Career & Technical Education

NORTHEASTERN JUNIOR COLLEGE

To be Colorado's premier two-year college of choice through excellence in education.

CAREER AND TECHNICAL EDUCATION (CTE)

A changing emphasis in education has so heightened the interest in career and technical education that more and more students are seeking college programs which lead directly to gainful employment.

Work in industry has become so highly specialized that general education no longer meets the number and variety of job demands; the student needs more skilled and specialized training today than ever before.

To help meet these demands, Northeastern Junior College offers a range of immediate employment programs, developed in cooperation with business and industry. Programs may be a two-year Associate of Applied Science Degree; or a Northeastern Junior College Certificate of one year or less.

Outstanding features of the career and technical education programs include modern equipment and facilities common to business or industry and a strong faculty with many years of workplace experience.

The objectives of the career and technical programs are:

- To learn the essential skills and operational theory needed to ensure occupational competency
- To develop correct habits of work safety
- To cultivate desirable civic attitudes such as integrity, dependability, resourcefulness and cooperation
- To recognize the importance of technology in the workplace

Career and Technical Education programs may carry special admission requirements in addition to those included in this catalog under general admission procedures. All information regarding admission is available from the Office of the Director of Admissions.

The college reserves the right to substitute courses for those no longer offered, to modify course content at any time, to approve the substitution of one course for another in any program or degree, or waive any course prerequisite or co-requisite.

ASSOCIATE OF APPLIED SCIENCE DEGREE (A.A.S.)

The Associate of Applied Science (A.A.S.) degree is awarded to a student who successfully completes a program designed to prepare the student for immediate employment in a full-time skilled and/or paraprofessional occupation. Each of the college's A.A.S. degree programs is in a specified occupational field. The program guides are located in the Career and Technical Education section of the catalog.

Although some college credits within these programs are accepted for transfer by particular four-year colleges and universities, career and technical education courses are not specifically designed to facilitate transfer. The student who anticipates transferring is encouraged to check carefully the requirements of the respective institution.

GRADUATION REQUIREMENTS AND POLICIES

1. Complete between 60 - 75 semester credits of approved coursework as outlined in the college catalog. Since each A.A.S. program is designed for a specified career or technical field, the minimum requirements will vary with the particular program. A minimum of 15 semester credits of the total must be in general education courses with at least one course in each of the following categories: **Communication or Reading; **Mathematics; **Science or Computer Science; **Social/Behavioral Science or Humanities**. The remaining credits must be earned as technical skills development coursework drawn from the specific career and technical program requirements.
2. Earn a minimum cumulative grade point average of 2.0 (a "C" average).
3. Earn 15 semester credits of coursework prior to graduation on the Sterling campus (or approved outreach center) of Northeastern Junior College.
4. File an Application for Graduation in the Records Office.
5. Resolve all financial obligations to the college and return all library and college materials.

General Education Requirements

The requirements of each A.A.S. degree program and the specific general education courses that must be completed for each program are described in the following pages of the Career and Technical Education section. Courses that meet the general education requirements for each A.A.S. degree program are chosen from the following areas in Communications or Reading, Mathematics, Science or Computer Science, Social Sciences or Humanities.

Any course designated as a Guarantee Transfer Course (see list on pages 44-47) will also fulfill a general education requirement for the AGS degree in the appropriate category. Additional courses are listed under the respective categories below.

Students must have at least one course in each of the following categories:

I. Communication or Reading

ENG 115 Technical English & Communication 3
ENG 121 English Composition I 3
ENG 122 English Composition II 3
ENG 131 Technical Writing 3
REA 130 Technical & Applied Reading 2
COM 115 Public Speaking 3
COM 125 Interpersonal Communications 3
COM 219 Group Dynamics 3

II. Mathematics

See Guarantee Transfer courses on pages 44-47 OR
BUS 226 Business Statistics 3
MAT 103 Math for Clinical Calculations 3
MAT 107 Career Math 3
MAT 112 Financial Mathematics 3

III. Science or Computer Science

See Guarantee Transfer courses on pages 44-47 OR
AGB 218 Computerized Farm Records 3
AGY 100 General Crops 4
AGY 240 Introductory Soil Science 4
ASC 100 Animal Sciences 3
ASC 102 Introduction to Equine Science 4
CHE 103 Agricultural Chemistry 4
CHE 107 Fundamentals of General Chemistry 5
CHE 205 Introductory Organic Chemistry 5
CIS 117 Intro to Technical Applications 2
CIS 118 Intro to PC Applications 3
CWB 110 Complete Web Authoring 3
CWB 130 Complete Web editing 3
EDU 265 Technology in Education 3
HPR 217 Kinesiology 4
MGD 101 Introduction to Computer Graphics 3
MGD 141 Web Design I 3

IV. Social and Behavioral Science - Humanities

See Guarantee Transfer courses on pages 44-47 OR
BUS 115 Introduction to Business 3
BUS 116 Personal Finance 3
BUS 203 Intro to International Business 3
ECO 105 Intro to Economics 3
MAN 128 Human Relations in Organization 3
PSY 237 Child and Adolescent Psychology 3
SOC 218 Sociology of Diversity 3
SPA 101 Conversational Spanish I 3
SPA 102 Conversational Spanish II 3
SPA 111 Spanish Language I 5
SPA 112 Spanish Language II 5
SPA 115 Spanish for the Professional I 3
SPA 215 Spanish for the Professional II 3

Total Semester Credits ..... 15 Credits

At least one course in each of the following categories: Communications or Reading; Mathematics; Science or Computer Science; and Social/Behavioral Science or Humanities.

Summary of Degree Requirements

I. General Education (chosen from the four basic areas in Communications or Reading, Mathematics, Science or Computer Science, and Social Sciences or Humanities) 15

II. Specific A.A.S. program courses and electives . 45-60

Total Semester Credits 60-75

CERTIFICATE IN CAREER AND TECHNICAL EDUCATION PROGRAMS

A Certificate is awarded to a student who successfully completes a career and technical education program not leading to an Associate of Applied Science degree (A.A.S.). Normally these programs are two years, one year, or less in duration. These programs are designed primarily to prepare students for immediate employment. Depending on the program, some general education or related coursework may be required. Students are encouraged to supplement their career and technical training with at least two additional approved general education courses. Course requirements for various certificate programs are outlined in this catalog in the Career and Technical Education section.

GRADUATION REQUIREMENTS AND POLICIES

1. Complete the minimum semester credits required for the program as outlined in the college catalog. Complete general education requirements (if any).
2. Earn a minimum cumulative grade point average of 2.0 (a "C" average).
3. Earn 25% of the semester credits of the program's coursework through Northeastern Junior College.
4. File an Application for Graduation in the Records Office.
5. Resolve all financial obligations to the college and return all library and college materials.

AGRI-BUSINESS

ASSOCIATE OF APPLIED SCIENCE DEGREE

Agri-Business is a field that encompasses the technologies of agriculture and business, combining the management aspects of business with the production factors of agriculture. This education provides a much needed skilled technician for that part of the industry that serves the producer. It also prepares the student to take advantage of the off-farm agriculture opportunities.

The Agri-Business program at Northeastern Junior College is designed for a student who plans on going directly into industry. This program is not intended to transfer to a four year institution. It consists of classroom work (60 credits) and eight (8) credits of Internship for a total of 68 credits. Students will work for an agri-business firm for 320 hours for eight (8) Internship credits.

General Education Requirements

Communication ..... 6 Credits

COM 115 Public Speaking OR 3
COM 219 Group Dynamics 3
ENG 121 English Composition OR 3
ENG 131 Technical Writing I 3

Mathematics/Science ..... 6 Credits

MAT 107 Career Mathematics 3
ASC 100 Animal Science 3

Social Science/Humanities ..... 3 Credits

AGE 102 Agricultural Economics 3

Program Requirements ..... Credits

ACC 101 Fundamentals of Accounting OR 3
AGB 218 Computerized Farm Records 3
AGB 120 Agricultural Salesmanship 3
AGB 180 Agri-business Internship 8
AGB 228 Agri-Business Management 3
AGB 289 Agri-business Capstone 1
AGE 210 Agricultural Marketing 3
AGY 100 General Crops OR 4
AGP 100 Practical Crop Production 4
BUS 217 Business Comm & Report Writing 3
CIS 118 Introduction to PC Applications. 3

Suggested Electives . ..... Credits

ACC 121 Principles of Accounting I 4
ACC 122 Principles of Accounting II 4
AGB 218 Computerized Farm Records 3
AGE 208 Agricultural Finance 3
AGE 205 Farm and Ranch Management 3
AGP 110 Integrated Pest Management 3
AGP 145 Calving Management 2
AGP 146 Artificial Insemination 2
AGP 147 Practical Cattle Reproduction 2
AGP 148 Cattle Reproduction Lab 1
AGP 204 Soil Fertility and Fertilizers 4
AGP 215 Animal Health 3
AGP 247 Production Cattle Feeding 3
AGR 260 World Interdependence- Population & Food 3
AME 105 Basic Ag Mechanic Skills 2
AME 107 General Power Mechanics 2
AME 118 Farm Carpentry 3
AME 125 Agricultural Machinery 3
ASC 102 Introduction to Equine Science 4
ASC 225 Feeds/Feeding 2
ASC 250 Livestock & Carcass Evaluation 3
AGY 240 Introduction to Soil Science 4
BUS 115 Introduction to Business 3
BUS 216 Legal Environment of Business 3
BUS 221 Business Law I 3
MAN 226 Principles of Management 3
MAR 216 Principles of Marketing 3
MAR 220 Principles of Advertising 3
RAM 205 Principles of Range Management 3

AGRI-BUSINESS

CERTIFICATE

A Certificate will be granted upon completion of 30 semester credits of classroom work and 8 credits of Internship. Appropriate courses are selected in consultation with a faculty advisor. Internship is normally completed during the summer following the nine months of classroom course work.

AGRI-BUSINESS: FERTILIZER CHEMICAL APPLICATOR

ASSOCIATE OF APPLIED SCIENCE DEGREE

Students entering the Agri-Business Fertilizer/ Chemical Applicator option at Northeastern Junior College will complete a work of study that prepares them to be an applicator in the fertilizer/chemical industry. This program is not intended to transfer to a four-year institution. It consists of classroom work and two five-credit Internship experiences. The Internship will be completed during the spring and summer months. An individual completing the program will have a minimum of 60 on campus credits and 10 Internship credits.

General Education Requirements

Communications ..... *6 Credits*
- COM 115 Public Speaking OR 3
- COM 219 Group Dynamics 3
- ENG 121 English Composition OR 3
- ENG 131 Technical Writing I 3

Mathematics/Science ..... *11 Credits*
- MAT 107 Career Mathematics 3
- AGY 240 Introduction to Soil Science 4
- CHE 103 Agricultural Chemistry 4

Social Science/Humanities ..... *3 Credits*
- AGE 102 Agriculture Economics 3

Program Requirements ..... Credits
- AGB 120 Agriculture Salesmanship 3
- AGB 180 Agri-business Internship 5
- AGB 244 Industry Equipment & Technology 4
- AGB 280 Agri-business Internship 5
- AGB 289 Agri-business Capstone 1
- AGP 100 Practical Crop Production 4
- AGP 110 Integrated Pest Management 3
- AGP 204 Soil Fertility & Fertilizers 4
- AGP 208 Commercial Pesticides License Training 3
- CIS 118 Introduction to PC Applications 3

Suggested Electives ..... Credits
- ACC 101 Fundamentals of Accounting 3
- AGB 218 Computerized Farm Records 3
- AGB 228 Agri-Business Management 3
- AGE 210 Agricultural Marketing 3
- AME 105 Basic Ag Mechanics Skills 2
- AME 107 General Power Mechanics 2
- AME 151 Fundamentals of Welding 3
- BUS 217 Bus Communications & Report Writing 3
- HWE 103 Community First Aid & CPR 1

AGRI-BUSINESS ONLINE

ASSOCIATE OF APPLIED SCIENCE DEGREE

The agribusiness degree and certificate can be completed online. The degree requirements are very similar to the on-campus requirements. More information is available at *www.ccconline.org & www.njc.edu*.

AGRICULTURE BUSINESS MANAGEMENT

NINE ONE-YEAR CERTIFICATES

The agriculturist of today depends as much on his or her management skills as on production skills. This program provides individuals in the agriculture community systematic instruction to give them the tools to make sound business decisions based on enterprise and farm records. As technology changes, it is necessary to enhance skills to communicate with accountants, lenders, and other professionals. With difficult profit margins in agriculture, guidance in being resilient to risk is valuable.

Instruction is made up of on-site visits, lectures of hybrid/online instruction, and cooperative education.

RECORDS & BUSINESS PLANNING CERTIFICATE

Program Requirements ..... Credits
- ABM 111 Records & Business Planning I 9
- ABM 112 Records & Business Planning II 9

The focus of this certificate is to assist students in computerized record keeping and developing a Business plan.

FINANCIAL ANALYSIS CERTIFICATE

Program Requirements ..... Credits
- ABM 121 Financial Analysis I 9
- ABM 122 Financial Analysis II 9

The focus of this certificate is to develop financial statements and understand financial ratios as they relate to the agricultural business.

COMMODITY MARKETING CERTIFICATE
- ABM 131 Commodity Marketing I 9
- ABM 132 Commodity Marketing II 9

The focus of this certificate is to introduce commodity marketing to the student and utilize a defined, written marketing plan.

MARKETING & RISK MANAGEMENT CERTIFICATE
- ABM 135 Marketing & Risk Management I 9
- ABM 136 Marketing & Risk Management II 9

The focus of this certificate is expanding on commodity marketing with an emphasis in risk management, e-commerce, niche marketing and value added marketing.

AG BUSINESS & RISK MANAGEMENT - WEB PRODUCTIVITY & UTILIZATION EMPHASIS CERTIFICATE

Program Requirements..... Credits

ABM 137 Web Productivity/Utilization I 9
ABM 138 Web Productivity/Utilization II 9

This certificate is designed to enhance business management skills by improving one's understanding and use of the internet for business productivity.

ADVANCED AGRICULTURE BUSINESS MANAGEMENT CERTIFICATE

Program Requirements..... Credits

ABM 141 Advanced Business Management I 9
ABM 142 Advanced Business Management II 9

This certificate is designed to enhance management skills by looking at the existing business plan, identifying risk reducing alternatives and continuing in-depth financial analysis.

INTEGRATED MANAGEMENT CERTIFICATE

Program Requirements..... Credits

ABM 143 Integrated Management I 9
ABM 144 Integrated Business Management II 9

This certificate emphasizes integration of data and software technology for a business. Research and identification of data will assist in development of a management plan.

RURAL BUSINESS ENTREPRENEURSHIP CERTIFICATE

Program Requirements..... Credits

ABM 151 Rural Business Entrepreneurship I 9
ABM 152 Rural Business Entrepreneurship II 9

This certificate is designed to enhance your business management skills by looking at new business ventures and using technology to research and develop complete business plans.

LEADERSHIP/HUMAN RESOURCES CERTIFICATE

Program Requirements..... Credits

ABM 153 Leadership/Human Resource Mgt. I 9
ABM 154 Leadership/Human Resource Mgt. II 9

This certificate is designed to enhance leadership and resource management in business. Learning effective leadership concepts and skills will be addressed.

Certificates may be taken out of order with permission of instructor.

AGRICULTURE
PRODUCTION AGRICULTURE

ASSOCIATE OF APPLIED SCIENCE DEGREE.

This program is designed to provide students with the necessary management and production skills required in the field of production agriculture today. Students seeking an occupation in farming or ranching will be able to pursue a variety of skills and competencies necessary to meet their individual occupational objective. This program requires 60 credits of course work and at least 8 credits of required internship(s) for a total of at least 68 credits.

General Education Requirements ..... Credits

ASC 100 Animal Science 3
AGE 102 Agricultural Economics 3

An additional 9 credits must be taken from the AAS Degree General Education Requirements in the Communications or Reading, Mathematics, and the Science or Computer Science categories.

Program Requirements ..... Credits

ACC 101 Fundamentals of Accounting OR 3
AGB 218 Computerized Farm Records 3
AGE 205 Farm and Ranch Management 3
AGP 100 Practical Crops OR 4
AGY 100 General Crops 4
AGP 180 Production Ag Internship 8
AGP 289 Production Ag Capstone 1
AME Any Agriculture Mechanics Course .....2 or 3
ASC 225 Feeds and Feeding 4

Suggested Electives ..... Credits

ACC 121 Principles of Accounting I 4
AGE 208 Agricultural Finance 3
AGE 210 Agricultural Marketing 3
AGP 110 Integrated Pest Management 3
AGP 145 Beef Cattle Calving Management 2
AGP 146 Artificial Insemination 2
AGP 147 Practical Cattle Reproduction 2
AGP 148 Cattle Reproduction Lab 1
AGP 160 Ranch Horsemanship Skills 2
AGP 204 Soil Fertility and Fertilizers 4
AGP 215 Animal Health 3
AGP 241 Beef Cattle Management I 3
AGP 247 Production Cattle Feeding 3
AGY 240 Introductory Soil Science 4
AME 105 Basic Agricultural Mechanic Skills 2
AME 107 General Power Mechanics 2
AME 118 Farm Carpentry 3
AME 125 Agricultural Machinery 3
AME 151 Fundamentals of Welding 3
ASC 102 Introduction to Equine Science 4
ASC 215 Livestock Judging 2
ASC 250 Livestock and Carcass Evaluation 3
BUS 115 Introduction to Business 3
BUS 216 Legal Environment of Business 3
BUS 221 Business Law 3
EQM 158 Equine Reproduction 2
EQM 210 Equine Health 2
RAM 205 Principles of Range Management 3

AGRICULTURE
PRODUCTION AGRICULTURE

CERTIFICATE

Students completing 30 semester credits plus 8 credits of Internship (38 total credits) will be eligible to receive an NJC Certificate. A minimum of 15 credits must be taken from agricultural courses. The additional 15 credits taken will be with the approval of the advisor. (Refer to the AAS Degree in Production Agriculture as a guide in selecting courses for study.)

APPLIED MANAGEMENT

ASSOCIATE OF APPLIED SCIENCE DEGREE

The Associate of Applied Science Degree in Applied Management (AAS) is designed to meet the needs of individuals who have acquired post high school occupationally-related training at any community college, technical institute, military service school, proprietary school or industry-related school in the business, health or technical fields.

This program builds on the student's previous one or more years of training in technical skills-related programs but also includes courses that will provide entrepreneurial training necessary to obtain management level employment appropriate to the Associate of Applied Science Degree and former technical training. Finally, the program requires a variety of general education courses that enable the individual to understand and appreciate his/her societal responsibilities.

The following types of occupations are examples of how this program would work.

Prior Technical Training
+ Applied Management Courses
= Job Possibilities

Practical Nursing (PN)	Nursing Home Administrator
Carpentry	Millwork Sales
Diesel Repair	Dealership Operations
Auto Repair	Auto Zone
Cosmetology	Shop Owner/Operator
Early Childhood Education	Day Care Center Owner/Operator
Paint/Equipment Sales Representative	

This core includes one or more years of prior technical training (30 semester credit hours minimum) from any recognized vocational program. A student is required to produce transcripted credit hours or the equivalent in a technical field.

General Education Requirements	Credits
Communication or Reading	6
Mathematics	3
Science or Computer Science	3
Social Sciences or Humanities	3

Program Requirements	Credits
ACC 101 Fundamentals of Accounting OR	3
ACC 121 Principles of Accounting I AND	4
ACC 122 Principles of Accounting II	4
BUS 115 Introduction to Business	3
BUS 216 Legal Environment of Business	3
BUS 217 Business Communications and Report Writing	3
BUS 287 Supervised Work Experience	8
MAR 216 Principles of Marketing OR	3
MAN 226 Principles of Management	3

APPLIED TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE DEGREE

To complete the AAS Degree in Applied Technology, a student will complete the technical course work for a state approved Career and Technical Education certificate at one of the four area vocational technical schools (AVTS). The four AVTS's are: Delta-Montrose Area Vocational Technical Center, Emily Griffith Opportunity School, San Juan Basin Area Vocational School and T.H. Pickens Technical Center.

The general education and other degree requirements will be completed at one of the Colorado public community/junior colleges. The AAS Degree will be conferred by the community/junior college at which the general education and other degree requirements have been completed.

The approved Career and Technical Education certificate programs at the AVTS prepare students with technical, applied academic and employability skills. Credit, in varying amounts from these certificate programs, will be applicable to the community college's AAS Degree in Applied Technology.

Students may enroll concurrently at both institutions, an AVTS and a community college. Students must comply with the regulations and requirements relating to admission and attendance at each institution.

Minimum requirements for the Associate of Applied Science (AAS) Applied Technology Degree include:

1. Minimum of 60 semester hours of course work.
2. Cumulative GPA of 2.0 or higher.
3. General education course of 15 semester hours.
4. Additional requirements of at least 42 semester hours:
   - from an individual state approved program at one of the four AVTS's.
   - If the program certificate is less than 42 semester hours, than the program certificate hours plus elective credit hours from the community college will be used for the total of at least 42 semester hours.
5. Minimum of 15 semester hours earned at the community college.

General Education Requirements	Credits
Communications or Reading	3
Mathematics	3
Science or Computer Science	3
Social Science or Humanities	3
General Education Elective	3
	15 minimum

AUTOMOTIVE & DIESEL MASTER TECHNICIAN

CERTIFICATE

Upon successful completion of all required courses in the Automotive Technology OR in the Diesel Technology AAS degree or 2-Year Certificate program, a student may pursue an Automotive & Diesel Master Technician certificate.

The Automotive and Diesel Master Technician (ADMT) Certificate will provide Auto Tech and Diesel Tech students with the opportunity to supplement and enhance their technical skills with courses specific to the auto or diesel tech program in which they did not earn their degree/certificate. To earn an ADMT certificate an Auto Tech graduate will take certain diesel tech courses, and a Diesel Tech graduate will take certain auto tech courses. Students completing this additional coursework will have a wide array of employment opportunities. Currently, there are many employment opportunities in both the automotive and diesel areas that are going unfilled due to a lack of qualified personnel.

The Automotive and Diesel Master Technician Certificate will also provide graduates who wish to become entrepreneurs a much broader foundation on which to build an automotive and/or diesel repair business.

Certificate Requirements for an Auto Tech graduate

BUS 102 Entrepreneurial Operations	3
CWB 130 Web Editing Tool	3
DPM 103 Diesel Engines I	4
DPM 106 Diesel Fuel Systems	3
DPM 122 Hydraulics II	3
DPM 203 Diesel Engines II	4
DPM 207 Heavy Duty Brakes II	3
Total Credits Required	**23 Credits**

Certificate Requirements for a Diesel Tech graduate

ASE 132 Ignition Sys. Diag. & Repair	2
ASE 134 Automotive Emissions	2
ASE 165 Automotive Machining	2
ASE 210 Brakes II	3
ASE 231Automotive Computers	2
ASE 235 Driveability & Diagnosis	1
ASE 252 Advanced Automatic Transmissions	2
ASE 275 Advanced Automatic Trans Lab	1
BUS 102 Entrepreneurial Operations	3
CWB 130 Web Editing Tool	3
Total Credits Required	**21 Credits**

Suggested Electives for either path ..... Credits

See Suggested Electives under Automotive Technology and/or Diesel Technology.

AUTO/DIESEL MAINTENANCE/ INSPECTION

CERTIFICATE

After successful completion of one of these certificates, the student would be eligibile to take the ASE Maintenance and Inspection exam. Successful completion of the ASE exam would certify the individual as "ASE Recognition in Light Vehicle Maintenance and Inspection". There is an additional cost to the student to take the ASE exam.

Required Courses for Auto Maintenance & Inspection Certificate:

ASE 101 Auto Shop Orientation	2
ASE 110 Brakes I	3
ASE 210 Brakes II	3
ASE 150 U-Joint & Axleshift Service	2
ASE 250 Automatic Transmission/Transaxle	1
MAT 175 Applied Math	2
Total Credits Required	**13 Credits**

AUTOMOTIVE TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE DEGREE

The Automotive Technology program is designed to prepare students for jobs in the areas of parts, service management, or service and repair. The program is meeting the needs for training in this field by offering a variety of courses supported by ASE and N.A.T.E.F. standards.

Basic skills in math, science, reading, along with skills and knowledge obtained in the program are essential to successfully securing and holding down jobs in the automotive industry. Effective communication skills to deal with customers, co-workers and to write work orders and reports are also in demand.

Graduates of the Automotive Technology Program will receive either a Northeastern Junior College Certificate or an Associate of Applied Science Degree. Those who enroll in only automotive coursework will receive a Northeastern Junior College Certificate. Those who choose the degree must complete the requirements of the Associate of Applied Science Degree.

Detailed information regarding this program and admission requirements may be obtained from the Director of Admissions, Northeastern Junior College.

General Education Requirements ..... 15 Credits

BUS 115 Introduction to Business	3
CIS 117 Introduction to Technical Applications	2
ENG 115 Technical English & Communication OR	
ENG 121 English Composition I OR	
ENG 131 Technical Writing I	3
MAT 175 Applied Mathematics	2
REA 130 Applied & Technical Reading	2
Social Science Course, selected from courses for the AAS Degree	*3*

Program Requirements ..... 53 Credits

ASE 101 Auto Shop Orientation 2
ASE 110 Brakes I 3
ASE 120 Basic Automotive Electricity 2
ASE 123 Automotive Battery, Starting & Charging Systems 2
ASE 130 General Engine Diagnosis 2
ASE 132 Ignition System Diagnosis & Repair 2
ASE 134 Automotive Emissions 2
ASE 140 Suspension & Steering I 3
ASE 150 Automotive U-Joint & Axleshaft Service 2
ASE 161 Engine Disassembly, Diagnosis, & Assembly 5
ASE 175 A/C Service and Repair 2
ASE 210 Brakes II 3
ASE 220 Special Electronics Training 2
ASE 221 Automotive Body Electrical 4
ASE 231 Automotive Computers 2
ASE 233 Fuel Injection & Exhaust Systems 4
ASE 235 Driveability & Diagnosis 1
ASE 240 Suspension & Steering II 3
ASE 250 Automatic Transmission/Transaxle Service 1
ASE 252 Advanced Automatic Transmissions 2
ASE 253 Advanced Manual Transmissions 2
ASE 275 Advanced Automatic Trans Lab 1
ASE 276 Advanced Manual Trans Lab 1

Suggested Electives ..... Credits

ACC 101 Fundamentals of Accounting 3
ASE 165 Automotive Machining 2
ASE 201 Automotive Parts Management 1
ASE 202 Automotive Service Management 2
AME 151 Fundamentals of Welding 3
AME 151 Fundamentals of Welding 3
COM 115 Public Speaking 3
HWE 124 Fitness & Wellness 2
PED 112 Conditioning Lab 1
WEL 140 Welding Practices & Procedures 1.5

AUTOMOTIVE TECHNOLOGY

TWO-YEAR CERTIFICATE

Students desiring a two-year certificate in Automotive Technology are required to take the following related instructional courses within the Automotive Technology Program that satisfy accreditation and two-year certificate requirements.

Program Requirements ..... 55 Credits

ASE 101 Auto Shop Orientation 2
ASE 110 Brakes I 3
ASE 120 Basic Automotive Electricity 2
ASE 123 Automotive Battery, Starting & Charging Systems 2
ASE 130 General Engine Diagnosis 2
ASE 132 Ignition System Diagnosis & Repair 2
ASE 134 Automotive Emissions 2
ASE 140 Suspension & Steering I 3
ASE 150 Automotive U-Joint & Axleshaft Service 2
ASE 161 Engine Disassembly, Diagnosis, & Assembly 5
ASE 175 A/C Service and Repair 2
ASE 210 Brakes II 3
ASE 220 Special Electronics Training 2
ASE 221 Automotive Body Electrical 4
ASE 231 Automotive Computers 2
ASE 233 Fuel Injection & Exhaust Systems 4
ASE 235 Driveability & Diagnosis 1
ASE 240 Suspension & Steering II 3
ASE 250 Automatic Transmission/Transaxle Service 1
ASE 252 Advanced Automatic Transmissions 2
ASE 253 Advanced Manual Transmissions 2
ASE 275 Advanced Automatic Trans Lab 1
ASE 276 Advanced Manual Trans Lab 1
MAT 175 Applied Mathematics 2

Suggested Electives ..... Credits

ASE 165 Automotive Machining 2
ASE 201 Automotive Parts Management 1
ASE 202 Automotive Service Management 2

Alternative Offerings:
A student having completed an ASE test and having the required work experience may be eligible to receive Credit for Prior Learning (CPL) and would be able to apply this towards their Associate of Applied Science Degree. Refer to the "Academic Information" section of the college catalog for more information.

AUTOMOTIVE TECHNOLOGY

ONE-YEAR CERTIFICATE

Students completing 30 credits or more in Automotive Technology will be eligible to receive a NJC One-Year Certificate.

Program Requirements ..... Credits

ASE 101 Auto Shop Orientation 2
ASE 110 Brakes I 3
ASE 120 Basic Automotive Electricity 2
ASE 123 Automotive Battery, Starting & Charging Systems 2
ASE 130 General Engine Diagnosis 2
ASE 150 Automotive U-Joint & Axleshaft Service 2
ASE 161 Engine Disassembly, Diagnosis, & Assembly 5
ASE 176 Advanced Automatic Transmission Lab 1

ASE 210 Brakes II 3
ASE 233 Fuel Injection & Exhaust Systems 4
ASE 250 Automatic Transmission/Transaxle Service 1
ASE 252 Advanced Automatic Transmissions 2
MAT 175 Applied Mathematics 2

BUSINESS

ASSOCIATE OF APPLIED SCIENCE DEGREE IN BUSINESS with Emphasis in:

- Accounting
- Business Administration
- Computer Applications
- Entrepreneurship
- Management
- Marketing
- Web Design

The Associate of Applied Science (A.A.S.) degree in Business is awarded to a student who successfully completes a program with a business emphasis. The business programs are designed to aid students in the development of skills, knowledge, and attitudes related to immediate employment in a full-time skilled and/or a paraprofessional business occupation.

General Education Requirements ..... 15 Credits
for all AAS Options
Communications ..... 6 credits
ENG 121 English Composition I OR
ENG 131 Technical Writing I 3
COM 115 Public Speaking OR
COM 125 Interpersonal Communications OR
COM 219 Group Dynamics 3

Mathematics 3
Science and Computer Science 3
Social Sciences and Humanities 3
Choose a course or courses within each of the appropriate required areas listed above as listed in the General Education Requirements for the Associate of Applied Science Degree section on page 66-67 (unless the course is a program requirement).

Business Core Requirements ..... All Options
ACC 121 Principles of Accounting I 4
ACC 122 Principles of Accounting II 4
BUS 115 Introduction to Business 3
BUS 216 Legal Environment of Business 3
BUS 217 Business Communications and Report Writing 3
CIS 118 Introduction PC Applications 3
ECONOMICS Course 3

NOTE: ACC 101 Fundamentals of Accounting OR ACC 121 Principles of Accounting AND BUS 116 may be substituted for ACC 121 & ACC 122 for the following options: Marketing and Web Design.

ACCOUNTING Emphasis
Program Requirements - AAS

In addition to the Business Core, the following business courses are required:
ACC 115 Payroll Accounting 3
ACC 211 Intermediate Accounting 4
ACC 235 Computer Accounting Small Business 3
ACC 132 Tax Help Colorado 2
ACC 131 Income Tax OR
ACC 133 Tax Help Colorado Site Lab 1
CIS 259 MOS Cert Expert Excel 1
MAN 128 Human Relations in Organizations 3

Suggested Electives
The following are suggested elective business courses that a student may choose to take to enhance the accounting option.
ACC 216 Governmental & Not-for-Profit Accounting 3
BUS 116 Personal Finance 3
BUS 203 Intro to International Business 3
MAN 215 Organizational Behavior 3
Approved Electives to meet 60 total credits for the AAS degree.

BUSINESS ADMINISTRATION Emphasis
Program Requirements – AAS

In addition to the Business Core, the following business courses are required:
BUS 203 Intro to International Business 3
ECO 201 Principles of Macroeconomics OR
ECO 202 Principles of Microeconomics 3
MAN 226 Principles of Management 3
MAN 128 Human Relations in Organizations 3
MAR 216 Principles of Marketing 3

Suggested Electives
The following are suggested elective business courses that a student may choose to take to enhance the Business Administration option.
ACC 235 Computer Accounting Small Business 3
BUS 102 Entrepreneurial Operations 3
BUS 116 Personal Finance 3
MAN 200 Human Resource Management I 3
MAN 215 Organizational Behavior 3
MAN 216 Small Business Management 3
MAN 223 Event Management 3
MAN 241 Project Management 3
Approved Electives to meet 60 total credits for the AAS degree.

COMPUTER APPLICATIONS Emphasis
Program Requirements – AAS

In addition to the Business Core, the following business courses are required:
MAN 226 Principles of Management 3
MAN 128 Human Relations in Organizations 3
CIS 234 MOS Cert. Expert Word 1
CIS 153 Adv. PC Spreadsheets OR
CIS 259 MOS Cert. Expert Excel 1

Suggested Electives
The following are suggested business courses that a student may choose to take to enhance the Computer Applications option.
ACC 235 Computer Accounting Small Business 3
BUS 116 Personal Finance 3
CIS 149 MOS Cert. Access 1
CIS 169 MOS Cert. Power Point 1
MAN 200 Human Resource Management I 3
MAN 215 Organizational Behavior 3
MAN 216 Small Business Management 3
MAN 241 Project Management 3
Approved Electives to meet 60 total credits for the AAS degree.

ENTREPRENEURSHIP Emphasis
Program Requirements – AAS

In addition to the Business Core, the following business courses are required:

- BUS 102 Entrepreneurial Operations 3
- BUS 116 Personal Finance 3
- BUS 203 Intro to International Business 3
- MAN 226 Principles of Management 3
- MAN 128 Human Relations in Organizations..... 3
- MAR 216 Principles of Marketing 3

Suggested Electives

The following are suggested elective business courses that a student may choose to take to enhance the Entrepreneurship option.

- ACC 235 Computer Accounting Small Business 3
- BUS 120 Intro to E-Commerce 3
- CWB 130 Complete Web Editing: 3
- MAN 200 Human Resource Management I 3
- MAN 223 Event Management 3
- MAN 241 Project Management 3

Approved Electives to meet 60 total credits for the AAS degree.

MARKETING Emphasis
Program Requirements – AAS

In addition to the Business Core, the following business courses are required:

- BUS 203 Intro to International Business 3
- CWB 130 Complete Web Editing 3
- MAN 128 Human Relations in Organizations 3
- MAR 216 Principles of Marketing 3
- MAR 220 Principles of Advertising 3
- MGD 111 Photoshop or Graphic Design Class 3

Suggested Electives

The following are suggested elective business courses that a student may choose to take to enhance the Marketing option.

- ACC 235 Computer Accounting Small Business 3
- BUS 116 Personal Finance 3
- BUS 120 Intro to E-Commerce 3
- MAN 223 Event Management 3
- MAN 241 Project Management 3

Approved Electives to meet 60 total credits for the AAS degree.

WEB DESIGN Emphasis
Program Requirements – AAS

In addition to the Business Core, the following business courses are required:

- BUS 120 Intro to E-Commerce 3
- CWB 110 Complete Web Authoring 3
- CWB 130 Complete Web Editing 3
- MGD 111 Adobe Photoshop I 3
- MGD 143 Motion Graphic Software 3

Suggested Electives

The following are suggested elective courses that a student may choose to take to enhance the Web Design option.

- BUS 116 Personal Finance 3
- MAN 200 Human Resource Management I 3
- MAN 241 Project Management 3

Approved Electives to meet 60 total credits for the AAS degree.

NOTE: *ACC 101 Fundamentals of Accounting* **AND** *BUS 116 Personal Finance may be substituted for ACC 121 and ACC 122 in the following AAS Business Options: Web Design and Marketing emphasis.*

MANAGEMENT Emphasis

- MAN 226 Principles of Management FALL 3
- MAN 128 Human Relations in Organizations SPRING..... 3
- MAN 215 Organizatonal Behavior FALL 3
- MAN 200 Human Resource Management 3
- Additional ECO course: ECO 101 MUST be one of the course taken.

ACCOUNTING CERTIFICATE
Required Core Courses:

- ACC 121 Principles of Accountng I 4
- ACC 122 Principles of Accounting II..... 4
- ACC 115 Payroll Accounting 3
- ACC 235 Computer Accounting - Small Business..... 3
- CIS 259 Advanced Excel (Prerequisite - CIS 118 or Instructor Approval) 1

Total Credits Required ..... 15 Credits

Electives (6 credits)

- ACC 132 Income Tax Preparation AND 2
- ACC 133 Income Tax Preparation (Tax Help Colorado Site) 1
- AGB 218 Computerized Farm Records 3
- BUS 115 Intro to Business 3
- BUS 216 Legal Environment of Business 3
- CIS 118 Intro to Microcomputer Applications 3
- MAT 112 Financial Math 3

COLORADO YOUNG FARMERS

CERTIFICATES

Young Farmers classes are offered to those who have an interest in improving themselves and the industry of agriculture through their interaction and involvement with a group of people who have similar goals and objectives. The Young Farmer classes offer tremendous opportunities for all, regardless of age or gender. At the pace which agriculture is changing, it is imperative that all agriculturists, whether just beginning or having been involved in the industry for many years, maintain a "Young" attitude and a willingness to continue life-long learning and growth in agriculture.

Students enroll annually in this certificate program. The course changes each year based on the needs of the group and the primary objectives of the course. Topics center around production agriculture, agriculture business, and agricultural leadership. Courses are offered in a number of communities that are in the NJC service area. In most cases the local high school agriculture instructor serves as the instructor/coordinator for the course. Instruction includes both classroom study and individualized instruction.

The Young Farmer program is a certificate program in which students can earn three levels of certificates. Young Farmer class credits can also be used toward the Associate of General Studies Degree (as per A.G.S. Degree requirements).

Young Farmer Organizational Leadership ..... Credits

CYF 101 Young Farmer Leadership	3
CYF 175 Special Topics	3
CYF 275 Special Topics	3

Young Farmer Leadership in Agriculture ..... Credits

CYF 110 Building Leadership Skills	3
CYF 176 Special Topics	3
CYF 276 Special Topics	3

Young Farmer Agriculture Professional ..... Credits

CYF 122 Professional Development	3
CYF 177 Special Topics	3
CYF 277 Special Topics	3

COSMETOLOGY

CERTIFICATE

Cosmetology is one of the most demanding, rewarding, diversified, and fastest growing specialties in the world today. This program is designed to provide high quality theory and practical training necessary to meet the requirements for today's cosmetologists. This one-year program begins fall semester of each year and meets the training required by Colorado's Department of Regulatory Agency/Cosmetology-Barber Board for state licensing. A NJC Certificate in Cosmetology will be granted upon successful completion of all required courses with a grade "C" or better. Graduates are eligible to take the state board exam to obtain a cosmetology license in the state of Colorado.

The Cosmetology department is housed in a 5,082 square foot facility and offers a wide range of salon services to the community.

Program Requirements ..... Credits

COS 103 Shampoos, Rinses, and Conditioners I	1
COS 110 Introduction to Hair Coloring	2
COS 111 Intermediate I Hair Coloring	2
COS 120 Introduction to Haircutting	2
COS 121 Intermediate I Haircutting	2
COS 130 Introduction to Hairstyling	2
COS 131 Intermediate I Hair Styling	2
COS 140 Introduction to Chemical Texture	1
COS 141 Intermediate I Chemical Texture	1
COS 150 Laws, Rules & Regulations	1
COS 160 Intro to Disinfection, Sanitation & Safety	2
COS 161 Intermediate I: Disinfection, Sanitation & Safety	1
COS 203 Shampoos, Rinses, and Conditioners II	1
COS 210 Intermediate II Hair Coloring	2
COS 211 Advanced Hair Coloring	2
COS 220 Intermediate II Haircutting	2
COS 221 Avanced Hair Cutting	2
COS 230 Intermediate II Hair Styling	2
COS 231 Advanced Hair Styling	1
COS 240 Intermediate II Chemical Texture	1
COS 241 Advanced Chemical Texture	1
COS 250 Management, Ethics, Interpersonal Skills & Salesmanship	1
COS 260 Intermediate II Disinfection, Sanitation & Safety	2
COS 261 Advanced Disinfection, Sanitation & Safety	1
EST 110 Introduction to Facials & Skin Care	3
EST 111 Intermediate Facial & Skin Care	2
EST 210 Advanced Massage & Skin Care	2
EST 211 Facial Makeup	1
EST 212 Hair Removal	3
MAN 128 Human Relations in Organizations	3
NAT 110 Introduction to Manicures & Pedicures	3
NAT 111 Intermediate Manicures & Pedicures	2
NAT 210 Advanced Manicures & Pedicures	2
NAT 211 Application of Artificial Nails	5
NAT 290 Advanced Nail Technician Studies	1
Total required for Cosmetology Certificate	64 Credits

DIESEL TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE DEGREE

The Diesel Technology program is a training program which will focus on the service, repair, and maintenance of medium/heavy duty trucks as well as agricultural and industrial equipment. All courses will follow ASE, N.A.T.E.F. standards and students will be working on live-units with real-world problems to diagnose and repair to gain the hands-on experience they need to become successful technicians.

Graduates of the Diesel Technology program will receive either a Northeastern Junior College Certificate or an Associate of Applied Science degree. Those who enroll in only Diesel Tech coursework will receive a Northeastern Junior College Certificate. Those who pursue an Associate of Applied Science Degree must also complete the general education requirements along with the Diesel Tech coursework.

Detailed information regrading this program and admission requirements may be obtained from the Director of Admissions, Northeastern Junior College.

General Education Requirements ..... 15 Credits

BUS 115 Introduction to Business	3
CIS 117 Introduction to Technical Applications	2
ENG 115 Technical English & Communication OR ENG 121 English Composition I OR ENG 131 Technical Writing	3
MAT 175 Applied Mathematics	2
REA 130 Applied and Technical Reading	2
Social Science Course selected from Courses for the AAS Degree	3

Required Courses

ASE 110 Brakes I	3
ASE 123 Battery/Starting/Charging Systems	2
ASE 175 A/C Service & Repair	2
ASE 220 Special Electronics Training	2
ASE 221 Automotive Body Electrical	4
DPM 101 Diesel Shop Orientation	2
DPM 103 Diesel Engines I	4
DPM 105 Heavy Duty Powertrains I	3
DPM 106 Diesel Fuel Systems	3
DPM 111 Preventive Maintenance I	3
DPM 122 Hydraulics II	3
DPM 140 Heavy Duty Steering & Suspension I	3
DPM 203 Diesel Engines II	4

DPM 207 Heavy Duty Brakes II 3
DPM 211 Preventive Maintenance II 3
DPM 222 Heavy Duty Lighting & Instrumentation 4
DPM 240 Heavy Duty Steering & Suspension II 3
Total Credits Required ..... 51 Credits

Suggested Electives
ACC 101 Fundamentals of Accounting 3
ADE 232 Combine Repair 1
ADE 231 Hay & Forage Harvesting Equipment 1
ADE 241 Tractor Tune up and Repair 4
AME 151 Fundamentals of Welding 3
ASE 165 Automotive Machining 2
COM 115 Public Speaking 3
HWE 113 Standard First Aid 0.5
WEL 140 Welding Practices & Procedures 1.5

DIESEL TECHNOLOGY

TWO-YEAR CERTIFICATE

Students desiring a two-year certificate in Diesel Technology are required to take the following related instructional courses within the Diesel Technology Program that satisfy accreditation and two-year certificate requirements.

Required Courses ..... 53 Credits
ASE 110 Brakes I 3
ASE 123 Battery/Starting/Charging Systems 2
ASE 175 A/C Service & Repair 2
ASE 220 Special Electronics Training 2
ASE 221 Automotive Body Electrical 4
DPM 101 Diesel Shop Orientation 2
DPM 103 Diesel Engines I 4
DPM 105 Heavy Duty Powertrains I 3
DPM 106 Diesel Fuel Systems 3
DPM 111 Preventive Maintenance I 3
DPM 122 Hydraulics II 3
DPM 140 Heavy Duty Steering & Suspension I 3
DPM 203 Diesel Engines II 4
DPM 207 Heavy Duty Brakes II 3
DPM 211 Preventive Maintenance II 3
DPM 222 Heavy Duty Lighting & Instrumentation 4
DPM 240 Heavy Duty Steering & Suspension II 3
MAT 175 Applied Mathematics 2

Suggested Electives
ADE 232 Combine Repair 1
ADE 231 Hay & Forage Harvesting Equipment 1
ADE 241 Tractor Tune up and Repair 4
AME 151 Fundamentals of Welding 3
ASE 165 Automotive Machining 2

DIESEL TECHNOLOGY

ONE-YEAR CERTIFICATE

Students completing 30 credits or more in Diesel Technology will be eligible to receive a NJC One Year Certificate.

Required Courses for Diesel Maintenance & Inspection Certificate:

ASE 110 Brakes I 3
DPM 101 Diesel Shop Orientation 2
DPM 111 Preventive Maintenance I 3
DPM 207 H/D Brakes II 3
MAT 175 Applied Math 2
Total Credits Required ..... 13 Credits

EARLY CHILDHOOD

For those who want the opportunity to provide a positive influence on the lives of children and their families, early childhood is a fascinating field in which to work. The demand for early childhood educators is great. Because of the large numbers of families in which all adults are employed, trends in the national economy, government priorities for children and their families and public demand for services this field continues to grow.

See Page 54 for AA degree requirements in Early Childhood.

EARLY CHILDHOOD EDUCATION

ASSOCIATE OF APPLIED SCIENCE DEGREE

The Early Childhood Associate Teacher Program is designed to prepare persons to meet the requirements for a variety of positions within early childhood programs. Upon completion of this degree, individuals will be group leader qualified. They will be able to independently implement program activities and will be responsible for the care and education of a group of children. Individuals will also have the necessary coursework to establish director qualifications and infant toddler nusery supervisor qualification in the State of Colorado after completing the work experience requirement.

Early childhood teachers and directors work in a variety of settings: private and public preschool and child care settings supported and operated by the employer, hospitals, recreation centers, before- and after-school programs, Head Start, and other programs serving children birth to age eight. A Northeastern Junior College Associate of Applied Science Degree is granted upon completion.

General Education Requirements ..... 15 Credits
Communication ..... 6 Credits
ENG 121 English Composition I 3
COM 115 Public Speaking 3

Mathematics ..... 3 Credits
MAT 107 Career Mathematics 3
MAT 112 Financial Mathematics 3
MAT 121 College Algebra 4
MAT 135 Introduction to Statistics 3

Science or Computer Science .....3 Credits
AST 101 Astronomy I 4
BIO 106 Basic Anatomy & Physiology 4
BIO 111 General College Biology I 5
CIS 118 Introduction to PC Applications 3
EDU 261 Teaching, Learning, Technology 3
or another approved Science or Computer Science course

Social & Behavioral Sciences .....6 Credits
PSY 101 General Psychology I OR
PSY 102 General Psychology II 3
SOC 101 Introduction to Sociology I 3

Program Requirements ..... 52 Credits
ECE 101 Intro to Early Childhood Profession 3
ECE 102 Intro to Early Childhood Lab Techniques 3
ECE 103 Guidance Strategies for Children 3
ECE 108 Assessment Process in ECE 1
ECE 111 Infant/Toddler Theory and Practice 3
ECE 112 Intro to Infant/Toddler Lab Techniques 3
ECE 205 Nutrition, Health, & Safety 3
ECE 209 Observing/Utilizing Assessment 1
ECE 220 Curriculum Development: Methods & Tech..... 3
ECE 226 Creativity and the Young Child 3
ECE 228 Language & Literacy 3
ECE 238 Child Growth & Development 3
ECE 240 Admin. of Early Childhood Care & Edu. Programs..... 3
ECE 241 Admin: Human Relations 3
ECE 256 Working w/ Parents, Families 3
ECE 260 Exceptional Child OR 3
ECE 265 Working w/Parents & Families w/Disabilities 3
ECE 288 Practicum: Early Childhood Ed 6
HWE 103 Community First Aid & CPR 1

EARLY CHILDHOOD: DIRECTOR

CERTIFICATE

The Director Certificate is designed for persons who have 24 months or more of verified work experience with young children and wish to establish director qualifications in the State of Colorado. The work experience must be full days working directly with childen in a child development program.

Program Requirements ..... 40 Credits
ECE 101 Intro to Early Childhood Profession 3
ECE 102 Intro to Early Childhood Lab Techniques 3
ECE 103 Guidance Strategies for Children 3
ECE 111 Infant/Toddler Theory 3
ECE 205 Nutrition, Health, & Safety 3
ECE 220 Curriculum Development:Methods & Tech..... 3
ECE 238 Child Growth & Development 3
ECE 240 Admin. of Early Childhood Care & Edu. Programs..... 3
ECE 241 Admin: Human Relations 3
ECE 260 Exceptional Child 3
PSY 101 General Psychology I 3
SOC 101 Introduction to Sociology I 3
ECE Elective 3

EARLY CHILDHOOD: GROUP LEADER

CERTIFICATE

The Group Leader Certificate is designed for persons who have nine months or more of verified work experience with young children and wish to establish group leader qualifications within the State of Colorado. The work experience must be in the care and supervision of four or more children under 6 years of age who are not related to the individual.

Program Requirements ..... 16 Credits
ECE 101 Intro to Early Childhood Profession 3
ECE 102 Intro to Early Childhood Lab Techniques 3
ECE 103 Guidance Strategies for Children 3
ECE 220 Curriculum Development 3
ECE 238 Child Growth & Development 3

EARLY CHILDHOOD: NANNY

CERTIFICATE

The Early Childhood Nanny program is designed to professionally prepare and enable students to be in-home child care professionals. They work as a member of the family team to provide for children's physical, emotional, social and intellectual needs.

Program Requirements ..... 35 Credits
ECE 101 Intro to Early Childhood Profession 3
ECE 102 Intro to Early Childhood Lab Techniques 3
ECE 103 Guidance Strategies for Children 3
ECE 111 Infant/Toddler Theory and Practice 3
ECE 112 Intro to Infant/Toddler Lab Techniques 3
ECE 130 The Professional Nanny 3
ECE 131 Nanny Methods & Techniques 3
ECE 205 Nutrition, Health, & Safety 3
ECE 238 Child Growth & Development 3
ECE 256 Working w/ Parents, Families 3
ECE 265 Working w/Parents & Families w/Disabilities 3
HWE 103 Community First Aid & CPR..... 1

Suggested Electives ..... 3 Credits
ENG 121 English Composition I 3

EMERGENCY MEDICAL SERVICES

ASSOCIATE OF APPLIED SCIENCE DEGREE

General Education Requirements ..... Credits

Communication ..... 6 Credits

ENG 121 English Composition I OR
ENG 131 Technical Writing I 3
COM 115 Public Speaking 3

Mathematics ..... 3-4 Credits

Science/Computer Science ..... 5 Credits

BIO 111 General College Biology with Lab 5

Social Sciences/Humanities ..... 3 Credits

PSY 102 General Psychology II 3

Program Requirements ..... 60 Credits

BIO 201 Human Anatomy and Physiology I 4
BIO 202 Human Anatomy and Physiology II 4
CIS 118 Introduction to PC Applications 3
EMS 121 EMT Fundamentals 3
EMS 122 EMT Medical Emergencies 4
EMS 123 EMT Trauma Emergencies 2
EMS 170 EMT - Clinical 1
HPR 178 Seminar - Medical Terminology 1
HPR 102 CPR for Professionals 1
NUR 116 Basic Concepts of Gerontological Nursing 1
PSY 235 Human Growth & Development 3
PSY 238 Child Development 3

Suggested Electives ..... Credits

ACC 101 Fundamentals of Accounting 3
BUS 216 Legal Environment of Business 3
BUS 217 Business Communication & Report Writing 3
HWE 100 Human Nutrition 3
MAN 128 Human Relations in Organizations 3
SOC 101 Sociology 3

EMERGENCY MEDICAL TECHNICIAN: BASIC

CERTIFICATE

Upon completion of the Emergency Medical Technical Program, the student will meet the prerequisite for taking the National Registry Examination for Emergency Medical Technicians. The program will teach skills in emergency treatment procedures as used with an ambulance service.

Required Courses ..... Credits

EMS 121 EMT Fundamentals 3
EMS 122 EMT Medical Emergencies 4
EMS 123 EMT Trauma Emergencies 2
EMS 170 Emergency Medical Technician -Clinical 1

EMERGENCY MEDICAL TECHNICIAN: CONTINUING EDUCATION

NJC is approved by the Colorado EMS Department as a Continuing Education Provider Group at the Basic and Intermediate level. Contact the EMS Coordinator for information about courses available.

EMERGENCY MEDICAL TECHNICIAN: INTERMEDIATE

CERTIFICATE

This course is designed to introduce the student to the theories and practices of advanced level assessment and management of the emergency patient as outlined by the State of Colorado, specifically: establish an intravenous line, provide advanced airway management, perform cardiac monitoring and defibrillation, and medication administration.

Required Courses ..... Credits

EMS 203 Emergency Medical Technician - Intermediate I 6
EMS 205 Emergency Medical Technician - Intermediate II 6
EMS 270 Clinical EMS Intermediate 3

EQUINE MANAGEMENT

ASSOCIATE OF APPLIED SCIENCE DEGREE

The horse industry in the United States is a growing, dynamic sector of agriculture with a broad spectrum of jobs expanding in the industry. The Equine Management Program is designed to provide the students with basic, general skills and background knowledge in all areas of the equine industry such as reproduction, health, selection, and general management, however the primary emphasis is placed on training of the Western Horse. Should students aspire to prepare for management opportunities in breeding operations, shed rows or training facilities, the two year program provides access to the business, economic, technical and general education classes necessary to become a competent manager. Students desiring a four year Equine Science degree should enroll in our transfer *Equine Sciences major.*

Enrollment is limited in the Equine Management program to enhance the individual instruction. This allows students to meet individual career objectives. Practical experience is provided in many of the classes as well as the Internship section of the program, which is completed in the summer following their sophomore year.

All students desiring admission to the Equine Management program must make application, go through an oral interview and practical riding exam before admission is granted.

General Education Requirements ..... 16 Credits

ASC 100 Animal Sciences	3
ASC 102 Introduction to Equine Science	4
AGE 102 Agricultural Economics	3
ENG 115 Technical English & Communication OR	
ENG 121 English Composition I OR	
ENG 131 Technical Writing I	3
MAT 107 Career Math	3

Program Requirements ..... Credits

AGB 218 Computerized Farm Records	3
AGB 228 Agri-Business Management OR	
AGE 205 Farm and Ranch Management	3
AME 105 Basic Agricultural Mechanic Skills	2
ASC 225 Feeds and Feeding	4
EQM 101 Stable Operations I	1
EQM 102 Stable Operations II	1
EQM 158 Equine Reproduction	2
EQM 201 Stable Operations III	1
EQM 202 Stable Operations IV	1
EQM 210 Equine Health	2
EQM 211 Equine Health Lab	1
EQM 280 Equine Internship	8
EQM 289 Equine Capstone	0.5
EQT 101 Intro to Horse Training	5
EQT 102 Beginning Colt Training	6
EQT 201 Intermediate Colt Training	6
EQT 202 Advanced Colt Training	6
MAN 205 Event Planning	3

Suggested Electives ..... 9 Credits

AGP 160 Ranch Horsemanship Skills	2
EQT 140 Ranch Horse Versatility	3
EQT 240 Ranch Horse Versatility II	3

FIRE SCIENCE TECHNOLOGIES

Fire Science Technology is the study of:

- The physical properties of fire
- Strategy and tactics of fire suppression and prevention
- Life Safety Engineering
- Fire Administration
- Fire and Public Education
- Hazardous Materials Handling, Response & Transportation
- Arson investigation
- Emergency Medical Response & Transportation
- Disaster Management, Preplanning and Recovery

The specialized knowledge gained through an education in fire science equips first responders with the skills and mental tools to effectively save lives and protect property and the environment. Careers in emergency services require courage, endurance, integrity and the ability to make good and quick decisions in emergencies. Teamwork is necessary to safely solve an emergency situation. The qualities of hard work and self discipline must be quickly mastered through both online and traditional residential learning opportunities. You will take these characteristics from the classroom to the fire station and throughout your life.

The Fire Science Technology program at NJC offers an Associate of Applied Science degree designed to meet the needs of personnel seeking entry into the fire career fields. Courses are accessible through traditional classroom, online and hybrid formats. The NJC program meets all of the criteria as adopted in the Fire and Emergency Services Higher Education (FESHE) curriculum model. You may also apply prior knowledge and skills earned through other classroom experiences via our Credit for Prior Learning assessment.

You may find through your training experience that you have a desire to follow other career paths within the emergency services profession. Some of the exciting careers include:

- Firefighter
- Fire Investigator
- Special Rescue and Tactics Technician
- Fire Adminstration Manager/Chief
- Environmental Crimes Investigator
- Public Education Specialist
- Hazardous Materials Technician/Coordinator
- Industrial Safety Officer
- FEMA Response Agent
- Emergency Manager
- Paramedic

In order to provide best services and marketability it is our desire to graduate students with the following state certifications:

- Fire Fighter I
- Hazardous Materials Operations Level
- Wildland Fire Fighter (Red Card)
- Emergency Medical Technician Basic

General Education Requirements ..... 19 Credits

BIO 106 Basic Anatomy & Physiology	4
CIS 118 Intro to PC Applications	3
COM 115 Public Speaking	3
ENG 121 English Composition I OR	
ENG 131 Technical Writing	3
MAT 107 Career Math	3
PSY 101 General Psychology I OR	
PSY 102 General Psychology II	3

Program Requirements ..... Credits

FST 100 Firefighter I	9
FST 102 Principles/Emergency Services	3
FST 103 Firefighter Occupational Safety & Health	3
FST 104 Fire Protection Systems	3
FST 105 Building Construction for Fire Professionals	3
FST 106 Fire Prevention	3
FST 107 HazMat Operations (Level 1)	3
FST 201 Instructional Methodology	3
FST 202 Strategy and Tactics	3
FST 204 Principles of Code Enforcement	3
FST 206 Fire Co Supervision & Leadership	3
FST 259 Wildland Firefighting Tactics	3
HPR 102 CPR for Professionals	0.5

Other Electives - (Select a minimum of 6 elective credits)

FST 101 Firefighter II	6
FST 137 Vehicle Extrication	2
FST 150 Fire Prevention Education	3
FST 203 Fire Hydraulics and Water Supply	3
FST 205 Fire Investigation I	3
FST 250 Chemistry for Fire Protection	3
FST 253 NIMS	3

FST 254 HazMat Technician Level	3
EMS 115 First Responder	3
EMS 125 EMT Basic	9
EMS 170 EMT Basic Clinical	2

TOTAL HOURS FOR GRADUATION: 67.5

NOTE: Students interested in a fire career that incorporates Emergency Medical Technician-Paramedic level work must successfully complete both Anatomy and Physiology I and II (BIO 201/202) courses.

FIREFIGHTER I

This program is designed to prepare individuals who have little or no experience with the firefighting profession for entry-level positions in the fire service industry. The course addresses the requirements necessary to perform at the first level of progression as identified in National Fire Protection Association (NFPA) 1001, Firefighter Professional Qualifications. This is a lecture and lab course for meeting the NFPA 1001, level I, standard using IFSTA Essentials.

Upon successful completion, the student will receive a NJC certificate and is eligible to register for the Colorado State Firefighter I Exam, which is an IFSAC accredited certificate.

BASIC LEVEL CERTIFICATE

Program Requirements	13 Credits
FST 100 Firefighter I	9
FST 107 HazMat Operations (Level 1)	3
PED 112 Conditioning Lab	1

ADVANCED LEVEL CERTIFICATE

Program Requirements	16.5 Credits
FST 100 Firefighter I	9
FST 107 HazMat Operations (Level 1)	3
FSW 100 Intro to Wildland Fire Behavior	1
FSW 101 Firefighting Training	2
HPR 102 CPR for Professionals	.5
PED 112 Conditioning Lab	1

FIREFIGHTER II

CERTIFICATE

For future advancement NJC offers a Firefighter II Certificate.

Program Requirements	6.0 Credits
FST 101 Firefighter II	6

FIREFIGHTER INSTRUCTOR

CERTIFICATE

For those who have experience and training and would like to teach others in firefighting.

Program Requirements	7.0 Credits
FST 201 Instructional Methodology	3.0
EDU 250 CTE in Colorado	1.0
EDU 260 Adult Learning & Teaching	3.0

FIRST RESPONDER

CERTIFICATE

This 58-hour course is designed to train individuals who are likely to be the first people who arrive on the scene of an emergency to properly assess victims, provide immediate emergency care, and stabilize victims until ambulance personnel arrive.

Required Courses	Credits
EMS 115 First Responder	3

NURSING ASSISTANT

CERTIFICATE OF ACHIEVEMENT

This short program prepares students to work as a Certified Nursing Assistant in a hospital, nursing home, or other health related agency. After successful completion the student is eligible to take the Colorado Board of Nursing examination to become certified.

Required Courses	Credits
NUA 101 Nurse Aide Health Care Skills	4
NUA 170 Nurse Assistant Clinical Experience	1

Electives:

HPR 115 Gerontology for Care Providers	1

PRACTICAL NURSING

CERTIFICATE

The providers of health care are recognized as team members. Practical Nursing has earned a respected place on the health care team. This program provides qualified individuals the theory and practical skills necessary to meet the occupational entry-level requirements. Practical nurses are trained to give basic bedside nursing care under supervision of a registered nurse, licensed physician or dentist.

The program includes both instructional and clinical experience. The purpose of the instructional period is to provide the students with the basic principles of practical nursing and to provide an opportunity to develop attitudes and skills that are essential to the practical nurse. The purpose of the clinical experience courses is to provide the student with the opportunity to practice and develop, under supervision, the knowledge and skills learned in the instructional period. Two or more weeks of clinical experience may be required on the evening shift and may occur on weekends. Additionally, travel (120 mile radius from campus) may be required for clinical experiences.

The Northeastern Junior College Certificate in Practical Nursing will be granted upon successful completion of all required courses with a grade of a "C" or better. Graduates are then eligible to apply to take the NCLEX-PN examination to obtain practical nurse licensure.

Once all prerequisites are completed the student must apply to the Practical Nursing Program. This is a separate application than the general admission to the college. The student needs to apply to the college first and be assigned a S number. Please contact the nursing department at (970) 521-6701 for specific directions on how to apply to the nursing program.

To be put on the nursing program wait list the following need to be completed:

1. ENG 121 English Composition - 3 Credits
2. HPR 108 Dietary Nutrition - 1 Credit
3. BIO 106 Basic Anatomy & Physiology - 4 Credits <u>OR</u> BIO 201 Anatomy & Physiology I - 4 Credits <u>AND</u> BIO 202 Anatomy & Physiology II - 4 Credits (Both BIO 201 & BIO 202 must be completed prior to acceptance into the Program)

Prerequisite Requirements

1. Must be completed with a grade of "C" or better.
2. A cumulative GPA of 2.25 is required for all pre-requisites (A GPA of 2.25 cannot be achieved with all C's).
3. Science prerequisites are valid for 7 years from the time of completion to the start of the Nursing Program.
4. If prerequsites were not taken at Northeastern Junior College, send official transcripts to NJC's Records Office.

<u>Program Acceptance</u>

The following must be completed for the student to be accepted into the program.

1. Accuplacer scores or comparable course work to show Math, Reading and English are at college Level.
2. Call counseling at 521-6656 to set up an appointment to take the test. The cost of the test is $35.
3. Take the preadmission nursing entrance exam to assess academic skills at the counseling office. An appointment may be made with nursing faculty to review results if needed.

Go to <u>www.healthcareex.com</u> and follow the directions for FBI fingerprinting package.

Acceptance into the practical nursing program is a competitive process. Points will be assigned based on the following 5 areas: grade point average on prerequisite courses, prior degree, certification as a nursing assistant by the state board of nursing, nursing preadmission test results, and proof of residency for one year from service area. Applicants will be selected based on total points earned. There are two scoring application deadlines June 1st and August 1st with the first application date having priority.

Once applicants complete ENG 121, HPR 108, and BIO 106 or BIO 201 and BIO 202, it is highly recommended that you meet with a nursing advisor to ensure all requirements have been met. Once the applicant has been provisionally accepted into the program the following must be completed before the start of the program in August:

*Satisfactory Criminal Background Check (not to be done earlier than 90 days of start date into the program)
*Health Statement/Proof of Immunizations for medical clearance
*Professional CPR Certificate (Must not expire until after graduation)

Program Requirements	Credits
NUR 101 Pharmacology Calculations	1
NUR 102 Alterations in Adult Health I	4
NUR 103 Assessment for the Practical Nurse	1
NUR 104 Alterations in Adult Health II	5
NUR 105 Practical Nursing Arts and Skills	6.5
NUR 110 Pharmacology Practical Nursing	3
NUR 111 Introduction into Socialization	1
NUR 113 Basic Concept of OB Nursing	2
NUR 114 Basic Concepts of Nursing Children	2
NUR 115 Mental Health	1
NUR 116 Introduction to Gerontology	1
NUR 131 Clinical I Application of Arts & Skills	4.5
NUR 132 Clinical II Application of Adult Heath I	3
NUR 133 Clinical III OB/Peds	1.5
NUR 134 Clinical IV Advanced Application of Adult Health	4.5

Electives:

HPR 178 Medical Terminology	2
PSY 235 Human Growth & Development	3

The Practical Nursing program is accredited by the National League for Nursing Accrediting Commission (NLNAC). NLNAC's contact information: 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, (404) 975-5000.

ASSOCIATE DEGREE NURSING

ASSOCIATE OF APPLIED SCIENCE DEGREE

The health care industry is growing rapidly and is increasing the need for more registered nurses. The Licensed Practical Nurse may continue his/her education to earn an Associate Degree in Applied Science at Northeastern Junior College. The program is a one year program for Licensed Practical Nurses which starts in January with graduation in December. Upon successful completion of the program students are eligible to apply to take the NCLEX exam to obtain licensure as a Registered Nurse.

Registered Nurses are the largest group of health care providers and work in a variety of settings ranging from schools, hospitals, clinics and health departments to name just a few. Registered nurses have both independent and supervisory responsibilities in managing patient care. In addition RNs work with a variety of health care professionals and carry out physician orders to ensure quality patient care.

The program includes both instructional and clinical experience to provide the student with the knowledge base and hands on experience to provide safe and compassionate nursing care. The nursing faculty also strives to teach the values and professionalism nurses will need to have a rewarding career in nursing. Clinical experiences vary and may occur on weekends or nights and will include eight and twelve hour shifts in facilities from the surrounding areas including Nebraska. Travel may be required up to a 200 mile radius of campus.

Applicants who desire to enter the LPN to ADN Program must satisfy the following requirements for admission:

1. Applicants must meet general admission requirements.
2. Applicants must submit all material required under admission information of this catalog.
3. Applications must take the ACCUPLACER or the ACT / SAT test with results indicating applicant is at college level in reading, math, and English.
4. Completion of the preadmission nursing entrance exam available at the counseling office.
5. Possession of a valid LPN license in good standing.

NOTE: Students who graduated from a practical nursing program three (3) or more years ago have additional requirements for entry as part of the Colorado Articulation Agreement. Contact the nursing program at (970) 521-6701 for details if you wish to attend.

Program Prerequisites: Completion of the following prerequisite courses which require a GPA of 2.5 or better: All courses need to be at least a "C".

Program Prerequisites:	Credits
ENG 121 English Composition	3
PSY 235 Human Growth and Development	3
BIO 201 Anatomy and Physiology I with lab	4
BIO 202 Anatomy and Physiology II with lab	4
BIO 204 Microbiology with lab	4

- Additional prerequisite courses must be completed with a grade of "C" or better:

MAT 103 Math for Clinical Calculations or higher level college math class	3
BIO 216 Pathophysiology	4
HPR 108 Nutrition	1

- All Biology (BIO) prerequisites must be completed within 7 years of entry into NJC's nursing programs

Once all prerequisites are completed the student must apply to the LPN to ADN program. This is a separate application than general admission to the college. The student needs to apply to the college first and be assigned a S numbr. Please contact the nursing department for specific directions on how to apply to the nursing program. Once accepted into the program the following must be completed.

*Satisfactory Criminal Background Check (not to be done earlier than 90 days of start date into the program)
*Health Statement/Proof of Immunizations for medical clearance
*Professional CPR Certificate (Must not expire until after graduation)

It is highly recommended that you meet with a nursing advisor to ensure all requirements have been met.

Program Requirements	Credits
Elective approved Social Science	3
NUR 189 Transition from LPN to ADN	4
NUR 206 Advanced Concepts of Medical Surgical Nursing	8
NUR 211 Nursing Care of Psychiatric Client	4
NUR 212 Pharmacology II	2
NUR 216 Advanced Concepts of Medical Surgical Nursing II	6
NUR 230 Transition to Professional Nursing Practice	5

The Associate Nursing program is accredited by the National League for Nursing Accrediting Commission (NLNAC). NLNAC's contact information: 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, (404) 975-5000.

WIND ENERGY TECHNICIAN PROGRAM

ASSOCIATE OF APPLIED SCIENCE DEGREE

Associate Degree Wind Energy Technician

The renewable energy field is a fast growing industry. Eastern Colorado is host to one of the fastest growing fields of renewable energy - wind energy. The Wind Energy Technician program is designed to prepare students for entry level positions in the wind industry. The program will cover the basic knowledge areas of electricity, electronics, fluid power, and mechanics, and then go into more specific control systems of large wind turbine generator technology. There is a strong emphasis on safety throughout the program, just as there is in the field.

Wind energy technicians typically work in demanding physical and environmental conditions. Technicians may be working with heavy motors and gear drives in tight, confined spaces, electrical systems up to 600 volts, or advanced electronic control systems, all in the heat of summer or cold of winter, at heights approaching 300 feet.

It is essential that wind technicians have effective communication and math skills for the rigors of the wind industry. For this reason, the program is only offered as an Associate of Applied Science Degree, which includes general education course requirements. Graduates of the Wind Energy Technician Program will be prepared to enter the wind industry in employment with wind farm developers and owners, wind turbine manufacturing and warranty service, or various specialty support industries. This is a fast

growing and exciting industry, with new developments and entrepreneurial potential for those who have the demanding skills required for this new energy field.

General Education Requirements .....Minimum 15 Credits

CIS 118 Intro to PC Applications 3
COM 115 Public Speaking OR
COM 125 Interpersonal Communications 3
ENG 115 Technical English & Communication OR
ENG 121 English Composition I OR
ENG 131 Technical Writing 3
MAN 128 Human Relations 3
MAT 107 or higher 3

Program Requirements ..... 45 Credits

EIC 101 Job Training and Safety 3
ELT 106 Fundamentals of AC/DC 3
ELT 107 Fundamentals of Industrial Electronics 3
ELT 252 Motors and Controls 3
ELT 258 Programmable Logic Controllers 3
HWE 103 First Aid & CPR 1
IMA 100 Intro to Industrial Maintenance 3
IMA 160 Basic Fluid Power 3
PED 112 Conditioning Lab 1
WTG 100 Intro to Wind Industry 3
WTG 110 Power Distribution & Control Systems 3
WTG 170 Fundamentals of AC/DC Lab 1
WTG 210 WTG Airfoils & Composites 2
WTG 220 WTG Troubleshooting and Repair 4
WTG 280 Wind Technician Internship 6
WTG 289 Wind Tech Capstone 2
Elective 2-3

Suggested Electives

AME 107 General Power Mechanics..... 2
AME 151 Fundamentals of Welding 3
WEL 130 Maintenance Welding 3
WEL 140 Welding Practices & Procedures 1.5
Any Foreign Language 3

Total Credits Required ..... 60 Credits