national objective for more than three decades with focuses on increased public awareness, health equity, healthful behaviors across all life stages, and interaction of national, state, and local stakeholders to strengthen policies and improve practices (e.g., Healthy People 2020).

The A.S. degree in Public Health exposes students to the various contributors to public health – including the natural sciences, mathematics, ethics, and social sciences – to form a foundation of public health education. Students are afforded a strong background in science and math along with the general education requirements appropriate for continued Public Health study at a four-year institution.

Successful graduates of this program will be able to transfer to Mercer's articulation affiliates (Rutgers: Edward J. Bloustein School of Planning and Public Policy or William Paterson University) to pursue a bachelor's degree in their chosen area of specialization. Elsewhere in the state, Richard Stockton College and Montclair State University offer a B.S. in Public Health or Health Education while The College of New Jersey and Drew University offer a minor in Public Health.

PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamental concepts of public health;
- View the world and all of its resources with a greater understanding, insight, and appreciation with regard to public health;
- Understand key health issues as they relate locally, nationally, and globally;
- Demonstrate the ability to apply the scientific method of inquiry to gather and use information for the purpose of critical thinking, information analysis, and problem solving;
- Recognize that knowledge of history, literature, geography, and economics all play an important role in public health;
- Transfer and successfully pursue a baccalaureate degree in public health.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)	
	OR	4
MAT 146	Pre-Calculus (4/0)[1]	
PBH 101	Principles of Public Health (3/0)	3
PSY 101	Introduction to Psychology (3/0)	3
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 102	English Composition II (3/0)	3
HPE 113	Medical Terminology (3/0)	3
SOC 101	Introduction to Sociology (3/0)	3
THIRD SEMESTER		
CHE 101	General Chemistry I (3/3)	4
CMN 112	Public Speaking (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
PHI 204	Ethics (3/0)	3
— —	Language elective[2]	
	OR	3-4
— —	Science elective[3]	
FOURTH SEMESTER		
CHE 102	General Chemistry II (3/3)[1]	
	OR	3-4
PSY 215	Human Sexuality (3/0)	
HPE 101	Basic Concepts of Nutrition (3/0)	3
MAT 200	Statistics for Social and Health Sciences I (3/0)	3
— —	Language elective[2]	
	OR	3
SOC 214	Sociology of Drug Use and Behavior (3/0)	
		60-62

NOTE: Electives should be selected in consultation with the program coordinator in order to assure maximum transfer of credits.

Course listings with an "OR" offer choices based on anticipated transfer institution and area of concentration desired by the student.

[1] Students planning to transfer to Rutgers: Edward J. Bloustein School of Planning and Public Policy must take CHE 102 and MAT 146.

[2] Any language including American Sign Language.

[3] Select from BIO 201, 208, 217.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Radio

Program **RADIO.AAS**
CIP 100202

Associate in Applied Science Degree in Radio/TV

Radio, one of the two options of the Radio/TV program, prepares students for employment as radio announcers, producers, news reporters, salespersons, copywriters, and other entry-level positions. Radio classes involve practical hands-on work with state-of-the-art audio production studio equipment including radio consoles, digital recording and editing equipment, digital media players, and newswire services. Facilities include complete stereo radio production studios and digital audio workstations.

In addition to practical and theoretical instruction, the Radio program provides a course of study emphasizing and developing communication skills. Qualified students intern at a radio station. Pursued either full-time or part-time, the complete program is available through a combination of daytime and evening attendance.

Radio is a career-oriented program leading to employment following graduation or transfer to four-year institutions. Radio graduates are employed by radio stations in the New Jersey, New York, and Philadelphia areas and other markets in the eastern United States.

Mercer graduates have transferred to a number of colleges and universities in New Jersey and other states, including Rutgers University, The College of New Jersey, Montclair University, Monmouth University, Rowan University, William Paterson State College, Syracuse University, Ithaca College, Emerson College, Temple University, New York University, Boston University, University of Maryland, and UCLA.

Admission to the program requires a high school diploma or its equivalent.

PROGRAM OUTCOMES

- Operate radio studio equipment including broadcast consoles, analog and digital recording devices, digital media players, and computerized music playback systems;
- Write and edit commercial and news copy;
- Perform digital editing and multi-track sequencing on digital audio workstations;
- Produce and announce radio news, commercial programs, and voiceovers;
- Distinguish and discuss the difference between radio formats;
- Prepare and post a podcast;
- Identify different advertising and marketing models utilized in social media;
- Interpret audience data using analytics;
- Work cooperatively with colleagues;
- Achieve entry-level professional competence for a position in commercial, educational, or public radio broadcasting.

Curriculum

Code	Course (lecture/studio hours)	Credits
FIRST SEMESTER		
CMN 101	Mass Media (3/0)	3
CMN 141	Introduction to TV Production (2/2)	3
CMN 151	Introduction to Radio (2/2)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CMN 153	Digital Audio Production I (2/2)	3
CMN 161	Writing for Media (3/0)	3
DMA 144	Internet Tools and Techniques (1/4)	
	OR[1]	3
IST 101	Computer Concepts with Applications (2/2)	
ENG 102	English Composition II (3/0)	3
THIRD SEMESTER		
CMN 146	Social Media Technologies (2/2)	3
CMN 250	Announcing for Radio and Electronic Media (2/2)	3
CMN 253	Digital Audio Production II (2/2)	3
MAT —	Mathematics elective[2]	3
— —	Program elective[3]	3
— —	Social Science general education elective	3
FOURTH SEMESTER		
CMN 252	Applied Radio Programming and Production (2/2)	3
CMN 290	Internship: Communications	
	OR	3
CMN 286	Special Studies in Radio	
— —	General Education elective[4]	3
— —	Program elective[3]	3
— —	Elective	3
		62

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

[1] DMA 144 recommended.

[2] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[3] Select from CMN 107; DMA 105, 110; MUS 103, 155, 156; THR 104. Dual Radio/Television majors select DMA 210 (Motion Graphics).

[4] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students must earn a minimum grade of C in all CMN courses to graduate.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Radiography

Associate in Applied Science Degree

Program **RAD.B.AAS**
CIP 510907

The Radiography program combines courses in general education and radiography with supervised clinical experience in area hospitals. Graduates are eligible to take the American Registry of Radiologic Technologist Examination in Radiography to become nationally certified and licensed by the State of New Jersey.

The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606; 312-704-5300 www.jrcert.org …and the New Jersey Radiologic Technology Board of Examiners. Graduates are employed by hospitals, clinics, diagnostic imaging centers, and the offices of private physicians.

PROGRAM OUTCOMES

- Apply the essential skills to perform diagnostic radiographic procedures competently as entry-level radiographers;
- Communicate effectively in a health care facility;
- Utilize critical thinking to problem solve;
- Develop values and attitudes consistent with professional practice.

Applicants must have a high school diploma or the equivalent with one year of laboratory physics and two years of academic mathematics. Students who have not completed these courses within the last five years may fulfill this requirement by completing Basic Algebra (MAT 034) and Fundamentals of Physics (PHY 109).

In order to be accepted into the professional phase of the radiography program, the student must have completed all basic skills and ESL courses and be eligible to enroll in college-level English and mathematics. Students must be at least 18 years of age by January of their first year in radiography courses. Enrollment in the professional phase of the radiography program is limited, with priority given to radiography science students who have completed Anatomy and Physiology courses (BIO 103 and 104), the mathematics elective, and Fundamentals of Physics (PHY 109).

Details regarding the acceptance procedure are available on the college website and may be obtained by contacting the Enrollment Services office or the Health Professions division.

Prior to enrollment in first semester radiography courses, students must obtain a physical examination to include immunizations and lab analyses from a licensed practitioner, and complete a criminal background check. The American Registry of Radiologic Technologists has the right to determine eligibility for certification with regard to misdemeanor and felony convictions and violations of academic integrity. The New Jersey Radiologic Board of Examiners has the right to determine eligibility for licensure. For additional information, contact the Radiography program coordinator.

Curriculum

Code	Course (lecture/lab/clinical days)	Credits
PRE-PROFESSIONAL PHASE		
FIRST SEMESTER		
BIO 103	Anatomy and Physiology I (3/3)	4
ENG 101	English Composition I (3/0)	3
MAT 135	Intermediate Algebra with Applications (4/0)	4
PSY 101	Introduction to Psychology (3/0)	3
SECOND SEMESTER		
BIO 104	Anatomy and Physiology II (3/3)	4
ENG 102	English Composition II (3/0)	3
PHY 109	Fundamentals of Physics (2/2)	3
— —	General Education elective[1]	3
PROFESSIONAL PHASE		
FIRST SEMESTER (Fall)		
RAD 102	Introduction to Radiography and Patient Care (1/2)	2
RAD 119	Principles of Imaging Science I (2/0)	2
RAD 127	Radiographic Procedures I (3/3/24 days)	6
SECOND SEMESTER (Spring)		
RAD 120	Principles of Imaging Science II (2/2)	3
RAD 128	Radiographic Procedures II (2/3/28 days)	6
SUMMER SESSION		
RAD 117	Radiation Protection and Biology (2/0)	2
RAD 207	Clinical Experience (0/0/28 days)	2
THIRD SEMESTER (Fall)		
RAD 217	Advanced Imaging Modalities (3/0)	3
RAD 228	Radiographic Procedures III (2/3/42 days)	7
FOURTH SEMESTER (Spring)		
RAD 224	Introduction to Pathology (2/0)	2
RAD 232	Imaging Equipment and Radiography Seminar (3/2)	4
RAD 240	Advanced Clinical Experience I (0/0/42 days)	3
SUMMER SESSION		
RAD 242	Advanced Clinical Experience II (0/0/28 days)	2
		71

[1] Select PHI 204 or 205, or course from Diversity and Global Perspective general education category.

NOTE: RAD 127, 128, and 228 require 30 minutes each week for competency testing in the laboratory.

NOTE: Students must earn a minimum grade of C+ in BIO 103, BIO 104, MAT 135, PHY 109, and all RAD courses. A minimum grade of C is required in all other general education courses.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Respiratory Care

Associate in Applied Science Degree from Brookdale Community College

Program **RESP.THPY.AAS**
CIP 510908

The Respiratory Care program is offered in cooperation with Brookdale Community College. Students can complete their first two semesters at Mercer and their final four at Brookdale. Respiratory Care courses at Brookdale are only offered once a year in the four-semester course sequence. For more information on the arrangement, including admissions, coursework, and testing requirements, contact the Respiratory Care program coordinator at Mercer immediately to review conditions.

This program prepares students for entry-level positions in respiratory care. Students work with patients in the treatment, management, and control of problems and abnormalities associated with the cardiopulmonary system.

Graduates work closely with patients, doctors, and nurses to provide diagnostic testing, therapeutics, education, rehabilitation, monitoring, life support, and other specialized methods of treatment. Clinical learning experiences are required of all students.

Upon completion of the program, students are eligible to sit for the National Board of Respiratory Care (NBRC) Examination. After successful completion of this examination and application to the Respiratory Care Board, the graduate is also eligible for state licensure as a Certified Respiratory Therapist. Once licensed, graduates are eligible to take the Advanced Practitioner Examinations to become a Registered Respiratory Therapist (RRT).

This program is accredited by the Commission on Accreditation for Allied Health Education Programs (CAAHEP) in cooperation with the Committee on Accreditation for Respiratory Care (CoArc), 1701 West Euless Blvd., Suite 300, Euless, TX 76040, (817) 283-2835.

PROGRAM OUTCOMES

- Assess, analyze, implement, and evaluate respiratory care;
- Perform respiratory quality control activities;
- Apply basic principles of management in the care of groups of patients;
- Exhibit therapeutic communication skills;
- Incorporate ethical/legal considerations into the respiratory action plan;
- Practice as a member of a diverse interdisciplinary healthcare team;
- Continue personal and professional growth;
- Incorporate principles from the social sciences, biologic sciences, and humanities into their practice;
- Practice within the limits and scope of a licensed respiratory therapist.

Curriculum

Mercer County Community College

Code		Course (lecture/lab hours)	Credits
FIRST SEMESTER			
BIO	103	Anatomy and Physiology I (3/3)	4
CSW	100	College Success and Personal Wellness (2/0)[1]	2
ENG	101	English Composition I (3/0)	3
MAT	135	Intermediate Algebra with Applications (4/0)[1]	4
PSY	101	Introduction to Psychology (3/0)	3
SECOND SEMESTER			
BIO	104	Anatomy and Physiology II (3/3)	4
HPE	113	Medical Terminology (3/0)	3
—	—	General Education elective[1]	3
—	—	General Education elective[1]	3
			29

[1] Recommended, not required.

NOTE: Students must register for MCCC courses in consultation with Respiratory Care program coordinator and earn a minimum grade of C in all. Consult program coordinator immediately to discuss application requirements; assume these need to be completed during the Fall semester. Brookdale reserves the right to admit or reject a student, even if minimum application requirements are met.

Brookdale Community College

Code		Course	Credits
THIRD SEMESTER			
BIOL	213	Microbiology[1]	4
RESP	161	Cardiopulmonary Anatomy and Physiology	3
RESP	162	Fundamental Skills in Respiratory Care	7
FOURTH SEMESTER			
RESP	163	Cardiopulmonary Pathophysiology	4
RESP	164	Patient Assessment and Diagnosis	6
RESP	165	Advanced Life Support and Emergency Care	2
FIFTH SEMESTER			
RESP	261	Neonatal & Pediatric Respiratory Care	2
RESP	262	Adult Critical Care	7
SPCH	115	Public Speaking[1]	3
SIXTH SEMESTER			
RESP	263	Subacute Respiratory Care	2
RESP	264	Respiratory Care Practice	7
RESP	265	Issues in Respiratory Care	2
—	—	Humanities general education elective[1]	3
			52

[1] May be taken earlier. Consult program coordinator for details.

NOTE: Respiratory (RESP) courses are offered once a year during the designated semesters; must be taken semester by semester in the given order. Consult Brookdale Respiratory Care program director for details and to schedule an opportunity to shadow a respiratory care therapist.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Security Systems Technology

Associate in Applied Science Degree

Program **SECURITY.SYS.AAS**
CIP 470110

The Security Systems Technology program was developed in cooperation with the Security Industry Association (SIA). The degree prepares students for jobs that support the selling, installation and management, and technical support of physical security systems technologies in an IP-based networked environment.

PROGRAM OUTCOMES

- Understand, configure, and install physical security hardware and software, cameras and optics, access control systems, video management systems (VMS), as well as fire and burglary systems, and perform control station monitoring;
- Understand, describe, and implement physical security practices and procedures;
- Understand, describe, and implement computer network protocols and standards;
- Sit for the Cisco Certified Network Associate (CCNA) and CompTIA Security+ exams;
- Use printed and online technical documentation;
- Work effectively as individuals and in workgroups to install and implement physical security systems technologies;
- Demonstrate written and oral communication skills.

Students excelling in the program may be eligible to participate in internship opportunities which periodically become available in the physical security product manufacturers, system distributors, and systems integrators sectors. A capstone experience during the last semester allows students to participate in the design and implementation of a real-world security solution.

Admission to the program requires a high school diploma or its equivalent, one year of high school algebra, and competency in English composition, reading, and mathematics as determined by placement testing. Students who are required to complete foundations courses should plan their curriculum with a faculty advisor.

Program applicants must demonstrate an understanding of how to configure, install, diagnose, and troubleshoot microcomputer hardware components and operating systems software, or should enroll in NET 102 (Introduction to PC Hardware and Software) during their first semester.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
EET 130	Fundamentals of Electronics (2/2)	3
ENG 101	English Composition I (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
NET 103	IT Essentials (2/3)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
SECOND SEMESTER		
CSW 100	College Success and Personal Wellness (2/0)†	2
EET 141	Electrical Wiring and Cabling (2/2)	3
ENG 102	English Composition II (3/0)	3
MAT 125	Elementary Statistics I (3/0)[1]	3
NET 130	Routing and Switching Essentials (2/2)	3
SST 200	Physical Security Product Technologies (2/2)	3
THIRD SEMESTER		
CMN 111	Speech: Human Communication (3/0)	3
EET 215	Fiber Optics (3/2)	4
NET 230	Scaling Networks (2/2)	3
NET 239	Connecting Networks (2/2)	3
SST 210	Security Project Management (2/2)	3
FOURTH SEMESTER		
BUS 210	Principles of Management (3/0)	3
BUS 230	Global Environment of Business (3/0)[2]	3
NET 240	Network Security (2/2)	3
SST 220	Systems Integration: A Business Blueprint (2/2)	3
SST 230	Security Sales: The Consultative Approach (2/2)	3
— —	General Education elective[3]	3
		66

[1] Students intending to transfer to a baccalaureate program should take MAT 135 or higher-level mathematics course.

[2] Students intending to transfer should substitute a lab science course.

[3] Select course from either Social Science or Humanities general education categories.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Small Business Management

Program **SML.BUS.MGT.CERT**
CIP 520701

Certificate of Proficiency

The Small Business Management certificate program prepares students to operate or assist in the operation of a successful small business.

At any given time in this country, 7000 to 10,000 people are considering starting a new business. In the last decade, small businesses have outstripped large companies as incubators of new jobs. The National Federation of Independent Businesses states that two of every three new jobs in the last 10 years have been at companies with fewer than 100 employees.

The certificate program informs students of the inherent pitfalls and management skill deficiencies which result in the high failure rate experienced by many small businesses.

PROGRAM OUTCOMES

- Analyze accounting reports to determine profitability, solvency, and liquidity of a business;
- Implement effective methods to attract and retain customers in a small business setting;
- Use terminology common to the business environment for effective communication;
- Apply supervision principles in performing management duties;
- Analyze/resolve problems common to small businesses.

Most credits earned in acquiring the Small Business Management Certificate can be applied toward the Business Studies degree program.

Admission to the program requires a high school diploma or its equivalent. A strong desire to work and succeed in a small business environment is vital.

Curriculum

Code	Course (lecture/lab hours)	Credits
ACC 106	Office Accounting I (3/0)	3
BUS 107	Business Law I (3/0)	3
BUS 202	Customer Orientation (3/0)	3
BUS 210	Principles of Management (3/0)	3
BUS 239	Entrepreneurship (3/0)	3
BUS 296	International Business Practice Firm (1/6)	3
ECO 103	Basic Economics (3/0)	3
ENG 101	English Composition I (3/0)	3
IST 101	Computer Concepts with Applications (2/2)	3
MAT 125	Elementary Statistics I (3/0)	3
MKT 101	Principles of Marketing (3/0)	3
		33

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Sustainability

Associate in Science Degree

Program **HORT.SUST.AS**
CIP 240101

An increased global focus on green initiatives, alternative energy, and conservation practices has prompted a growing demand for graduates with specialized training in sustainability. The Sustainability A.S. degree program exposes students to the various components of sustainability, including areas such as the natural sciences, ethics, and economics as a foundation of sustainability education.

Upon completion of the program, students will be able to transfer to a university and pursue a bachelor's degree in their chosen area of specialization. Currently in New Jersey, Kean University, Stockton College, Montclair State University, and Drew University all maintain bachelor's degree programs in sustainability. Additionally, Rider University offers a minor in sustainability and Ramapo College and Montclair State University have a master's degree program.

Admission to the program requires a high school diploma or its equivalent.

PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamental concept of sustainability;
- View the world and all of its resources with a greater understanding, insight, and appreciation;
- Understand key environmental issues as they relate locally, nationally and globally;
- Demonstrate the ability to apply the scientific method of inquiry to gather and use information for the purpose of critical thinking, information analysis and problem solving;
- Recognize that knowledge of history, literature, geography, economics and ethics all play an important role in sustainability;
- Transfer and successfully pursue a baccalaureate degree in sustainability.

Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
BIO 101	General Biology I (3/3)	4
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
HIS 214	The United States Since 1945 (3/0)	3
SUS 101	Introduction to Sustainability (3/0)	3
SECOND SEMESTER		
BIO 102	General Biology II (3/3)	4
CMN 111	Speech: Human Communication (3/0) OR	3
CMN 112	Public Speaking (3/0)	
ENG 102	English Composition II (3/0)	3
ENG 204	World Literature II (3/0)	3
MAT 151	Calculus I (4/0)	4
THIRD SEMESTER		
CHE 101	General Chemistry I (3/3)	4
MAT 201	Probability and Statistics for Science and Engineering (4/0)	4
PHY 101	College Physics I (3/3) OR	4
PHY 115	University Physics I (3/3)	
— —	Technical elective[1]	4
FOURTH SEMESTER		
CHE 102	General Chemistry II (3/3)	4
— —	Technical elective[1]	4
— —	Humanities general education elective[2]	3
— —	Social Science general education elective[3]	3
		62

NOTE: Electives should be selected in consultation with an academic advisor in order to ensure maximum transfer of credits.

[1] Select from BIO 204, OHT 108, PHY 215.

[2] Select from PHI 102, 204.

[3] Select from ECO 111, 112; GEO 101; PSY 101; SOC 101.

†Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Technical Studies

Associate in Applied Science Degree

Program **TECH.STUD.AAS**
CIP 309999

Over the past decade, certified apprenticeship programs in the building and construction trades have become sophisticated operations that enable employees to enter a career or move up a career ladder after participating in a formalized training process.

The A.A.S. degree in Technical Studies provides a means for students to earn an applied science degree partly based on credits received through technical training.

The opportunity to earn college credit based on an apprenticeship in the construction and building trades is provided in cooperation with NJ PLACE and the United States Department of Labor. For information about how apprenticeship credits may be applied to an A.A.S. degree, visit www.njplace.com.

PROGRAM OUTCOMES

- Compete effectively in a technology-based global economy;
- Demonstrate the necessary skills to be more productive in their chosen profession and career;
- Demonstrate competence in a broad array of intellectual and communications skills with information and habits of mind that enrich their lives and enable them to participate more fully in a democratic society.

Curriculum

Code	Course (lecture/lab hours)	Credits
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
ENG 112	English Composition II with Speech (3/0)	
	OR	3
ENG 102	English Composition II (3/0)	
IST 101	Computer Concepts with Applications (2/2)	
	OR	3
IST 102	Computer Concepts with Programming (2/2)	
MAT —	Mathematics elective	3-4
— —	Science OR Technology elective	3-4
— —	Social Science general education elective	3
— —	Humanities general education elective	3
— —	General Education elective[1]	3
	Credits Subtotal:	26-28

Students meet with an advisor to select an area of concentration from among all of MCCC's technically-oriented A.A.S. degree programs. A faculty advisor for the selected concentration will develop a plan of study with each student.

- 25 credits must be earned as block credits in Technical Studies for certified apprenticeship training programs in the building and construction trades.
- 9 additional credits selected in technical or career areas.

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Total Degree Credits: 60-62

[1] Select course from either Social Science or Humanities general education categories.

† Some exemptions apply. Consult academic advisor for details.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Television

Program **TV.AAS**
CIP 100202

Associate in Applied Science Degree in Radio/TV

The Television option of the Radio/TV program is designed to empower students with the knowledge and skills to seek professional careers in all phases of the dynamic worlds of film and television, broadcast journalism, and video production; and to prepare graduates for enrollment into four-year institutions.

In order to enjoy productive careers and compete successfully, graduates must meet the challenge of technological change. Therefore, Television option A.A.S. degree candidates benefit from hands-on real-world training utilizing cutting-edge technology preparing them for employment as directors, producers, editors, camera operators, compositors, audio engineers, writers, and other entry-level positions within the TV and video production industries.

Television majors also have the opportunity to create television programming to be cablecast throughout Mercer County on MCTV, channel 80/26/20. The program of study culminates with students entering their own short features for the college's annual video recognition ceremony, The Bernie Awards.

All production classes involve state-of-the-art TV studio and control room equipment, and include practical experience with studio and portable cameras, video editing, graphics, special effects, producing, writing, and directing. Students should be prepared for a course of study emphasizing and developing communication skills in addition to practical and theoretical television instruction.

Many alumni of the Television option are employed by facilities in Philadelphia, New Jersey and New York, assuming a wide variety of jobs at all levels in the television industry. Many are successful producers in documentary, educational, industrial, and other video work. In addition, graduates have transferred to colleges and universities in New Jersey and other states including Rutgers University, The College of New Jersey, Rider University, Rowan University, William Paterson State University, Syracuse University, Ithaca College, Emerson College, Temple University, and New York University.

Admission to the Television option requires visual and aural acuity and a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/studio hours)	Credits
FIRST SEMESTER		
ENG 101	English Composition I (3/0)	3
CMN 111	Speech: Human Communication (3/0)	
	OR	3
CMN 112	Public Speaking (3/0)	
CMN 141	Introduction to TV Production (2/2)	3
CMN 151	Introduction to Radio (2/2)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
SECOND SEMESTER		
ENG 102	English Composition II (3/0)	3
CMN 101	Mass Media (3/0)	3
CMN 142	Intermediate TV Production (2/2)	3
CMN 153	Digital Audio Production I (2/2)	3
CMN 161	Writing for Media (3/0)	3
DMA 210	Motion Graphics (1/4)	3
THIRD SEMESTER		
CMN 241	Applied Field Production for Video (2/2)	3
CMN 243	Cinematography (2/2)	3
MAT —	Mathematics elective	3
— —	Science OR Technology elective	3
— —	Social Science general education elective	3
FOURTH SEMESTER		
CMN 242	Advanced Film Production (2/2)	3
CMN 274	Radio/TV Management (3/0)	3
CMN 290	Internship: Communications	
	OR	3
CMN 285	Special Studies in Television Production	
DMA 250	Digital Portfolio Seminar (1/4)	3
— —	General Education elective[1]	3
		62

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits. Students must earn a minimum grade of C in all CMN courses to graduate.

[1] Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

† Some exemptions apply. Consult academic advisor for details.

PROGRAM OUTCOMES

- Produce cable television shows;
- Achieve entry-level professional competence for a position in commercial, public, industrial, instructional, and cable television studios and facilities;
- Write, produce, direct, and edit a variety of hi-definition video productions;
- Write various scripts, including commercials, news, and short film;
- Operate ENG (electronic news gathering) equipment;
- Produce a short film or documentary;
- Work on a professional project;
- Use cutting-edge non-linear video editing equipment;
- Build a strong, competitive portfolio;
- Operate a broadcast TV switcher and audio console.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Theatre

Programs **THTR.AA**
THTR.AFA
CIP 500101

Associate in Arts Degree in Liberal Arts and Sciences
Associate in Fine Arts Degree in Performing Arts

The Theatre program combines intensive classroom study and performance to challenge the serious student who aspires to a career in the entertainment industry. The program is dedicated to developing the total actor who can cope with the demands of the contemporary stage and work with a range of dramatic materials – from classical to modern, musicals to the avant-garde – that reflect current productions in the theatre centers of the United States.

The program offers two degree options, A.A. or A.F.A., both of which combine conservatory training in the performing arts with academic education in the liberal arts. The A.A. allows students to transfer as juniors into bachelor of arts programs in theatre. The A.F.A. includes additional training in performing arts and prepares students for work as well as further study in the field.

Successful graduates of this program will be able to:

- Conduct research in preparation for performing a role;
- Independently interpret dramatic literature for performance;
- Use a variety of acting, movement, and vocal techniques to craft a performance;
- Work collaboratively with artistic and production staff;
- Create successful auditions by preparing materials and exhibiting professional conduct.

Graduates have transferred to four-year institutions including Temple University, Rider University, The College of New Jersey, Pace University, SUNY Purchase, Penn State, and Rutgers University, among others. Theatre program students have also gone on to perform at The New York International Fringe Festival, George Street Playhouse, Luna Stage, Passage Theatre, and chashama.

The program may be pursued part- or full-time. Theatre courses are offered during the afternoon and early evening, requiring some day classes in order to complete the program. Admission requires a high school diploma or its equivalent.

Curriculum

Associate in Arts degree

Code	Course (lecture/studio hours)	Credits
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)	3
THR 101	Introduction to Theatre (3/0)	3
THR 104	Fundamentals of Acting (2/2)	3
DAN 103	Modern Dance I (0/3)	2
ENG 102	English Composition II (3/0)	3
THR 105	Acting II: Principles of Characterization (2/2)	3
THR 210	Theatre History: Classical to Elizabethan (3/0)	3
HIS —	Historical Perspective general ed. elective[1]	3
MAT —	Mathematics elective[2]	3
CMN 112	Public Speaking (3/0)	3
THR 207	Scene Study I (3/0)	3
THR 212	Central Voices in World Drama (3/0)	3
VPA 228	Artistic Collaboration Workshop (2/2)	3
HIS —	Historical Perspective general ed. elective[1]	3
DAN 101	Introduction to Dance and Culture (3/0)	3
THR 217	Theatre Production (1/5)	3
— —	Lab Science general education elective[3]	3
— —	Social Science general education elective[4]	3
— —	Social Science general education elective[4]	3
— —	Technology general education elective[5]	3
		64

[1] HIS 112 and 113 recommended.

[2] Select MAT 120 or 126 in consultation with an academic advisor.

[3] Select from among the course categories of BIO (excluding BIO 114 and 115), CHE, or PHY.

[4] ANT 101 and PSY 101 recommended.

[5] IST 101 recommended.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students who forego the courses recommended above should select all other electives in consultation with an academic advisor in order to assure maximum transfer of credits.

Curriculum

Associate in Fine Arts degree

Code	Course (lecture/studio hours)	Credits
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
MAT 125	Elementary Statistics I (3/0)	3
THR 101	Introduction to Theatre (3/0)	3
THR 104	Fundamentals of Acting (2/2)	3
DAN 103	Modern Dance I (0/3)	2
ENG 102	English Composition II (3/0)	3
THR 102	Stagecraft (2/2)	3
THR 105	Acting II: Principles of Characterization (2/2)	3
THR 210	Theatre History: Classical to Elizabethan (3/0)	3
HIS —	Historical Perspective general ed. elective[1]	3
CMN 112	Public Speaking (3/0)	3
DAN 102	Ballet I (0/3)	2
THR 207	Scene Study I (3/0)	3
THR 212	Central Voices in World Drama (3/0)	3
VPA 228	Artistic Collaboration Workshop (2/2)	3
DAN 101	Introduction to Dance and Culture (3/0)	3
DAN 105	Jazz Dance I (0/3)	2
THR 217	Theatre Production (1/5)	3
— —	Social Science general education elective[2]	3
— —	Social Science general education elective[2]	3
— —	Technology general education elective[3]	3
		62

[1] HIS 112 recommended.

[2] ANT 101 and PSY 101 recommended.

[3] IST 101 recommended.

† Some exemptions apply. Consult academic advisor for details.

NOTE: Students who forego the courses recommended above should select all other electives in consultation with an academic advisor in order to assure maximum transfer of credits.

Travel Agent

Certificate of Proficiency

Program **TRAV.CERT**
CIP 520903

The Travel Agent certificate program prepares students to work successfully as professional travel agents. Travel agency operations, international protocol, customer service and cultural diversity are stressed. Practical applications on a live system in a controlled environment constitute the capstone course.

PROGRAM OUTCOMES

- Assess customer needs and make the best possible travel arrangements;
- Know how to use reference directories of the travel industry;
- Use computer resources to obtain information on airline schedules and fares as well as hotel and car rental availability and rates;
- Understand customs regulations, passports and visas, health permits, and how to interpret currency exchange rates;
- Provide international travelers with the protocol for appropriate dress, language and gestures, and other behavior information;
- Develop vacation packages and business/ pleasure trip combinations.

Most of the credits earned in acquiring the Travel Agent Certificate can be applied to the A.A.S. degree in Aviation Customer Relations.

Admission to the program requires a high school diploma or its equivalent.

Curriculum

Code	Course (lecture/lab hours)	Credits
BUS 103	Business Mathematics (3/0)	3
BUS 202	Customer Orientation (3/0)	3
BUS 296	International Business Practice Firm (1/5)[1]	3
CMN 111	Speech: Human Communication (3/0)	3
ENG 101	English Composition I (3/0)	3
GEO 102	Cultural Geography (3/0)	3
HOS 100	Hospitality Success Skills (1/0)	1
HOS 115	Food and Culture (2/2)	3
HOS 120	Introduction to the Hospitality Industry (3/0)	3
HOS 123	Introduction to Travel and Tourism (3/0)	3
HOS 124	Computerized Reservations (3/0)	3
		31

[1] Students must enroll in the section with the travel agency business.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Unmanned Aerial Systems (UAS)

Program **AVI.UAS.CRT**
CIP 490199

Certificate of Achievement

The Unmanned Aerial Systems (UAS) certificate program, a beginning step in becoming a professional UAS operator, explores the practical use of drones and trains individuals for work as professional UAS pilots in the exciting industry of aerial robotics or drones.

The potentials for commercial usage of unmanned systems are tremendous, including remote sensing of atmosphere, disaster response, weather forecasting, scientific research, agricultural surveying, wildlife surveying, payload transportation, search and rescue, and aerial photography.

This certificate program addresses the latest commercial drone regulations implemented by the Federal Aviation Administration (FAA). Classroom training prepares students to pass the required written test and be eligible to obtain their remote operator certificate for UAS vehicles. In addition, exceeding FAA requirements, students must pass a practical test – flying a drone – while an instructor observes.

PROGRAM OUTCOMES

- Achieve awareness of current and potential capabilities and trends of UAS vehicles;
- Interpret and apply federal regulations specific to UAS operations and general aviation;
- Demonstrate knowledge of the political, legal, and moral issues of UAS as well as evolving FAA rules and regulations;
- Identify UAS platforms, to include unmanned aerial vehicles (UAVs), ground control stations, and ground support equipment;
- Demonstrate proficiency in flight planning and executing the flight of a UAS vehicle;
- Transfer to a bachelor's degree program if desired.

Admission to the program requires a high school diploma or its equivalent with one year of algebra.

Curriculum

Code	Course (lecture/lab hours)	Credits
MAT 135	Intermediate Algebra with Applications (4/0)[1]	4
AVI 113	Flight I (1/3)	2
AVI 131	Commercial Pilot I (3/0)	3
UAS 101	Introduction to Unmanned Aerial Systems (UAS) (3/1)	3
UAS 102	Advanced Unmanned Aerial Systems (UAS) (3/1)	3
AVI 215	Aerodynamics (2/2)	3
		14-18

[1] Not required for students possessing an associate or bachelor's degree.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**

Visual Arts

Associate in Fine Arts Degree

Programs **VIS.HIS.AFA**
VIS.CER.AFA
VIS.FINE.AFA
CIP 500101

The Associate in Fine Arts degree in Visual Arts prepares students to transfer into the third year of a baccalaureate degree program or to work in their field of concentration. Students gain a broad knowledge through the core curriculum and complete their degree requirements through extensive experience in one of four concentrations, or through a tailored set of electives from these four areas.

PROGRAM OUTCOMES

- Identify and explain the significant events in the history of art as well as contemporary practices;
- Discuss and/or integrate different techniques and approaches to art making;
- Analyze and evaluate artwork verbally and in writing;
- Create a portfolio for education transfer, employment, or artistic venues.

Students learn in modern, well-equipped facilities. Most courses are offered through day or evening classes, and an Associate in Fine Arts degree may be pursued either full- or part-time.

Admission to the Visual Arts program requires a high school diploma or its equivalent.

Through the **Art History** concentration (VIS.HIS.AFA), students gain an understanding of the arts of both western and non-western societies, including so-called primitive cultures. Students study the history of painting, sculpture, architecture, printmaking, photography, and decorative arts not only in relation to aesthetics, but also in relation to and as an indicator of world history.

The **Ceramics/Sculpture** concentration (VIS.CER.AFA) provides students with both aesthetic understanding and broad-based knowledge of three-dimensional arts: design, ceramics, and sculpture. Students develop their creativity in and knowledge of a variety of three-dimensional media, technical processes, and traditions.

The **Fine Arts** concentration (VIS.FINE.AFA), with an emphasis on drawing, painting, and printmaking courses, develops students' technical skills and personal expression, and provides a deeper knowledge and appreciation of art history.

For **Photography** concentration (PHOTO.AFA) requirements, refer to the Photography program, page 108.

Core Curriculum

Code	Course (lecture/lab hours)	Credits
FIRST SEMESTER		
ART 102	Basic Drawing (1/4)	3
ART 105	Two-Dimensional Design (1/4)	3
ART 106	Three-Dimensional Design (1/4)	3
ART 123	History of Modern Art (3/0)	3
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
SECOND SEMESTER		
ART 121	History of Art I (3/0)	3
ENG 102	English Composition II (3/0)	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
THIRD SEMESTER		
ART 125	Topics in Contemporary Art (3/0)	3
— —	Science OR Technology elective	3
— —	General Education elective[1]	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
FOURTH SEMESTER		
ART 122	History of Art II (3/0)	3
CMN 112	Public Speaking (3/0)	
	OR	3
CMN 111	Speech: Human Communication (3/0)	
MAT —	Mathematics elective[2]	3
— —	**Concentration elective**	3
— —	**Concentration elective**	3
— —	**Concentration elective**[3,4]	0-3
		62-65

NOTE: Electives should be selected in consultation with an academic advisor in order to ensure maximum transfer of credits.

[1] Select course from either Historical Perspective or Humanities general education categories. For the Art History concentration, this course may be selected from any of the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

[2] MAT 120 or 125 recommended. Select in consultation with an academic advisor.

[3] Applies to Fine Arts concentration only.

[4] PHO 103 or DMA 250 recommended.

† Some exemptions apply. Consult academic advisor for details.

Concentrations

Art History (electives)

ARC 124	History and Theory of Modern Architecture (3/0)	3
HIS 101	History of Western Civilization to 1648 (3/0)	3
PHO 110	History of Photography (3/0)	3
ART 124	History of Non-Western Art (3/0)	3
HIS 102	History of Western Civilization Since 1648 (3/0)	3
ART 126	African American Art History (3/0)	3
— —	World Language elective	3

Ceramics/Sculpture (electives)

ART 104	Life Drawing (1/4)	3
ART 130	Painting I (1/4)	3
ART 145	Beginning Ceramics: Handbuilding (1/4)	3
ART 141	Sculpture I (1/4)	3
ART 146	Beginning Ceramics: Wheel-Throwing (1/4)	3
ART 241	Sculpture II (1/4)	3
— —	Visual Arts elective[4]	3

Fine Arts (electives)

ART 104	Life Drawing (1/4)	3
ART 130	Painting I (1/4)	3
ART 141	Sculpture I (1/4)	3
ART 150	Printmaking I (1/4)	3
ART 230	Painting II (1/4)	3
ART 145	Beginning Ceramics: Handbuilding (1/4)	
	OR	3
ART 146	Beginning Ceramics: Wheel-Throwing (1/4)	
ART 233	Watercolor Painting (1/4)	
	OR	3
— —	Visual Arts elective[4]	
ART 241	Sculpture II (1/4)	3

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_degree**

Web Design

Certificate of Proficiency

Program **WEB.DSG.CERT**
CIP 500402

The Web Design Certificate prepares students for positions as web designers, web animators, and interactive art directors – positions most often found in interactive multimedia studios, advertising agencies, and design firms. It also prepares students for advanced study in interactive media design.

PROGRAM OUTCOMES

- Design an architectural plan for a website;
- Use professional software applications to create a website with advanced design and content;
- Use professional software to create interactive games and educational modules;
- Use professional software to edit digital video and audio;
- Use design principles to create web pages that communicate effectively;
- Use the principles of user interaction and usability to create user-friendly websites;
- Create websites that are accessible to and serve a variety of different user needs and technologies;
- Successfully develop and present ideas in both written and oral formats;
- Create a professional portfolio to serve in the pursuit of further education or employment.

Curriculum

Code	Course (lecture/lab hours)	Credits
ART 125	Topics in Contemporary Art (3/0)	3
DMA 105	Introduction to Computer Art (1/4)	3
DMA 110	Digital Imaging I (1/4)	3
ENG 101	English Composition I (3/0)	3
— —	Web Design elective[1]	3
DMA 135	Digital Narrative (1/4)	3
DMA 144	Internet Tools and Techniques (1/4)	3
DMA 145	Web Design I (1/4)	3
DMA 245	Web Design II (1/4)	3
DMA 246	Web Design III: Advanced Project (1/4)	
	OR	3
DMA 290	Digital Media Arts Internship	
DMA 250	Digital Portfolio Seminar (1/4)	3
		33

[1] Select from ADV 110, 210; DMA 140.

NOTE: All program listings are subject to periodic updates. Please consult your program advisor, academic division, or **www.mccc.edu/programs_certificate**