

# TRANSFER PROGRAMS

- BUSINESS ADMINISTRATION
- CRIMINAL JUSTICE
- INDIVIDUAL STUDIES
- LIBERAL ARTS: HUMANITIES & SOCIAL SCIENCE
- LIBERAL ARTS: MATH & SCIENCE





# BUSINESS ADMINISTRATION

■ ASSOCIATE OF SCIENCE



## ■ ASSOCIATE OF SCIENCE

The A.S. Degree Program in Business Administration is designed for students intending to transfer to four-year institutions. The program prepares students for a smooth transition, frequently with junior-level status, to many four-year colleges. Many students transfer to colleges that offer degrees in financial information and analysis; entrepreneurial studies; hotel, resort, and tourism; management; e-business; management information systems, international business, and accounting. CCC has a 2+2 agreement with Plattsburgh State University in several areas including accounting, management, marketing, and international business.

### MINIMUM DEGREE REQUIREMENTS (61 CREDITS):

#### Accounting 8 Credits:

ACC 101 Principles of Accounting I  
ACC 151 Principles of Accounting II

#### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition

#### Mathematics & Science 11 Credits:

MAT 161 Elementary Statistics  
MAT 215 Calculus for Business  
One science elective in biology, chemistry, environmental science, physics or science is required.

#### Computer Science 3 Credits:

CSC 102 Introduction to Microcomputer Applications

#### Business 15 Credits:

BUS 101 Business Organization & Management  
BUS 210 Principles of Marketing  
BUS 260 Business Law I  
BUS 261 Business Law II  
One business elective in any accounting, business information technology, business or computer science is required.

#### Social Science 9 Credits:

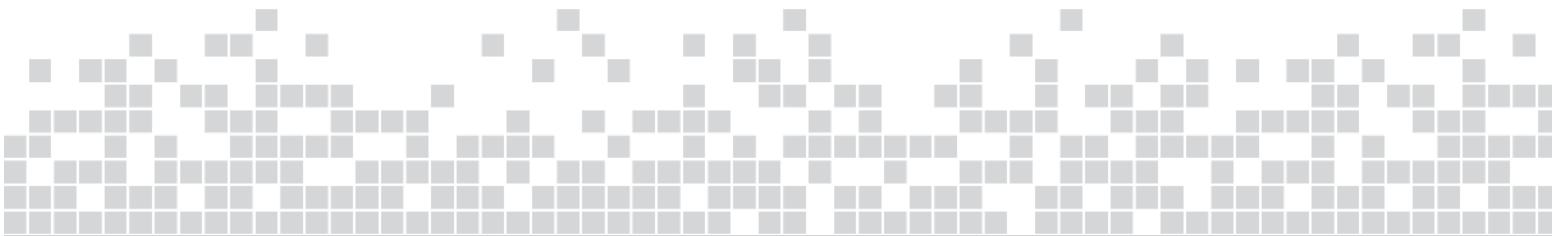
ECO 101 Principles of Microeconomics  
ECO 102 Principles of Macroeconomics  
One social science elective in anthropology, economics, geography, history, mass media, political science, psychology, or sociology, may be taken.

#### Humanities 6 Credits:

Two humanities electives in the arts including music, and theatre, literature, public speaking, or foreign languages.

#### Free Elective 3 Credits:

Students may take any credit-bearing courses they choose. Students may use these credits to focus on an area of interest or to sample different academic disciplines.



# CRIMINAL JUSTICE

■ ASSOCIATE OF ARTS



## ■ ASSOCIATE OF ARTS

The A.A. Degree Program in Criminal Justice is designed for students intending to transfer to four-year colleges and universities throughout the State University of New York (SUNY) system, as well as private institutions, where they can often enter with junior status and take additional courses to complete a bachelor's degree in Criminal Justice.

Students will complete a course of study that gives them a strong foundation of knowledge about crime, crime causation and criminal justice institutions. Students will also take courses in the various disciplines that make up the overall category of liberal arts: humanities, social sciences, mathematics, and science.

### MINIMUM DEGREE REQUIREMENTS (60 CREDITS):

A minimum of 60 credit hours is required for the Criminal Justice Associate of Arts degree. If basic skills courses are required, degree completion will take more than four semesters.

#### Basic Skills Courses:

If indicated by placement testing, basic skills courses in mathematics and English are required as prerequisite courses. These courses count as credit toward load and financial aid, but not toward graduation.

#### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition

#### Humanities 6 Credits:

COM 101 Public Speaking is required  
Courses in art, music, philosophy, communication, English, theater, and foreign language may be taken.

#### Social Science 6 Credits:

PSY 101 Introduction to Psychology  
SOC 101 Introduction to Sociology

#### Foundations for College Success 3 Credits:

FCS 101 Foundations for College Success

#### History 6 Credits:

One American History course  
One course in Western Civilization **or** Other World Civilization

#### Mathematics 3 Credits:

MAT 103 Finite Math or higher

#### Natural Science 4 Credits:

One four-credit natural science course with laboratory is required.

#### Criminal Justice 15 Credits:

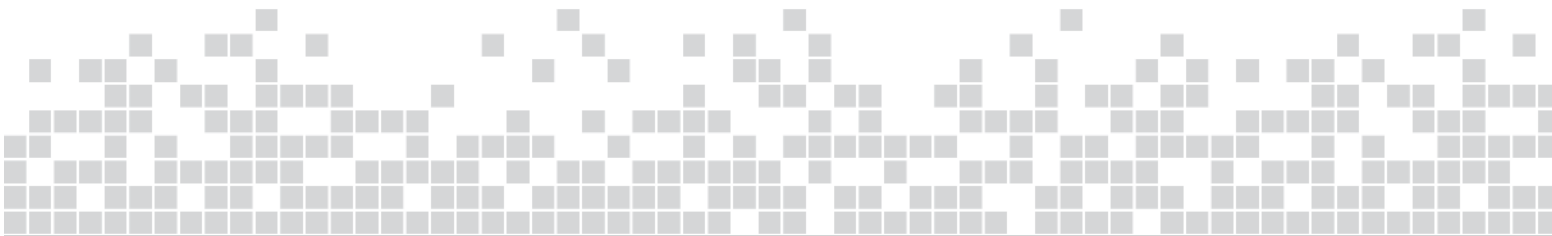
CRI 101 Introduction to Criminal Justice  
CRI 201 Criminal Law  
CRI 207 Criminal Investigation **or**  
CRI 210 Police Operations  
CRI 208 Corrections Theory and Practice  
CRI 214 Ethics in Criminal Justice

#### Health/Physical Education 2 Credits:

One activity course is required.

#### Liberal Arts/Criminal Justice Electives 9 Credits:

Six (6) of the credits must be in the liberal arts.



# INDIVIDUAL STUDIES

- ASSOCIATE OF ARTS
- ASSOCIATE OF SCIENCE



## Associate of Arts

The Individual Studies degree option provides students with a great deal of flexibility to develop their own course of study. Course concentration is divided mainly among the Humanities, Social Sciences, and Math/Science disciplines with a large number of electives and free electives completing the curriculum. Sixty-four credits are needed to receive the Associate in Arts in the Individual Studies Program. This program can be used either by students who are unsure of their plans and need flexibility to explore educational options, or by those who wish to develop their own personally planned course of study (approved by the College) because of special educational needs and career goals. A.A. Degree students usually emphasize the Social Sciences and Humanities. The A.A. Degree in Individual Studies is also intended to prepare students for transfer to similar four year baccalaureate programs.

### MINIMUM DEGREE REQUIREMENTS:

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1. A minimum of 60 credit hours.
2. ENG 093, 094, MAT 098, if indicated by Placement Test.
3. English: ENG 101 and 102.
4. 31 credits distributed among Humanities, Social Sciences and Math/Science disciplines.
5. 15 elective credits in one or more of the following areas: Humanities, Social Sciences, Math/Science.
6. 14 Free Electives in any credit courses approved by the college.
7. Students intending to pursue baccalaureate degree should make sure all courses are transferable.
8. A maximum of 15 credits may be granted for prior work/life experiences if such experiences equal college-level learning. Students must complete 12 credits of college level work before having work/life experiences considered for credit towards degree.

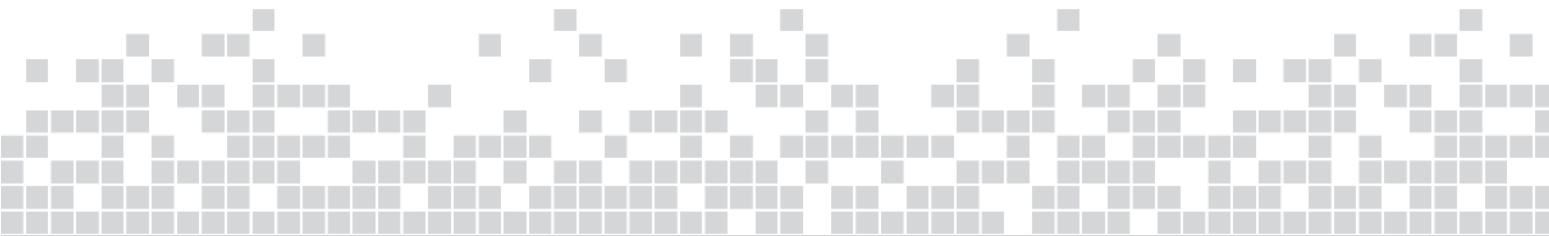
## Associate of Science

The Individual Studies degree option provides students with a great deal of flexibility to develop their own course of study. Course concentration is divided mainly among the Humanities, Social Sciences, and Math/Science disciplines with a large number of electives and free electives completing the curriculum. Sixty-four credits are needed to receive the Associate in Science in the Individual Studies Program. This program can be used either by students who are unsure of their plans and need flexibility to explore educational options, or by those who wish to develop their own personally planned course of study (approved by the College) because of special educational needs and career goals. A.S. Degree students usually have a strong concentration in Math/Science. The A.S. Degree in Individual Studies is also intended to prepare students for transfer to similar four year baccalaureate programs.

### MINIMUM DEGREE REQUIREMENTS:

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1. A minimum of 60 credit hours.
2. ENG 093, 094, MAT 098, if indicated by Placement Test.
3. English: ENG 101 and 102.
4. 30 credits distributed among Humanities, Social Sciences and Math/Science disciplines (6 credits in any one area, 9 credits in remaining two).
5. 6 elective credits in one or more of the following areas: Humanities, Social Sciences, Math/Science.
6. 28 Free Electives in any credit courses approved by the college.
7. Students intending to pursue baccalaureate degree should make sure all courses are transferable.
8. A maximum of 15 credits may be granted for prior work/life experiences if such experiences equal college-level learning. Students must complete 12 credits of college level work before having work/life experiences considered for credit towards degree.



# LIBERAL ARTS: HUMANITIES & SOCIAL SCIENCE

■ ASSOCIATE OF ARTS





# Liberal Arts: Humanities & Social Science

## ■ ASSOCIATE OF ARTS

The liberal arts degrees require a student to take a sampling of courses in the various disciplines that make up the overall category of liberal arts: humanities, social sciences, mathematics, and science. Students will select courses in all the categories listed above, but those earning the Liberal Arts: Humanities/Social Science degree will take more courses in the humanities (art, music, literature, foreign language) and social sciences (history, psychology, political science, sociology).

The Humanities/Social Science degree is specifically designed to prepare students to transfer into a baccalaureate program in one of the humanities or social science disciplines. Graduates transfer to numerous four-year colleges and universities throughout the State University of New York (SUNY) system, as well as private institutions, where they can often enter with junior status and take additional courses to complete a bachelor's degree in a specific major.

CCC also has specific articulation agreements with several institutions for a number of bachelor's degree programs. By carefully following the sequence of courses listed in the respective articulation agreement (available on CCC's website by following the links: Current Students; Academics; Degrees/Certificates Offered; 2 + 2 Programs), students may be in a position to transfer into their junior year at the four-year college or university. Some of these agreements require students to cross register and take courses at the transfer institution while they are at CCC, but this incurs no additional cost as long as the student is enrolled in at least twelve credit hours at CCC.

## MINIMUM DEGREE REQUIREMENTS (60 CREDITS):

A minimum of 60 credit hours is required for the Liberal Arts Humanities/Social Science Associate of Arts degree. If basic skills courses are required, degree completion will take more than four semesters.

### Basic Skills Courses:

If indicated by placement testing, basic skills courses in mathematics and English are required as prerequisite courses. These courses count as credit toward load and financial aid, but not toward graduation.

### English 9 Credits:

English Composition and Literature and Composition are both required English credit courses, as is one other English elective.

### Humanities 9 Credits:

Courses in art, music, philosophy, communication, English, theater, Western Civilization, and foreign language may be taken. At least one Arts course is required for a Humanities/Social Science degree.

### Social Science 12 Credits in Three Different Disciplines:

Courses in anthropology, economics, geography, history, political science, psychology, sociology, and mass media may be taken.

### Mathematics 6 Credits:

Two mathematics courses: MAT 101 or higher.

### Science 8 Credits:

Two four-credit science courses with laboratories are required.

### Health and Physical Education 1 Credit:

Any course with an HPE prefix fills this requirement.

### Information Literacy 1 Credit:

LIB 101 Library Research Skills is required.

### Electives 14 Credits:

Students may take any credit-bearing courses they choose. Students may use these credits to focus on an area of interest or to sample different academic disciplines.

# LIBERAL ARTS: MATH & SCIENCE

## ■ ASSOCIATE OF SCIENCE



## ■ ASSOCIATE OF SCIENCE

The liberal arts degrees require a student to take a sampling of courses in the various disciplines that make up the overall category of liberal arts: humanities, social sciences, mathematics, and science. Besides sampling courses in all the categories listed above, students earning the Liberal Arts Math/Science degree will take more courses in mathematics (e.g. algebra, calculus, statistics) and natural sciences (e.g. biology, chemistry, physics, environmental science).

The Math/Science degree is specifically designed to prepare students to transfer into a baccalaureate program in mathematics, natural sciences, or a related discipline. Graduates transfer to numerous four-year colleges and universities throughout the State University of New York (SUNY) system, as well as private institutions, where they enter with junior status and take additional courses in one of these specialized areas to gain a strong base of knowledge.

CCC also has specific articulation agreements with several institutions for a number of bachelor's degree programs. By carefully following the sequence of courses listed in the respective articulation agreement (available on CCC's website by following the links: Current Students; Academics; Degrees/Certificates Offered; 2 + 2 Programs), students will be in position to transfer into their junior year at the four-year college or university.

### Math/Science A.S. Program Goals

1. To prepare Math/Science majors to problem-solve.
2. To prepare Math/Science majors to use appropriate technology.
3. To prepare Math/Science majors to communicate effectively.
4. To prepare Math/Science majors to transfer to a four-year institution in mathematics, science, or related field.

### MINIMUM DEGREE REQUIREMENTS (60 CREDITS):

A minimum of 60 credit hours is required for the Liberal Arts Math/Science Associate of Science degree.

#### Basic Skills Courses:

Basic skills courses in mathematics and English are required as prerequisite courses if indicated by placement testing. These courses count toward load and financial aid, but not toward graduation.

#### English 6 Credits:

English Composition and Literature and Composition are both required.

#### Humanities 6 Credits:

Courses in art, communication, English, foreign language, mass media, music, philosophy, and theater may be taken.

#### Social Science 9 Credits in Two Different Disciplines:

Courses in anthropology, economics, geography, history, political science, psychology, and sociology, may be taken.

#### Mathematics 8 Credits:

Two four-credit mathematics courses, to be selected from College Algebra with Trigonometry II, Calculus with Analytic Geometry I or Calculus with Analytic Geometry II.

#### Science 8 Credits:

Two four-credit science courses with laboratory components are required. Students planning to major in a science should take a two-year sequence.

#### Math/Science Elective 12 Credits:

Twelve credits of mathematics and science credits will be taken under advisement of a math or science faculty member. A mix of college-level mathematics, science and related courses will be selected to best prepare students for a bachelor's program in mathematics, natural sciences, or a related field.

#### Health and Physical Education 2 Credits:

Any course with an HPE prefix fills this requirement. One activity course is required.

#### Information Literacy 1-3 Credits:

Library Research Skills or Introduction to Computer Applications is required.

#### Electives 6-8 Credits:

Students may take any credit-bearing courses they choose. Students may use these credits to focus on an area of interest or to sample different academic disciplines.

#### NOTES:

- It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.
- The Math & Science degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.

The Math & Science A.S. degree is a two-year transfer program designed to provide students with course preparation for a baccalaureate program in mathematics, natural sciences or a related field. Graduates may transfer to numerous four-year colleges and universities with junior status and benefit from general education coursework that transfers throughout the State University of New York (SUNY) system and to most private institutions. To best serve students, CCC offers a number of articulation agreements, as well as transfer scholarships, such as the following:

### **Articulation Agreements and Advisement Options with SUNY Plattsburgh**

Childhood Education Articulation Agreements with a Choice of Concentrations in Mathematics or Science.

This is a pathway for those who are seeking a career as a teacher certified in childhood education (grades 1-6). Students in this program typically complete 63-65 credit hours at CCC, working to complete the SUNY general education requirements and to establish a concentration in math or natural science.

Students will need to cross register at SUNY Plattsburgh for three courses during three of their semesters at CCC. These courses meet on SUNY Plattsburgh's campus and the student does not incur extra cost as long as the student is enrolled in at least 12 additional credit hours at CCC. Advisors will assist students in completing this cross registration. Students who are seeking a career as a teacher certified in education (grades 7-12) should follow a Math & Science A.S. degree with a focus in the relevant area of mathematics or science.

### **Articulation Agreements and Advisement Options in Biology, Chemistry, Biochemistry, and Environmental Science**

Students in these programs complete 60-67 credit hours at CCC, working to complete the SUNY general education requirements and to build a strong foundation in the physical sciences.

Graduates from four-year programs in biology, chemistry, biochemistry, and environmental science typically advance toward graduate degrees and/or seek careers in medicine, health, agriculture, pharmaceuticals, environmental science, or industrial, private or public research laboratories.

### **Articulation Agreements with Upstate Medical University**

Articulation Agreements in Cardiovascular Perfusion, Medical Imaging Sciences, Medical Technology, Radiation Therapy Technology, and Respiratory Care.

Graduates of this program seek careers in healthcare settings such as operating room specialists, working with physicians, or within anatomical pathology, radiology or clinical laboratories. Students in this program typically complete 60-64 credit hours at CCC, working to complete the SUNY general education requirements and to establish a strong foundation in science coursework.

### **Articulation Agreements and Advisement Options with Paul Smith's College, SUNY ESF and SUNY ESF – Wanakena Ranger School**

Students interested in forestry may transfer to Paul Smith's College or SUNY ESF-Wanakena Ranger School. After completing approximately 60 credits at CCC, students may transfer to Paul Smith's College to pursue a degree in Natural Resources or Forestry. After completing approximately 30 credits at CCC, students may transfer to Wanakena Ranger School to pursue a degree in Forest Technology, Land Surveying Technology or Environmental and Natural Resources Conservation.

#### **NOTE:**

*These credit hours of coursework earn the student an Associate of Science degree in Liberal Arts & Science - Math & Science at Clinton Community College and are equivalent to what most majors would take during the freshman and sophomore years at SUNY Plattsburgh, SUNY ESF, Upstate Medical University, or Paul Smith's College. By carefully following the sequence of courses listed in the respective articulation agreement (available on the CCC website), students will be in position to transfer to their junior year at the four-year college or university.*

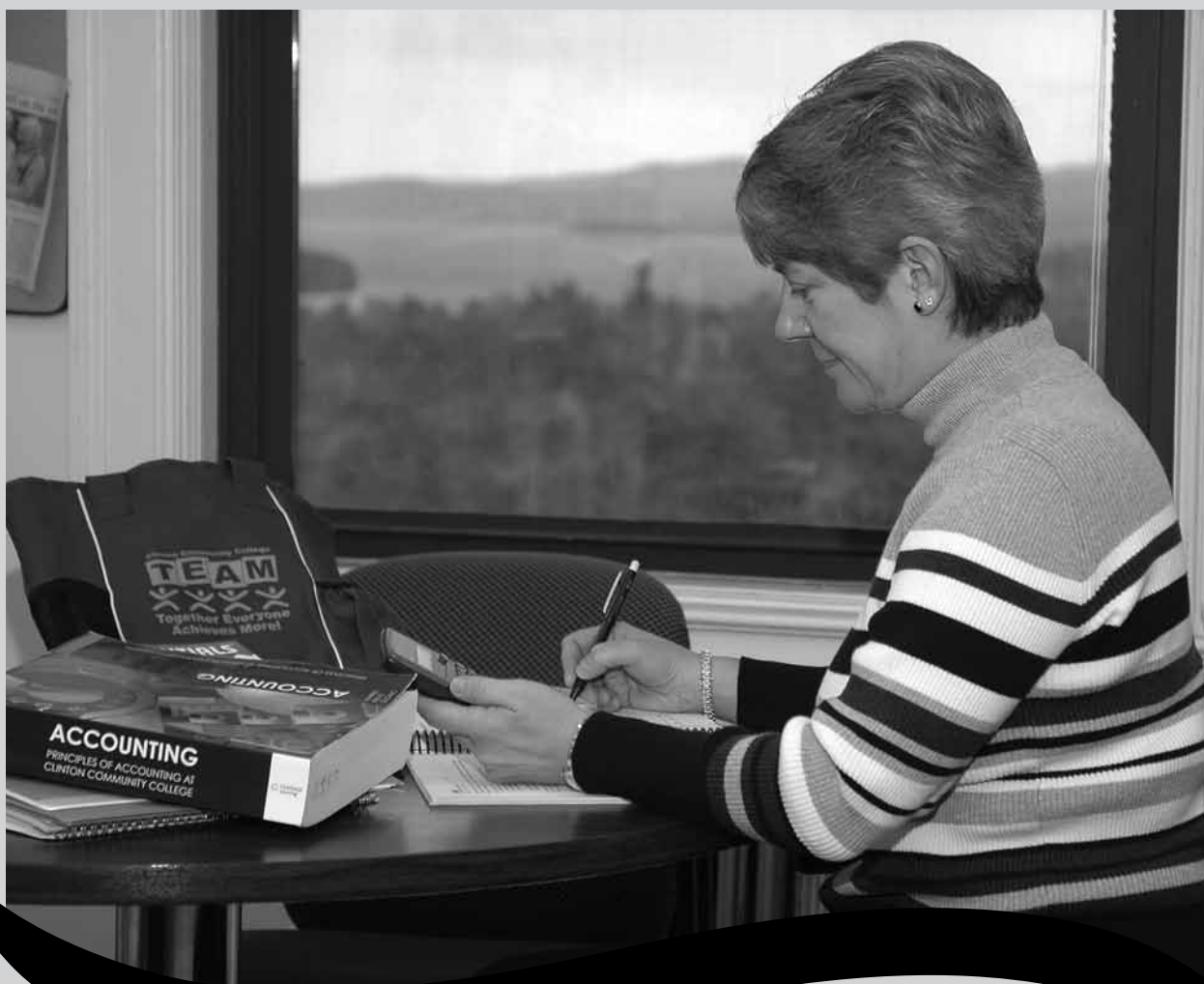
# CAREER PROGRAMS

- BUSINESS ACCOUNTING
- BUSINESS ADMINISTRATION
- COMPUTER INFORMATION SYSTEMS
- COMPUTER TECHNOLOGY
- CRIMINAL JUSTICE
- ELECTRICAL TECHNOLOGY: ELECTRONICS
- ENVIRONMENTAL TECHNOLOGY
- HUMAN SERVICES
- INDIVIDUAL STUDIES
- INDUSTRIAL TECHNOLOGY
- NURSING
- RENEWABLE ENERGY TECHNOLOGIES
- WIND ENERGY & TURBINE TECHNOLOGY



# BUSINESS ACCOUNTING

■ ASSOCIATE OF APPLIED SCIENCE



## ■ ASSOCIATE OF APPLIED SCIENCE

The A.A.S. Accounting Degree provides a general education and specialized training in accounting and management to prepare graduates for entry-level positions in industry, service organizations, retail establishments, and various government agencies. The A.A.S. Degree is not designed to prepare graduates to transfer to a four-year institution. However, almost all courses do transfer to most four-year universities, and many A.A.S. Accounting Degree graduates do continue their studies at transfer institutions.

Graduates are eligible for city, county, state and federal jobs, or may open their own business in areas such as taxes, bookkeeping/accounting, and general business.

Graduates can join the workforce in areas such as:

- Customs Broker
- Accounting
- Retail Sales
- Management
- Human Resources
- Marketing
- Inside/Outside Sales
- Non-profit Organizations
- Advertising
- Payroll
- Tax Management
- Insurance
- Banking

## MINIMUM DEGREE REQUIREMENTS (61 CREDITS):

### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition

### Mathematics 3 Credits:

Mat 101 or higher

### Computers Science 3 Credits:

CSC 102 Introduction to Microcomputer Applications

### Communication 3 Credits:

COM 101 Public Speaking

### Accounting 20 Credits:

ACC 101 Principles of Accounting I  
ACC 151 Principles of Accounting II  
ACC 201 Intermediate Accounting  
ACC 202 Cost Accounting  
ACC 251 Federal Income Tax  
ACC 252 Computer Applications in Accounting

### Business 18 Credits:

BUS 101 Business Organization & Management  
BUS 210 Principles of Marketing  
BUS 213 Business Communications  
BUS 260 Business Law I  
BUS 261 Business Law II  
BUS 285 Internship or business elective of any accounting, business or computer science course

### Social Science 3 Credits:

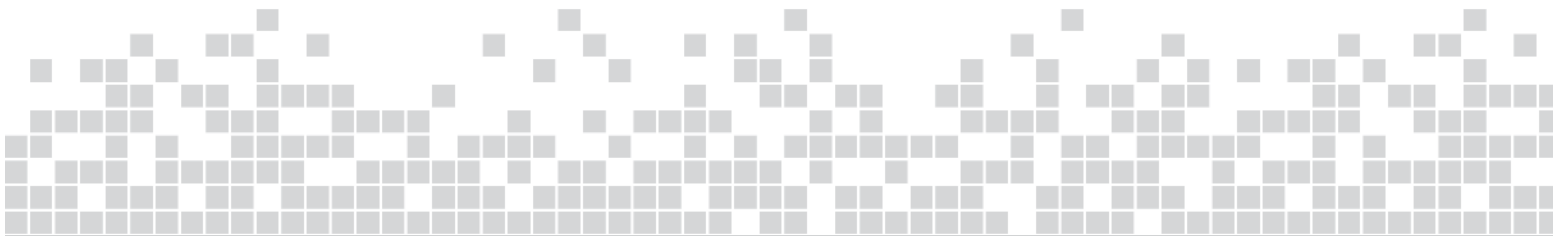
ECO 101 Microeconomics OR  
ECO 102 Macroeconomics

### Science 4 Credits:

One four-credit science course with laboratory components is required.

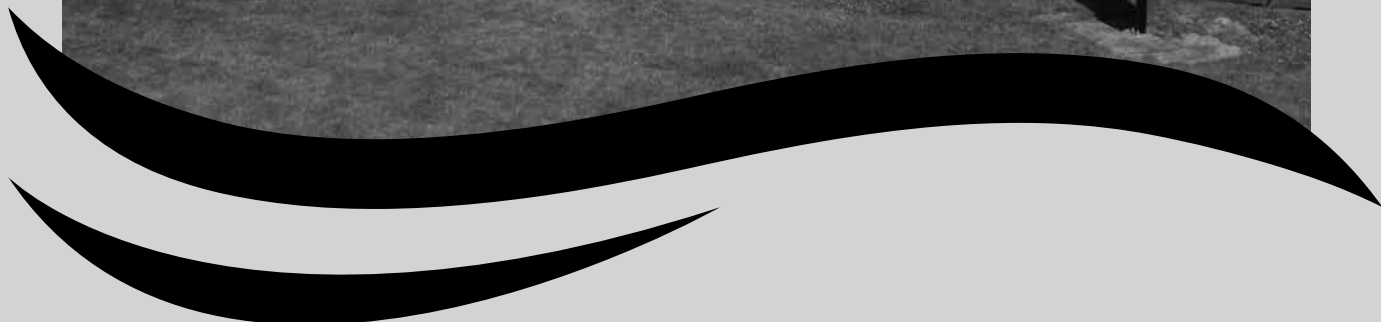
### Other 1 Credit:

LIB 101 Library Research Skills



# BUSINESS ADMINISTRATION

■ ASSOCIATE OF APPLIED SCIENCE





## ■ ASSOCIATE OF APPLIED SCIENCE

The A.A.S. Degree Program in Business Administration has been developed for students contemplating careers in the expanding fields of marketing, sales, retailing, advertising, personnel, office management, and other business fields. The curriculum provides specialized training in management, as well as a comprehensive general education. Many graduates enter the workforce by successfully completing governmental examinations. Others gain promotions, new job opportunities, and increased compensation as a result of obtaining their degrees at CCC.

### MINIMUM DEGREE REQUIREMENTS (60 CREDITS):

#### Accounting 8 Credits:

ACC 101 Principles of Accounting I  
ACC 151 Principles of Accounting II

#### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition

#### Mathematics 3 Credits:

Mat 101 or higher

#### Computer Science 3 Credits:

CSC 102 Introduction to Microcomputer Applications

#### Communication 3 Credits:

COM 101 Public Speaking

#### Business 24 Credits:

BUS 101 Business Organization & Management  
BUS 210 Principles of Marketing  
BUS 213 Business Communications  
BUS 260 Business Law I  
BUS 261 Business Law II  
Internship (Any ACC, BUS, CSC internship)  
Two business electives of any accounting, business or computer science course

#### Social Science 6 Credits:

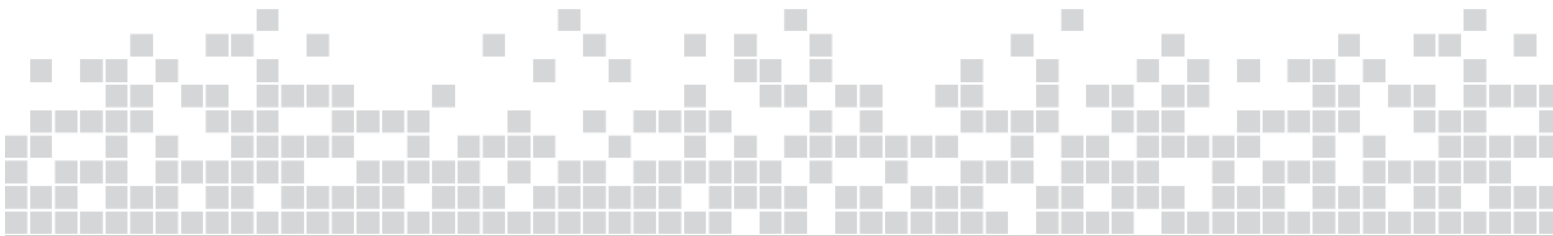
ECO 101 Microeconomics OR  
ECO 102 Macroeconomics  
One social science elective in anthropology, economics, geography, history, mass media, political science, psychology, and sociology, may be taken.

#### Science 4 Credits With a Lab:

One four-credit science courses with laboratory components is required.

#### Free Elective 3 Credits:

Students may take any credit-bearing courses they choose. Students may use these credits to focus on an area of interest or to sample different academic disciplines.



# COMPUTER INFORMATION SYSTEMS

■ ASSOCIATE OF APPLIED SCIENCE



# Computer Information Systems

## ■ ASSOCIATE OF APPLIED SCIENCE

The Computer Information Systems (CIS) degree is a hands on program that covers a wide variety of topics including computer programming, hardware, operating systems, web design, and database management. This degree will prepare students for entry level positions in the following areas:

- Computer Programming
- Computer Networking
- Computer Hardware Maintenance and Repair
- Web Design
- Database Management
- Help Desk/Computer Support

**Internship** – The CIS degree program has a required internship to insure that students get at least 120 hours of work experience in the computer field before they graduate.

**Articulation Agreements** – The CIS degree program has articulation agreements with Rochester Institute of Technology, SUNY IT, and SUNY Plattsburgh.

**Cost Effective** – Students that complete the CIS degree can go directly to work for a company or transfer to one of the institutions named above. Either way, students save substantially on the cost of an education.

## MINIMUM DEGREE REQUIREMENTS (61 CREDITS):

### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition **or**  
ENG 235 Technical Writing

### Mathematics 3-4 Credits:

MAT 101 or above

### Humanities 3 Credits:

COM 101 Public Speaking

### Social Science 6 Credits:

Two social science electives are required.

### Computer Information Systems 33 Credits:

CSC 102 Introduction to Microcomputer Applications  
CSC 121 Fundamental Concepts of Computing  
CSC 202 Database Systems  
CSC 215 Web Design & Programming  
CSC 217 Computer Programming  
CSC 220 Operating Systems  
CSC 225 Computer Hardware  
CSC 230 Intro to Networking  
CSC 280 Technology Practicum/Seminar

*Pick two courses from the following:*

CSC 201 Advanced Software Applications  
CSC 222 Database Web Applications  
CSC 240 Networking II

*(Credits Updated August 2013)*

### Business 3 Credits:

BUS 101 Business Organization and Management

### Science 4 Credits:

One science course with lab is required.

### HPE Activity 1 Credit:

One activity course is required.

### Free Electives 3 Credits:

Students may use these credits to focus on an area of interest or prepare for a specific transfer opportunity.

*(Credits Updated August 2013)*

### NOTES:

- *It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.*
- *The Computer Information Systems degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.*

# COMPUTER TECHNOLOGY

■ ASSOCIATE OF APPLIED SCIENCE



# Computer Technology

## ■ ASSOCIATE OF APPLIED SCIENCE

Computer Technology is a program that provides graduates with skills in two areas: electronics and computer science. Students will study the electronics associated with computer systems as well as the software that makes computer systems function. Graduates of the Computer Technology program will be prepared for positions requiring an understanding of hardware and software applications of microprocessor and other computer-based systems, or have the opportunity to transfer to one of several Baccalaureate programs in Computer Engineering Technology in New York State.

An Associate Degree in Computer Technology prepares graduates to work in a variety of jobs that include:

- Computer Systems Repair and Maintenance
- Engineering Assistance
- Repair and Maintenance of Microprocessor Controlled Equipment
- Computer Networking
- Installation of Computer Hardware/Software Systems
- Help Desk/Computer Support

The Computer Technology program can be completed in four semesters or two years. In order to graduate, students must complete 65 credits and graduate with a grade point average of 2.0. If beginning the program with the required math (able to enroll in Tech Math I) and English skills, students can complete the program in four semesters.

## MINIMUM DEGREE REQUIREMENTS (65 CREDITS):

### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition **or**  
ENG 235 Technical Writing

### Social Science 3 Credits:

One social science elective in Anthropology, Economics, Geography, History, Political Science, Psychology, or Sociology.

### Mathematics or Science 8 Credits:

MAT 105 Technical Math I  
MAT 205 Technical Math II

### Science 8 Credits:

PHY 111 General Physics I  
PHY 112 General Physics II

### Electrical Technology 25 Credits:

ETE 101 Electrical Circuits I  
ETE 103 Computer Programming for Electronics  
ETE 104 Electronics I  
ETE 105 Digital Electronics I  
ETE 205 Digital Electronics II  
ETE 207 Microcontroller Fundamentals

### Computer Info Systems 15 Credits:

CSC 121 Fundamental Concepts of Computing  
CSC 217 Computer Programming  
CSC 220 Operating Systems  
CSC 225 Computer Hardware  
CSC 230 Intro to Networking

### CT Elective 3-4 Credits:

CSC 240 Networking II **or**  
CSC 280 Technology Practicum/Seminar **or**  
ETE 210 Microcomputer Systems

### NOTES:

- *It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.*
- *The Computer Technology degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.*

# CRIMINAL JUSTICE

■ ASSOCIATE OF APPLIED SCIENCE



## ■ ASSOCIATE OF APPLIED SCIENCE

The Criminal Justice curriculum is a two year program that leads to an Associate of Applied Science Degree. The program prepares students for exciting careers in law enforcement, corrections, and private/industrial security.

Our program meets the needs of students who plan to enter their chosen careers right after graduation. Courses also provide continuing education to professionals already employed in the criminal justice field.

Students are required to successfully complete a minimum of 63 credits with a minimum grade point average of 2.0. If enrolling with the required math and English skills, students may complete the program in four full-time semesters or two years. Without the required math and English, studies will extend beyond two years.

### Internships

Field experience is not only a wonderful way to learn information and acquire skills, it is the best way for students to "try out" careers. Internships are also a great opportunity to get job experience and make professional contacts that could prove invaluable for landing the first job after graduation. CCC's Criminal Justice Program is unique for the wide array of diverse internship settings available to students.

An Associate Degree in Criminal Justice prepares graduates for a career in or as a:

- State Police
- Municipal Police Departments
- Federal Law Enforcement
- State- and County-level Corrections Officers
- Deputy Sheriff
- Court Officer
- Private Security Officers and Campus Security

## MINIMUM DEGREE REQUIREMENTS (63-64 CREDITS):

### Foundations for College Success 3 Credits:

FCS 101 Foundations for College Success  
(Course added to degree program, effective Fall 2011)

### English 9 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition  
ENG 235 Technical Writing

### Mathematics or Science 3-4 Credits:

MAT 103 Finite Math or higher; or  
One science elective in biology, chemistry, environmental science, physics, geology or science may be taken.

### Communication 3 Credits:

COM 101 Public Speaking

### Criminal Justice 18 Credits:

CRI 101 Introduction to Criminal Justice  
CRI 201 Criminal Law  
CRI 207 Criminal Investigation  
CRI 208 Corrections Theory and Practice  
CRI 210 Police Operations  
CRI 214 Ethics in Criminal Justice

### Criminal Justice Electives 9 Credits:

Three course electives in criminal justice are required.  
(CJ Electives reduced, effective Fall 2011)

### Social Science 9 Credits:

PSY 101 Introduction to Psychology  
SOC 101 Introduction to Sociology  
PSC 100 Government and Politics in America

### Computer 1 Credit:

CSC 101 Computer Orientation

### Health/Physical Education 2 Credits:

Two activity courses are required.

### Free Elective 6 Credits:

Students may take any credit-bearing courses they choose. Students may use these credits to focus on an area of interest or to sample different academic disciplines, or to take further general education courses for transfer to a four-year college.

# ELECTRICAL TECHNOLOGY: ELECTRONICS

■ ASSOCIATE OF APPLIED SCIENCE





# Electrical Technology: Electronics

## ■ ASSOCIATE OF APPLIED SCIENCE

Study the exciting field of electronics in state-of-the-art laboratories at Clinton Community College. Students can enter the program right out of high school, or transfer from another college or university. With an Electrical Technology: Electronics A.A.S. degree from CCC, graduates can seek immediate employment as an electronics technician, or pursue a baccalaureate degree in Electrical Engineering Technology at a four-year institution. Graduates from the program have had excellent results obtaining employment in the field and record some of the highest starting salaries of all CCC graduates.

An associate degree in Electrical Technology prepares graduates to work in a variety of settings or as the following:

- Electrical and Electronics repair and maintenance
- Engineering assistant
- Testing and quality control
- Instrumentation specialist
- Calibration technician

The Electrical Technology program can be completed in four semesters or two years. In order to graduate, students must successfully complete a minimum of 63-64 credits with a grade point average of 2.0. If beginning the program with the required math (able to enroll in Tech Math I) and English skills, the program can be completed in four semesters.

## MINIMUM DEGREE REQUIREMENTS (63-64 CREDITS):

### English 6 Credits:

ENG 101 English Composition  
ENG 235 Technical Writing

### Mathematics 8 Credits:

MAT 105 Technical Math I  
MAT 205 Technical Math II  
(MAT 104/MAT 204 may be substituted)

### Electrical Technology 35 Credits:

ETE 101 Electrical Circuits I  
ETE 102 Electrical Circuits II  
ETE 103 Computer Programming for Electronics  
ETE 104 Electronics I  
ETE 105 Digital Electronics I  
ETE 202 Intro to Industrial Electricity **or**  
CSC 230 Intro to Networking  
ETE 204 Electronics II  
ETE 205 Digital Electronics II  
ETE 207 Microcontroller Fundamentals  
ETE 208 Operational Amplifiers

### Science 8 Credits:

PHY 111 General Physics I  
PHY 112 General Physics II

### Social Science 3 Credits:

One social science elective in anthropology, economics, geography, history, mass media, political science, psychology, and sociology may be taken.

### Free Elective 3-4 Credits:

Students may take any credit-bearing courses they choose. Students may use these credits to focus on an area of interest or to sample different academic disciplines, or to take further general education courses for transfer to a four-year college.

### NOTES:

- *It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.*
- *The Electrical Technology: Electronics degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.*



# ENVIRONMENTAL TECHNOLOGY

■ ASSOCIATE OF APPLIED SCIENCE



## ■ ASSOCIATE OF APPLIED SCIENCE

The Environmental Technology AAS degree will give students the scientific background and hands-on instruction needed to pursue a technical career in fields related to environmental science. Graduates will possess basic skills applicable to careers in environmental site investigation, cleanup, and monitoring and wastewater/drinking water operations. As one of only four (4) NYSDEC-approved wastewater programs in the state, the AAS degree offers a highly marketable skill set that includes a fast-track option for wastewater treatment plant operator certification. Students will train for a position in these high-growth career areas in state-of-the-art science laboratories situated on CCC's beautiful campus overlooking Lake Champlain. In addition to lab and classroom instruction, students will also receive practical exposure to the latest field technologies in a variety of outdoor settings and prepare for certification exams relevant to employment in the environmental industry (Hazardous Materials/Water Treatment Operator). The U.S. Bureau of Labor Statistics projects that employment in these fields will grow much faster than the national average, adding nearly 33,000 new positions across the United States over the next 10 years. Regionally, an anticipated surge in retirements at wastewater treatment plants in NYS will require a workforce with the specialized skills to replace plant operators in towns and municipalities across the state. Opportunities are also available for transfer to a four-year Environmental Science program at another SUNY institution. The Environmental Technology program can be completed in only four semesters, or two years. Students who require developmental math and/or English may take more than four semesters. In order to graduate, students must complete 60 credits and graduate with a grade point average of 2.0.

### MINIMUM DEGREE REQUIREMENTS (60 CREDITS):

#### English 6 Credits:

ENG 101 English Composition  
ENG 235 Technical Writing

#### Mathematics 7 Credits:

MAT 105 Technical Math I  
MAT 161 Elementary Statistics

#### Science 28 Credits:

BIO 101 General Biology I  
BIO 102 General Biology II  
BIO 204 Microbiology OR  
BIO 206 Ecology  
CHE 111 General Chemistry I  
CHE 112 General Chemistry II  
ENV 101 Environmental Science  
GEL 101 Physical Geology

#### Environmental Technology 13 Credits:

ENV 210 Environmental Technology  
ENV 211 Water Quality Operator\*  
ENV 214 Internship/Field Training  
ENV 215 ENV Site Assessment\*  
ENV 216 HAZWOPER/HAZMAT\*  
ENV 220 Seminar in ENV Issues  
ENV 230 Simulated ENV Impact Project  
\*Certificate/training courses

#### Social Science 3 Credits:

PSC 240 State and Local Government

#### Computer 3 Credits:

CSC 102 Introduction to Microcomputer Applications

#### NOTES:

1. It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.
2. The Environmental Technology degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.
3. These credit hours of coursework earn the student an Applied Associate of Science degree in Environmental Technology at Clinton Community College and are equivalent to what most majors would take during the freshman and sophomore years at SUNY ESF. By carefully following the sequence of courses listed in the respective articulation agreement (available on the CCC website) students will be in position to transfer to their junior year at the four-year university.

# HUMAN SERVICES

■ ASSOCIATE OF APPLIED SCIENCE



### **Mission Statement**

The mission of the Human Services Program is to prepare competent entry-level professionals for employment in the helping professions and/or transfer to baccalaureate programs in Human Services or related fields. The program provides students with theory and practice in the areas of general human services and selected specialty areas.

The nationally accredited Human Services curriculum is a two-year program that leads to an Associate of Applied Science Degree. The program prepares students for entry-level employment within a variety of helping professions. Areas of focus may include early childhood, chemical dependency intervention and counseling, family assistance, gerontology, and other social services.

The program meets the needs of students who plan to enter their chosen careers right after graduation, as well as students who wish to transfer to four-year colleges and universities for further education. Courses also provide extended learning to professionals already employed in the human services field.

Students may choose to attend on a full-time or part-time basis. This program is considered to be primarily hybrid in nature. This means that all core courses and some electives are conducted half-time in class with all written work and examinations completed online.

Upon acceptance into the Human Services program, each student is assigned an advisor from the Human Services faculty who assists the student with formulating career goals and planning a course of study in accordance with those goals. Since all Human Services faculty are either past or present practitioners in various human services careers, students can gain valuable information and insights relevant to their career planning efforts.

The Associate Degree Program prepares graduates for a career\* in:

- Chemical Dependency Treatment
- Mental Health Services
- Gerontology
- Social Services
- Housing
- Crisis Services
- Vocational Services
- Community Services
- Working with the Developmentally Challenged
- Advocacy Work

*\*Some of these careers require additional education or training.*

### **MINIMUM DEGREE REQUIREMENTS (66 CREDITS):**

#### **English 6 Credits:**

ENG 101 English Composition  
ENG 235 Technical Writing

#### **Mathematics 3 Credits:**

Math elective, MAT 103 or higher.

#### **Communication 3 Credits:**

COM 101 Public Speaking

#### **Human Services 30 Credits:**

HUS 101 Introduction to Human Services  
HUS 105 Introduction to Basic Counseling Skills  
HUS 200 Case Management & Crisis Intervention  
HUS 201 Social Service Agencies  
HUS 206 Group Skills for Human Service Professionals  
HUS 281 Field Practicum Seminar  
HUS 282 Field Practicum

Three approved Human Services Electives are required.

#### **Social Science 12 Credits:**

PSC 240 State and Local Government  
PSY 101 Introduction to Psychology  
SOC 101 Introduction to Sociology  
One 200 level psychology or sociology elective is required.

#### **Science 4 Credits:**

One science course elective

#### **Health/Physical Education 4 Credits:**

HPE 102 Safety and First Aid  
One activity course is required.

#### **Information Management 4 Credits:**

CSC 102 Microcomputer Applications  
LIB 101 Library Research Skills



# INDIVIDUAL STUDIES

■ ASSOCIATE OF APPLIED SCIENCE



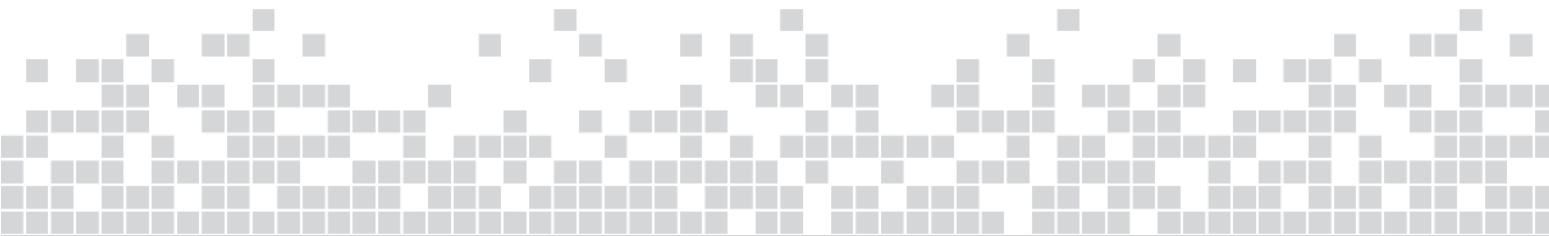
## ■ ASSOCIATE OF APPLIED SCIENCE

The Individual Studies degree option provides students with a great deal of flexibility to develop their own course of study. Course concentration is divided mainly among the Humanities, Social Sciences, and Math/Science disciplines with a large number of electives and free electives completing the curriculum. Sixty credits are needed to receive the Associate in Applied Science in the Individual Studies Program. This program can be used either by students who are unsure of their plans and need flexibility to explore educational options, or by those who wish to develop their own personally planned course of study (approved by the College) because of special educational needs and career goals. The A.A.S. Degree, like the A.A. and A.S. Degrees, can also be used for transfer to a four year program, but the A.A.S. Degree was designed mainly to lead individuals directly to employment in a specific career.

### MINIMUM DEGREE REQUIREMENTS:

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1. A minimum of 60 credit hours.
2. ENG 093, 094, MAT 098, if indicated by Placement Test.
3. English: ENG 101 and 102.
4. 18 credits distributed among Humanities, Social Sciences and Math/Science disciplines (6 credits in each area).
5. 6 elective credits in one or more of the following areas: Humanities, Social Sciences, Math/Science.
6. 36 Free Electives in any credit courses approved by the College.
7. Students intending to pursue baccalaureate degree should make sure all courses are transferable.
8. A maximum of 15 credits may be granted for prior work/life experiences if such experiences equal college-level learning. Students must complete 12 credits of college-level work before having work/life experiences considered for credit towards degree.



# INDUSTRIAL TECHNOLOGY

■ ASSOCIATE OF APPLIED SCIENCE





## ■ ASSOCIATE OF APPLIED SCIENCE

Industrial technology is a field that is constantly growing offering a rewarding career in the technology sector. There are manufacturing firms here in upstate New York currently seeking skilled graduates, and the demand is expected to grow. The Industrial Technology A.A.S. degree program prepares graduates to step immediately into such jobs in the manufacturing sector. Students will study general industrial technology subjects common to most manufacturing industries, and choose any two specialized electives from six broadly-based courses. Along the way, students will also take general education courses. An Associate degree in Industrial Technology prepares graduates to work in a variety of settings in one of the following occupations:

- Electrical and Mechanical Repair
- Maintenance Technician
- Quality Assurance Specialist
- CAD and CAM Technician
- Plastics Service or Manufacturing
- Inspector
- Supervisor

The Industrial Technology program is designed to be completed in only four semesters, or two years. In order to graduate, students must successfully complete a minimum of 62 credits with a grade point average of 2.0. If beginning the program with the required math and English skills, the program can be completed in four semesters.

### MINIMUM DEGREE REQUIREMENTS (62 CREDITS):

#### English 6 Credits:

ENG 101 English Composition  
ENG 235 Technical Writing

#### Humanities/Social Science Elective 3 Credits:

One social science elective in anthropology, economics, geography, history, mass media, political science, psychology, and sociology may be taken.

#### Social Science 3 Credits:

Social science elective in anthropology, economics, geography, history, mass media, political science, psychology, and sociology may be taken.

#### Mathematics 4 Credits:

MAT 205 Technical Math II  
(MAT 204 may be substituted)

#### Science 4 Credits:

PHY 111 General Physics I

#### Computer Science 3 Credits:

CSC 102 Introduction to Microcomputer Applications

#### Industrial Technology 32 Credits:

INT 100 Industrial Operations  
INT 101 Technical Drawing/CAD  
INT 102 Blueprint Reading & Tech. Schematics  
INT 203 Introduction Quality Control/Assurance  
INT 204 Manufacturing Processes  
INT 206 Principles of Fluid Power Systems  
INT 207 Principles of Industrial Maintenance  
INT 209 Environmental Health & Safety  
INT 214 Industry Internship  
INT 215 Workforce Leadership

#### Specialized Electives:

Choose any two courses from:  
INT 210, INT 211, INT 212, INT 217, ETE 106, CSC 230.

#### Electrical Technology 7 Credits:

ETE 101 Electrical Circuits I  
ETE 202 Introduction to Industrial Electricity

#### NOTES:

- *If may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.*
- *The Industrial Technology degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.*

# NURSING

## ■ ASSOCIATE OF APPLIED SCIENCE



## ■ ASSOCIATE OF APPLIED SCIENCE

The Associate Degree Program in Professional Nursing prepares students for a career as a Registered Nurse, with the potential to work in a variety of health care settings. Students successfully completing the program will be eligible to take the national licensure examination for registered nurses. The program is more fully described in the Clinton Community College Department of Nursing Student Handbook. This program is fully registered by the University of the State of New York and nationally accredited by the National League for Nursing Accrediting Commission.

The program of study in professional nursing coursework is tightly organized and sequential. Students must follow the prescribed course sequencing published in the handbook and college catalog. All required science, math and nursing courses must be completed with a "C" grade or higher. A minimum of 65 credits with a grade point average of 2.0 is required for graduation. Students may earn course credit by enrollment or transfer, according to College and Nursing Program policy.

The Nursing Program is guided by the College's established values. Nursing faculty are attentive to providing for the diverse learning needs of students and are committed to providing relevant learning, leading to career paths and future educational objectives. CCC student nurses are introduced to a holistic, caring philosophy which focuses on the humanness and uniqueness of each individual patient, within a highly technical and regulated healthcare environment. Emphasis is on the bio-psycho-social person who has a healthcare requirement. The program's tradition of excellence contributes to the fulfillment of the College's mission to be an integral and responsive contributor to the educational, economic and social vitality of the community.

Students must successfully meet the criteria for promotion and graduation as defined in the CCC Department of Nursing Student Handbook.

## MINIMUM DEGREE REQUIREMENTS (65 CREDITS):

### English 6 Credits:

ENG 101 English Composition  
ENG 102 Literature & Composition

### Nursing 38 Credits:

NUR 103 Fundamentals of Nursing  
NUR 104 Medical Surgical Nursing I  
NUR 105 Maternal/Child Nursing  
NUR 201 Medical Surgical Nursing II  
NUR 202 Mental Health Nursing  
NUR 203 Medical Surgical Nursing III  
NUR 204 Pharmacology

### Social Science 9 Credits:

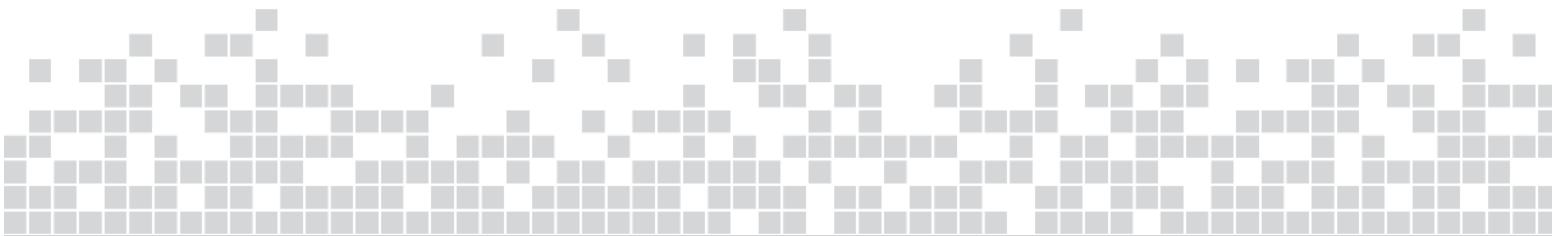
PSY 101 Introduction to Psychology  
PSY 230 Human Development  
SOC 101 Introduction to Sociology

### Science 12 Credits:

BIO 226 Anatomy & Physiology I  
BIO 227 Anatomy & Physiology II  
BIO 204 Microbiology

### Pre-Requisites for Admission:

See page 10 under Competitive Degree Programs.



# RENEWABLE ENERGY TECHNOLOGIES

■ ASSOCIATE OF APPLIED SCIENCE



# Renewable Energy Technologies

## ■ ASSOCIATE OF APPLIED SCIENCE

The Renewable Energy Technologies Program is a hands-on, technology-based program of study that will award an A.A.S. degree. The program includes the study of electricity, electronics, wind energy production, power distribution, photovoltaic systems installation, operation, and maintenance, along with general education study in humanities, science, and technical math. The core courses have a specific focus on the preparation of graduates for immediate employment in a renewable energy field as installers, troubleshooters, sales, system engineering or technical support. Students may also pursue self-employment opportunities, expand existing business services to include renewable energy installation, maintenance and repair, or pursue advanced study.

Graduates of the program will not only be desired to fill jobs locally but will be able to work anywhere in the country where renewable energy is being produced. As the trend to rely more on renewable energy production continues to grow, trained technicians will be needed to service them. These technicians will require a strong background in industrial electricity, renewable energy production and transmission as well as knowledge of electronics systems in order to safely and competently work in this environment.

### Why consider the Renewable Energy Technologies degree at CCC?

According to the American Council on Renewable Energy "Renewable energy technologies are at the center of New York's concerted strategy to move to a clean energy economy. The state is ranked in the top 10 states for installed wind generation capacity and installed solar generation capacity..." A CORE ranks New York as 8th in the nation in installed wind capacity and 7th in installed solar capacity. Steady expansion is expected.

The Occupational Information Network (O\*NET) is the nation's primary source of occupational information. According to O\*NET, projected growth in the renewable energy field from 2008 to 2018 is expected to be faster than average. The American Solar Energy Society recently published the Green-Collar Jobs report showing that renewable energy and energy efficiency sectors generate more than 9 million jobs and \$1 trillion in annual revenue in the U.S., a trend that is likely to continue.

## MINIMUM DEGREE REQUIREMENTS (60 CREDITS):

### English 3 Credits:

ENG 101 English Composition

### Mathematics 8 Credits:

MAT 105 Technical Math I

MAT 205 Technical Math II

### Science 8 Credits:

ENV 101 Environmental Science

PHY 111 General Physics I

### Computer Science 3 Credits:

CSC 230 Intro to Networking

### Renewable Energy Technologies 35-36 Credits:

ETE 101 Electrical Circuits I

ETE 102 Electrical Circuits II

ETE 104 Electronics I **or**

ETE 105 Digital Electronics I

ETE 106 Photovoltaic Systems Theory & Design

ETE 107 Photovoltaic Systems Installation & Maintenance

ETE 202 Industrial Electricity

INT 102 Blueprint Reading & Technical Schematics

INT 209 Environmental Health & Safety

INT 217 Instrumentation

WTT 101 Intro to Wind Energy and Wind Turbine Tech

WTT 201 Power Generation & Delivery

### Free Electives 3-4 Credits:

Students must select one CCC approved SUNY General Education Course.

### NOTES:

- It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.
- The Renewable Energy Technologies degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.



# WIND ENERGY & TURBINE TECHNOLOGY

■ ASSOCIATE OF APPLIED SCIENCE



# Wind Energy & Turbine Technology

## ■ ASSOCIATE OF APPLIED SCIENCE

In the United States, wind power is at the top of the list of fast growing, new sources of electrical energy. In Clinton and Franklin Counties alone, 257 wind turbines have been constructed since 2007 with more slated to be installed over the next several years. As the number of wind turbines across the country continues to grow, trained technicians will be needed to service them. These technicians will require a strong background in industrial electricity and mechanical systems in order to safely and competently work in this exciting new energy sector.

CCC classrooms and laboratories are well-equipped with modern equipment providing students with the type of hands-on training that's so important. Graduates of the Wind Energy & Turbine Technology Program will be prepared to enter the workforce responsible for service work in current and future wind parks throughout the country. Graduates will not only be highly qualified to fill jobs locally but will be able to work anywhere wind turbines are located in the country. Due to the abundance of electrical and mechanical subject matter throughout the curriculum, students may also be positioned for work in other energy sectors such as hydro-power and traditional energy.

After receiving an Associate Degree in Wind Energy & Turbine Technology students will be able to:

1. Identify the role of wind energy and turbine technology in alternative energy.
2. Demonstrate an understanding of the mechanical systems in modern wind turbines.
3. Demonstrate an understanding of electrical power delivery systems in modern wind turbines.
4. Maintain the mechanical and electrical systems of wind turbines.

The Wind Energy & Turbine Technology program can be completed in four semesters or two years. In order to graduate, students must successfully complete 65 credits with a grade point average of 2.0 or above. In order to complete the program in four semesters, students must place into the required courses upon entering school.

## MINIMUM DEGREE REQUIREMENTS (65 CREDITS):

### English 3 Credits:

ENG 101 English Composition

### Mathematics 8 Credits:

MAT 105 Technical Math I

MAT 205 Technical Math II

### Humanities/Social Science 3 Credits:

Social science elective

### Health/Physical Education 1 Credit:

HPE 105 Physical Fitness OR

HPE 124 Career Fitness

(Updated August 2013)

### Computer Science 3 Credits:

CSC 230 Introduction to Networking

### Industrial Technology 8 Credits:

INT 102 Blueprint Reading & Tech. Schematics

INT 206 Principles of Fluid Power Systems

INT 209 Environmental Health & Safety

(Credits Updated August 2013)

### Electrical Technology 14 Credits:

ETE 101 Electrical Circuits I

ETE 102 Electrical Circuits II

ETE 105 Digital Electronics I

ETE 202 Introduction to Industrial Electricity

### Wind Energy & Turbine Technology 13 Credits:

WTT 101 Introduction to Wind Energy & Turbines

WTT 102 Wind Turbine Mechanical Systems

WTT 201 Power Generation & Delivery

WTT 202 Turbine Troubleshooting & Repair

### Science 12 Credits:

PHY 111 General Physics I

MET 101 Meteorology

ENV 210 Environmental Technology

### NOTES:

- It may take a student more than two years to complete this degree, or may require summer coursework, if basic skills courses are required.
- The Wind Energy & Turbine Technology degree program features a course schedule with set classes in the fall and spring semesters. Not all classes are offered each semester. Students who start in the spring and meet all other requirements may take five semesters to complete the program.

# CERTIFICATE PROGRAMS

- ALCOHOL & SUBSTANCE ABUSE COUNSELING
- COMPUTER SUPPORT
- EARLY CHILDHOOD CARE & DEVELOPMENT
- HEALTH STUDIES
- PAYROLL
- RENEWABLE ENERGY TECHNOLOGIES
- WIND TURBINE SERVICE TECHNICIAN





# Certificate Programs

## Alcohol & Substance Abuse Counseling

The Human Services Alcohol & Substance Abuse Counseling Certificate Program is a 31 credit program designed to prepare students for entry-level employment or to enhance current employment within the addictions field. This certificate provides an academic and experiential foundation for skill development and ethical practice in the field of addiction counseling. All the credit hours earned in the Alcohol & Substance Abuse Counseling Certificate Program are transferable to the Human Services A.A.S. Degree Program and meet the required 350 education hours for credentialing by the New York Office of Alcohol and Substance Abuse Services.

### English 3 Credits:

ENG 101 English Composition

### Human Services 27 Credits:

HUS 101 Introduction to Human Services  
HUS 105 Introduction to Basic Counseling Skills  
HUS 110 Critical Topics in Chemical Dependency  
HUS 175 Ethical Foundations of Chemical Dependency Counseling  
HUS 201 Social Service Agencies  
HUS 206 Group Skills for Human Services Professions  
HUS 210 Identification, Diagnosis, and Treatment Planning  
HUS 281 Field Practicum Seminar  
HUS 282 Field Practicum

### Information Management 1 Credit:

LIB 101 Library Research Skills

## Computer Support

The Computer Support Certificate includes several CIS courses and covers a wide variety of computer skills. This certificate is designed to prepare students for entry-level positions in computer support. All credits from this certificate are transferable to the Computer Information Systems Associate in Applied Science Degree Program.

### Degree Requirements (24 Credits):

ENG 101 English Composition  
CSC 102 Microcomputer Applications  
CSC 121 Fundamental Concepts of Computing  
CSC 201 Advanced Applications  
CSC 220 Operating Systems  
CSC 225 Computer Hardware  
CSC 230 Intro to Networking  
CSC 215 Web Design and Programming **or**  
CSC 240 Networking II

### Additional Certificate Requirements:

Students must place into Math 101 or above.

## Early Childhood Care & Development

This certificate program is a 31 credit program designed for individuals who wish to enter the human services field of early childhood care and development. This program enables those students to acquire the basic techniques, skills, and theoretical background needed for a potential career in early childhood development. All of the credit hours earned in this certificate program are transferable to the Human Services A.A.S. Degree program.

### English 6 Credits:

ENG 101 English Composition  
ENG 235 Technical Writing

### Human Services 15 Credits:

HUS 101 Introduction to Human Services  
HUS 103 Intro. to Early Childhood Care & Development  
HUS 104 Observation of Childhood Behavior  
HUS 200 Case Management & Crisis Intervention  
HUS 203 Planning Programs for Young Children

### Social Science 6 Credits:

PSY 101 Introduction to Psychology  
PSY 235 Child Development **OR**  
PSY 230 Human Development

### Health/Physical Education 3 Credits:

HPE 102 Safety and First Aid

### Information Management 1 Credit:

LIB 101 Library Research Skills

## Health Studies

The Health Studies Certificate is a 28-29 credit program that requires a foundation of coursework in math (not required, just placement), science, humanities and the social sciences, and health studies, complemented by a flexible elective component, allowing students to tailor the curriculum worksheet to their needs. Students, following the successful completion of the certificate, will be better prepared to succeed in related degree programs, such as nursing, or to seek employment in the healthcare arena. A seminar in Health Career Pathways will expose students to a variety of healthcare career options and fortify them with a working knowledge of organizational standards/regulations. A number of the courses offered in the certificate are applicable to the Nursing A.A.S. degree program.

**Goal:** To provide students with the opportunity to begin to explore health career options while being introduced to foundation courses leading to further education or employment.

### Following successful completion of the certificate students will:

- demonstrate a broad base of knowledge of personal health issues and careers;
- have a competitive edge for entry level employment in a variety of healthcare settings; and,

- possess college level science and math skills necessary for admission to a career degree program.

### MINIMUM CERTIFICATE REQUIREMENTS:

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1. A minimum of 28-29 credit hours.
2. CSS 101 College Success Seminar.
3. Humanities/Social Sciences: a minimum of 7 credits to include ENG 101 and PSY 101.
4. Science: a minimum of 8 credit hours, to include BIO 101 or BIO 226 and CHE 101 or BIO 227. Students wishing to pursue a degree in Nursing will benefit from inclusion of BIO 226 & 227, once the BIO 101 and CHE 101 requisites have been met.
5. Health Studies: a minimum of 7 credit hours to include HPE 100, HPE 101, HPE 102.
6. This certificate requires that students be prepared for college level mathematics upon completion. Students, who have not placed into MAT 103 or higher, will be required to take developmental math coursework up to and including MAT 100.

### Basic Skills (if indicated by placement test)

#### 1 Credit:

- ENG 093 Reading & Study Skills  
 ENG 094 Fundamentals of Composition  
 MAT 096 Arithmetic  
 MAT 098 Pre-Algebra  
 CSS 101 College Success Seminar, Information Literacy

### Humanities/Social Sciences 6 Credits:

- ENG 101 English Composition  
 PSY 101 Introduction to Psychology

### Science 8 Credits:

- BIO 101 General Biology or BIO 226 Anatomy & Physiology I  
 CHE 101 Applied Chemistry **or**  
 BIO 227 Anatomy & Physiology II **or**  
 BIO 204 Microbiology

### Health Studies 7 Credits:

- HPE 101 Personal Health  
 HPE 102 Safety & First Aid  
 HPE 100 Seminar in Health Career Pathways

### Electives 6-7 Credits:

- CSC 102 Introduction to Microcomputer (3 credits)  
 HPE 125 Nutrition for Health & Fitness (3 credits)  
 HPE 147 Care & Prevention of Athletic Injuries (4 credits)  
 HPE Activity Courses (1 credit)  
 HUS 101 Introduction to Human Services (3 credits)  
 LIB 101 Library Research Skills (1 credit)  
 MAT 103 Finite Math (3 credits)  
 NUR 101 Introduction to Nursing (1 credit)  
 NUR 106 Medical Terminology (1 credit)  
 NUR 207 Phlebotomy (2 credits)  
 SOC 101 Introduction to Sociology (3 credits)

## Payroll

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This program prepares students for work in the area of Payroll Accounting in most business and educational institutions and in some governmental agencies. This program not only provides payroll basics and advanced procedures, but it provides students with a variety of other skills, such as human resource management, computers in accounting, management, and public speaking.

### English 3 Credits:

ENG 101 English Composition

### Communications 3 Credits:

COM 101 Public Speaking

### Business 19 Credits:

ACC 101 Principles of Accounting I  
 ACC 159 Payroll Accounting  
 ACC 252 Computers in Accounting  
 BUS 101 Business Organization & Management  
 BUS 213 Business Communications  
 CSC 102 Introduction to Microcomputer Applications

# Renewable Energy Technologies

The Renewable Energy Technologies certificate is a laboratory-oriented, technological program of study that will award a College Certificate. The program includes 14 credits of English, technical math, environmental science, and computer networking, plus 19 credits of technology courses in subjects directly related to renewable energy. The technology courses have a specific focus of preparing graduates for immediate employment in the renewable energy field.

This program is unique as it will be one of two in New York State that is strong in electrical technology while providing instruction in both photovoltaic systems and wind power systems. This program allows students the opportunity to pursue a career in renewable energy technology. Students will be prepared to work as installers and troubleshooters. Additionally, students may pursue self-employment opportunities, expand existing business services to include renewable energy installation and maintenance, or pursue completion of the Renewable Energy Technologies A.A.S. or Wind Energy and Turbine Technician A.A.S. degree program.

## Minimum Degree Requirements (33 Credits):

### English 3 Credits:

ENG 101 English Composition

### Mathematics 4 Credits:

MAT 105 Technical Math I

### Science 4 Credits:

ENV 101 Environmental Science

### Computer Science 3 Credits:

CSC 230 Intro to Networking

### Renewable Energy Technologies 19 Credits:

ETE 101 Electrical Circuits I  
ETE 106 Photovoltaic Systems Theory & Design  
ETE 107 Photovoltaic Systems Installation & Maintenance  
ETE 202 Industrial Electricity  
INT 102 Blueprint Reading & Technical Schematics  
WTT 101 Intro to Wind Energy and Wind Turbine Tech

# Wind Turbine Service Technician

The Wind Turbine Service Technician Certificate program is a 30 credit program designed to prepare students to begin their career in wind energy or enhance current employment in the renewable energy industry. Students will acquire a strong background in industrial electricity and mechanical systems in order to safely and competently work in the wind industry. All of the credit hours in this certificate are transferable to the Wind Energy and Turbine Technology A.A.S. Degree program. *(Credits Updated August 2013)*

## Mathematics 4 Credits:

MAT 105 Technical Mathematics I

## Health/Physical Education 1 Credit:

HPE 105 Physical Fitness OR

HPE 124 Career Fitness

*(Updated August 2013)*

## Computer Information Systems 3 Credits:

CSC 230 Introduction to Networking

## Technology 22 Credits:

INT 102 Blueprint Reading & Schematics

INT 206 Principles of Fluid Power Systems

INT 209 Environmental Health & Safety

ETE 101 Electrical Circuits I

ETE 202 Industrial Electricity

WTT 101 Introduction to Wind Energy & Turbines

WTT 102 Wind Turbine Mechanical Systems

*(Credits Updated August 2013)*