

# ASSOCIATE IN APPLIED SCIENCE (A.A.S.)

The Associate in Applied Science degree is designed to prepare a student for employment in a specific occupational area. **For most majors, the A.A.S. is not designed as a transfer degree.**

Agreements are in place with several colleges and universities to facilitate transfer of some A.A.S. degrees into four year programs. Contact an NCMC Student Services advisor or your faculty advisor for more information.

Associate in Applied Science degrees are comprised of about 15 credit hours of general education courses and a minimum of 46 (up to 58) credit hours of courses most appropriate to address the intended outcome of the career program.

Students receive individualized advisement regarding course selections most appropriate to their individual career goals. A recommended curriculum is listed for each career program offered at NCMC.

## Associate in Applied Science Degree

### General Requirements

<b>COMMUNICATIONS</b> .....	<b>6 hours</b>
A. EN101 English I	3
B. SP175 Speech Communications	3
<b>SOCIAL SCIENCE</b> .....	<b>3 hours</b>
A. HI101 American History to 1877 or PL216 National Government	3
<b>MATHEMATICS</b> .....	<b>3 hours</b>
A. Department Requirement	3
<b>HUMANITIES OR GENERAL ELECTIVE</b> .....	<b>3 hours</b>
<b>VOCATIONAL-TECHNICAL CURRICULUM</b> ....	<b>46-58 hours</b>

**IMPORTANT NOTES:** In order to earn a second degree, a student must complete a minimum of 12 credit hours in addition to those required for the first degree.

*Developmental Studies classes do not apply toward any degree requirements in any program.*

*A minimum final cumulative grade point average of 2.0 and a minimum of 60 credit hours are required for graduation.*

*A maximum of two hours in physical education activity credit will be applied toward a degree.*

## CAREER CERTIFICATE PROGRAMS

**N**CMC offers career certificate programs in accounting, agriculture & natural resources, business management, business technology, criminal justice, medical assistant, insurance & billing, medical transcription and nursing. Designed to be completed in approximately one year, these programs help graduates gain job skills for immediate employment.

Students who wish to continue their education may do so. In most cases, a certificate program leads directly into an Associate in Applied Science degree.

A minimum final cumulative grade point average is required for graduation.

\*Developmental Studies classes do not apply toward any certificate requirements in any program.

# Accounting AAS

This Associate in Applied Science program is designed to prepare graduates for a variety of accounting positions in business, industry and government. A balanced curriculum of accounting courses, related business courses, general education courses and an internship in the office of a cooperating employer provides classroom education and practical experience.

## Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Microcomputer Applications I	BT160	3
Microeconomics	EC252	
<b>or</b> Macroeconomics I	<b>or</b> EC253	3
English I	EN101	3
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting II	AC137	3
Payroll Accounting	AC186	3
Spreadsheet Applications	BT190	3
Intermediate, College Algebra	MT110, MT122	
<b>or</b> Business Math	<b>or</b> BT110	3
Speech	SP175	3
<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
Accounting Internship	AC240	6

## Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Cost Accounting	AC210	3
Intermediate Accounting I	AC236	3
Credit and Finance	BA204	3
Business Communications	BT130	3
Business Elective		3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Computer Accounting	AC206	3
Income Tax Accounting	AC220	3
Intermediate Accounting II	AC237	3
Business Law	BA221	3
Employment Strategies	BT240	1
General Education Elective		3

# Accounting/Business Technology Certificate

This certificate is designed to prepare students for employment in both Accounting or Business Technology fields. Completion of the following courses may be applied toward an Associate in Applied Science degree in Accounting.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Business Law	BA221	3
Business Communications	BT130	3
Microcomputer Applications I	BT160	3
Data Base Concepts	BT170	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting II	AC137	3
Payroll Accounting	AC186	3
Computer Accounting	AC206	3
Spreadsheet Applications	BT190	3
Employment Strategies	BT240	1
Microcomputer Applications II	BT260	3

# Accounting Clerk Certificate

The Accounting Clerk Certificate is designed to prepare the student for employment as an accounting clerk or payroll clerk in one calendar year.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Bs. Math, Inter. Algebra, or College Algebra	BT110, MT110, or MT122	3
Business Communications	BT130	3
Microcomputer Applications I	BT160	3
Microeconomics or Macroeconomics	EC252 or EC253	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting II	AC137	3
Computer Accounting	AC206	3
Income Tax Accounting	AC220	3
Spreadsheet Applications	BT190	3
Employment Strategies	BT240	1
Speech	SP175	3
<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
Payroll Accounting	AC186	3
Accounting Internship	AC240	6
Business Law	BA221	3

# Professional Accounting Certificate

The Professional Accounting Certificate is designed primarily for part-time or evening students. Students are required to take the same accounting and computer courses and internship as in the A.A.S. in Accounting degree without the supporting business and general education courses. Job opportunities are similar to those with the A.A.S. degree.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Microcomputer Applications I	BT160	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting II	AC137	3
Payroll Accounting	AC186	3
Computer Accounting	AC206	3
<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
Accounting Internship	AC240	6
<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Intermediate Accounting I	AC236	3
Cost Accounting	AC210	3
Spreadsheet Applications	BT190	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Intermediate Accounting II	AC237	3
Income Tax Accounting	AC220	3
Employment Strategies	BT240	1

# Agriculture & Natural Resources AAS

The Agriculture and Natural Resources Technology (AGNR) program is designed for students who wish to pursue a career in the areas of agribusiness or the management of agricultural and natural resources. Students receive instruction in agronomy, animal science, computer applications, ecology, economics, leadership development and soils along with core general education courses. Classroom, laboratory and internship experiences are included in the program.

Following completion of this program, students can enter the workforce or pursue a Bachelor of Technology degree at NWMSU. The NWMSU Bachelor of Technology degree is designed for students transferring who have completed an Associate of Applied Science degree at a community college. The curriculum leading to a Bachelor of Technology degree is individually developed for each student and provides for transfer of all Agriculture and Natural Resources A.A.S. courses to NWMSU.

## Freshmen

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Plant Science	AG105	3
Plant Science Lab	AG106	1
Animal Science	AG107	3
Animal Science Lab	AG108	1
Ecology	BI110	5
Career Development in AGNR	AG101	1
Farm & Environmental Safety	AG130	2
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Soils & Fertilizers	AG103	3
Soils & Fertilizers Lab	AG104	1
Agri-Economics	EC223	3
Crop Science	AG114	
<b>or</b> Feeds & Feeding	<b>or</b> AG227	3
English I	EN101	3
Microcomputer Applications I	BT160	3

## Sophomore

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Farm Mgmt. & Records Analysis	AG270	3
Beef Production	AG112	
<b>or</b> Soil & Farm Water Mgmt.	<b>or</b> AG240	3
Business Communications	BT130	3
American History	HI103	
<b>or</b> American Government	<b>or</b> PL216	3
Speech	SP175	3
Employment Strategies	BT240	1

<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Agriculture Credit & Finance	AG163	3
Agriculture Math	AG117	
<b>or</b> Math Requirement		3
Agriculture Sales	AG148	3
Agriculture & Natural Resources Internship	AG215	6

## **Agriculture & Natural Resources Certificate**

The Agriculture and Natural Resources Technology certificate is designed for students who are interested only in technical courses in the areas of agribusiness and the management of agricultural and natural resources. Students receive instruction in agronomy, animal science, computer application, ecology, economics, leadership development and soils.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Plant Science	AG105	3
Plant Science Lab	AG106	1
Animal Science	AG107	3
Animal Science Lab	AG108	1
Farm Mgmt. & Records Analysis	AG270	3
Career Development in AGNR	AG101	1
Farm & Environmental Safety	AG130	2

<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Soils & Fertilizers	AG103	3
Soils & Fertilizers Lab	AG104	1
Agriculture Economics	EC223	3
Agriculture Credit & Finance	AG163	3
Agricultural Math	AG117	
<b>or</b> Math Requirement		3
Microcomputer Applications I	BT160	3
Employment Strategies	BT240	1

# Agriculture & Natural Resources AAS

## Equine Management Emphasis

The Equine Emphasis is designed for students who wish to seek a career in equine production or equine operations. The program provides hands-on instruction in horse training and management.

Following completion of this program, students can enter the workforce or pursue a Bachelor of Technology degree at NWMSU. The NWMSU Bachelor of Technology degree is designed for students transferring who have completed an Associate of Applied Science degree at a community college. The curriculum leading to a Bachelor of Technology degree is individually developed for each student and provides for transfer of all Agriculture and Natural Resources - Equine Emphasis - A.A.S. courses to NWMSU.

### Freshman

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Plant Science	AG105	3
Plant Science Lab	AG106	1
Animal Science	AG107	3
Animal Science Lab	AG108	1
Horses & Horsemanship	AG124	
<b>or</b> Light Horse Production	<b>or</b> AG125	3
Career Development in AGNR	AG101	1
Farm & Environmental Safety	AG130	2
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Principles of Light Horse Training	AG224	2
Agriculture Economics	EC223	3
Feeds & Feeding	AG227	3
English I	EN101	3
Microcomputer Applications I	BT160	3
Horseback Riding I	PE123	1

### Sophomore

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Horses & Horsemanship	AG124	
<b>or</b> Light Horse Production	<b>or</b> AG125	3
Farm Mgmt. & Records Analysis	AG270	3
Business Communications	BT130	3
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
Speech	SP175	3
Employment Strategies	BT240	1

<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Advanced Light Horse Training	AG225	2
Agriculture Credit & Finance	AG163	3
Agricultural Math	AG117	
<b>or</b> Math Requirement		3
Agriculture Sales	AG148	3
Agriculture/Natural Resources Internship	AG215	6

## **Agriculture & Natural Resources Certificate Equine Management Emphasis**

The Equine Management Emphasis certificate is designed for students who are interested only in technical courses in the areas of agribusiness and equine management.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Plant Science	AG105	3
Plant Science Lab	AG106	1
Animal Science	AG107	3
Animal Science Lab	AG108	1
Horses & Horsemanship	AG124	
<b>or</b> Light Horse Production	<b>or</b> AG125	3
Farm Mgmt. & Records Analysis	AG270	3
Career Development in AGNR	AG101	1
Farm & Environmental Safety	AG130	2
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Principles Light Horse Training	AG224	2
Agri-Economics	EC223	3
Agriculture Credit & Finance	AG163	3
Agricultural Math	AG117	
<b>or</b> Math Requirement		3
Microcomputer Applications I	BT160	3
Horseback Riding I	PE124	1

# Applied Technology AAS 1+1 Program

Students satisfactorily completing a certificate program of competency-based instruction in a technical field may receive 30 college credit hours toward an AAS in Applied Technology degree. The 1+1 program provides opportunities for students at area technical schools and career centers to earn articulated college credit.

Students completing an articulated technical program at an area technical school or career center can earn 30 hours of college credit after completing the remaining NCMC degree requirements. Students can enroll in NCMC classes on campus, at an outreach location in a surrounding community or on-line.

To receive articulated credit for the certificate earned and have it apply toward the AAS degree at NCMC, you must:

1. Enroll at NCMC within 15 months of high school graduation or completion of the technical school/career center program.
2. Present an official articulated credit certificate and your technical school/career center transcript during enrollment and to an advisor.
3. Complete a minimum of 31 credit hours at NCMC which shall include 15 credits of general education courses, Employment Strategies, and 15 credits of approved electives.
4. Complete NCMC requirements with an overall GPA of at least 2.0.
5. Apply with the Registrar's office to have the articulated 30 hour block credit put on the student transcript and pay the transcription fee.

The technical school or career center must complete and submit a certificate of articulated credit to NCMC upon the completion of the technical program by the student.

## General Education Core

<b>Course Title</b>	<b>Course Number</b>	<b>Credits</b>
English I	EN101	3
Microcomputer Applications	BT160	3
Employment Strategies	BT240	1
Am. History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
Speech	SP175	3
*Math Requirement		3

*\*See Advisor. Math requirement varies with degree sought.*

## Electives

In addition to the General Core Requirements students must complete 15 hours of credit from career and technical education \*\*electives including: \*

<b>Course Title</b>	<b>Course Number</b>	<b>Credits</b>
Precision Measurement	AT220	3
Principles of Management	BA150	3
Principles of Marketing	BA154	3
Entrepreneurship	BA269	3
Principles of Safety	MF150	3
AutoCad I	MF220	3
Industrial Robotics	MF235	3
Internship	MF271	3

*\*\*Elective courses may be substituted from the following areas with advisor approval: Accounting (AC), Agriculture (AG), Automotive & Machinery (AM), Applied Technology (AT), Business Administration (BA), Business Technology (BT), Construction Technology (CT), Information Technology (IT), and Manufacturing Technology (MF).*

## **Additional Options for CTE Electives**

### Agriculture Emphasis

<b>Course Title</b>	<b>Course Number</b>	<b>Credits</b>
Agricultural Math	AG117	3 cr hrs
Soils & Fertilizers	AG103	3 cr hrs
Soils & Fertilizers Lab	AG104	1 cr hr
Plant Science	AG105	3 cr hrs
Plant Science Lab	AG106	1 cr hr
Animal Science	AG107	3 cr hrs
Animal Science Lab	AG108	1 cr hr
Business Communications	BT130	3 cr hrs

***NOTE:** Transferability of the vocational component of the programs is at the discretion of the transfer institution. Students planning to transfer for a bachelor's degree may substitute courses required for General Education.*

Contact an NCMC advisor or Coordinator of Federal Programs at phone extension 1278 for additional information.

# Business Management AAS

The Business Management program combines traditional classroom education and supervised work experience. Students receive a well-rounded general business background plus valuable experience—tools necessary for a successful career in business management.

## Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Introduction to Business	BA101	3
Business Math	BT110	
<b>or</b> Advisor-Approved Math Course		3
Microcomputer Applications I	BT160	3
English I	EN101	3
Current Issues in Business	BA110	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Principles of Management	BA150	3
Speech	SP175	3
Elementary Accounting II	AC137	3
Psychology	PY121	
<b>or</b> Sociology	<b>or</b> SO107	3
Desktop Publishing	BT200	3
Microeconomics	EC252	
<b>or</b> Macroeconomics	<b>or</b> EC253	3

## Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Credit & Finance	BA204	3
Microeconomics	EC252	
<b>or</b> Macroeconomics	<b>or</b> EC253	3
Business Communications	BT130	3
Human Resource Management	BA161	3
Entrepreneurship	BA269	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Principles of Marketing	BA154	3
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
Employment Strategies	BT240	1
Web Page Design I	BT210	3
Business Law	BA221	3
Business Management Internship	BA176	4
Business Elective (BA, EC, BT, IT, AC)		3

## Business Management Certificate

The one-year certificate in Business Management is designed to provide applicable skills for today's competitive job market. All courses in this certificate program apply toward an A.A.S. in Business Management.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Human Resource Management	BA161	3
Credit & Finance	BA204	3
Introduction to Business	BA101	3
Microcomputer Applications I	BT160	3
Current Issues in Business	BA110	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Principles of Management	BA150	3
Business Law	BA221	3
Business Math	BT110	3
<b>or</b> advisor approved math course		3
Microeconomics	EC252	3
<b>or</b> Macroeconomics	<b>or</b> EC253	3
Business Management Internship	BA176	4

## Marketing Management Certificate

The one-year certificate in Marketing Management is designed to provide applicable skills for today's competitive job market. All courses apply toward an A.A.S. in Business Management.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Microcomputer Applications I	BT160	3
Business Math	BT110	3
Web Page Design I	BT210	3
Credit & Finance	BA204	3
Current Issues in Business	BA110	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Business Law	BA221	3
Desktop Publishing	BT200	3
Microeconomics	EC252	3
<b>or</b> Macroeconomics	<b>or</b> EC253	3
Principles of Marketing	BA154	3
Entrepreneurship	BA269	3
Business Management Internship	BA176	2

# Business Management

## On-Line & Outreach Cohort AAS

This program is designed to help students reach their educational goals by utilizing both conventional & non-conventional learning environments. Several features of the program are designed to optimize student learning. They include a hybrid delivery of on-line and traditional classroom learning environments, a cohort of students progressing through the program together and an academic advisor and course facilitator who meets weekly with the cohort.

<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
Microcomputer Applications I	BT160	3
<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to Business	BA101	3
Elementary Accounting I	AC136	3
Business Math	BT110	3
Speech Communications	SP175	3
Current Issues in Business	BA110	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
Elementary Accounting II	AC137	3
Employment Strategies	BT240	1
Business Law	BA221	3
Psychology	PY121	
<b>or</b> Sociology	<b>or</b> SO107	3
<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
Desktop Publishing	BT200	3
Human Resource Management	BA161	3
<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Business Communications	BT130	3
Credit & Finance	BA204	3
Principles of Management	BA150	3
Principles of Marketing	BA154	3
Microeconomics	EC252	
<b>or</b> Macroeconomics	<b>or</b> EC253	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Web Page Design I	BT210	3
Microeconomics	EC252	
<b>or</b> Macroeconomics	<b>or</b> EC253	3
Entrepreneurship	BA269	3
Business Management Internship	BA176	4
Business Elective (BA, EC, BT, IT, AC)		3

# Business Technology AAS

The Business Technology program is designed to prepare students for careers in modern business environments. This 61-credit hour program offers students the opportunity to receive comprehensive training in all aspects of office processes and management. Hands-on experience is provided with a variety of hardware and software packages pertaining to word processing, spreadsheets, presentation graphics, database, desktop publishing and web design. The program includes a general education and business technology core.

## Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Accounting I	AC136	3
Business Communications	BT130	3
Microcomputer Applications I	BT160	3
DigiTools	BT180	2
American History to 1877 or National Government	HI103 or PL216	3
Employment Strategies	BT240	1
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Spreadsheet Applications	BT190	3
Database Concepts	BT170	3
Word Processing II	BT250	3
Desktop Publishing	BT200	3
English I	EN101	3

## Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Web Page Design I	BT210	3
Microcomputer Applications II	BT260	3
Humanities or Gen. Ed. Elective		3
Math Elective		3
Business Elective (BA, EC, BT, AC)		3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Business Technology Internship	BT270	4
Office Procedures	BT230	3
Speech	SP175	3
Business Electives (BA, EC, BT, AC)		6

# Business Technology Certificate

This one-year program prepares students for a career in a modern, automated office environment. The 33-credit hour curriculum provides hands-on experience using a variety of hardware, computer software packages and records management.

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Elementary Accounting I	AC136	3
Microcomputer Applications I	BT160	3
Business Communications	BT130	3
DigiTools	BT180	2
Speech	SP175	3
Employment Strategies	BT240	1
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Word Processing II	BT250	3
Web Page Design I	BT210	3
Office Procedures	BT230	3
Spreadsheet Applications	BT190	3
Database Concepts	BT170	3
Business Elective (BA, EC, BT, AC)		3

# Criminal Justice AAS

This degree is designed for students seeking a career in Criminal Justice. It also provides a sound base for individuals wanting to enter the mental health profession as students receive background in psychology, the justice system and legal system.

Course Title	Course Number	Hours
English I	EN101	3
Introduction to Criminal Justice	CJ126	3
General Psychology	PY121	3
Liability/Criminal Justice Officer	CJ125	3
Criminal Law	CJ235	3
Procedural Law	CJ118	3
Criminal Investigations	CJ140	3
Criminal Evidence	CJ219	3
Introduction to Corrections	CJ226	3
Police Report Writing	CJ245	3
General Sociology	SO107	3
Criminal Justice Practicum	CJ250	3
Introduction to Juvenile Law	CJ170	3
Criminology	CJ218	3
Police Organization & Management	CJ239	3
Deviant Behavior	SO298	3
Interviewing and Interrogation	CJ255	2
Constitutional Aspects of Criminal Justice	CJ260	3
Speech Communications	SP175	3
American History to 1877 or National Government	HI103 or PL216	3
Business Mathematics	BT110	3
Physical Education activity class		1

**NOTE:** People with felony convictions will have difficulty securing employment in the criminal justice field.

# Criminal Justice Certificate

The one-year certificate program is designed to allow easy entrance into the two-year program or provide skills needed for an entry-level position.

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
Introduction to Criminal Justice	CJ126	3
General Psychology	PY121	3
Liability Criminal Justice Officer	CJ125	3
Criminal Law	CJ235	3
Procedural Law	CJ118	3
Criminal Investigations	CJ140	3
Criminal Evidence	CJ219	3
Introduction to Corrections	CJ226	3
Police Report Writing	CJ245	3
General Sociology	SO107	3
Interviewing & Interrogation	CJ255	2
Physical Education activity class		1

# Early Childhood Development AAS

This training program in early childhood education prepares students to work in entry-level positions in day care centers, Head Start programs, private pre-schools or in other positions dealing with young children. This is accomplished through a combination of general education and behavioral science courses, and practicum applying classroom knowledge in the field. These courses are offered on a rotation basis.

## General Education Core

Course Title	Course Number	Hours
Biological <b>or</b> Physical Science (BI, CH, ES, <b>or</b> PS)		4 - 5
Microcomputer Applications I	BT160	3
Business Math, Intermediate Algebra	BT110, MT110	
<b>or</b> higher	<b>or</b> higher	3
English I	EN101	3
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
General Psychology	PY121	3
Speech Communications	SP175	3
Humanities <b>or</b> General Education elective		3
Electives (CD, SO <b>or</b> PY)		3

## Area of Concentration

Course Title	Course Number	Hours
First Aid & Emergency Procedures	AH223	2
Creative Activities for Children	CD140	3
Caring for Children with Special Needs	CD207	3
Preschool Literature	CD209	3
Music for Children	CD211	3
Child Care Observation	CD250	3
Marriage and the Family	SO201	
<b>or</b> Child, Family & Community: Family-Centered Early Care & Ed.	CD230	3
Early Child Growth & Develop.	CD112	3
Professionalism in Early Childhood	CD115	3
Preschool Administration & Mgmt.	CD120	3
Child Care Practicum	CD260	3
Child Health, Safety & Nutrition	CD205	3
Language Development & Early Literacy	CD220	3

## Electives

Exploring Science & Math in the EC Setting	CD213	3
Intro to Early Childhood Education	CD130	3
Special Topics in Early Childhood Ed.	CD150	1-3

## **Child Development Associate (CDA) Component**

NCMC offers the educational component needed for eligibility to apply for the Child Development Associate (CDA) credential. The CDA is a person who is able to meet the specific needs of children and who, with parents and other adults, works to nurture children's physical, social, emotional and intellectual growth in a child development framework.

NCMC's program is designed only to provide the 120-hour educational component required for eligibility and to provide help in the preparation of the Professional Resource File. However, these courses are not designed to transfer. Students enrolled in NCMC's CDA component do not automatically receive the CDA Credential. The only way to earn the CDA Credential is to successfully complete the assessment.

CD112, CD115, and CD120: Students who have not completed articulated course work for any part of this group will be required to complete all three courses. Students who have earned articulated credit from their high school through articulation agreements with North Central Missouri College or are transferring from other colleges/universities will have the option to take the remaining courses needed to complete their CDA or AAS requirements.

For complete details on how to qualify for a CDA, call 660-359-3948, ext. 1331 to request a guide sheet.

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Early Child Growth & Development	CD112	3
Professionalism in Early Childhood	CD115	3
Preschool Administration & Mgmt.	CD120	3

# Paraprofessional & Substitute Teaching AAS

This program is designed for students seeking employment in either private or public school systems as paraprofessionals and/or substitute teachers. Paraprofessionals and substitute teachers enrich the learning experience for students by assisting in the classroom and performing both administrative and instructional duties that complement and support the instructional plan and educational goals.

## General Education Core

Course Title	Course Number	Hours
English I	EN101	3
General Psychology	PY121	3
American History to 1877	HI103	3
National Government	PL216	3
Speech Communications	SP175	3
Health	PE105	2
Biological <b>or</b> Physical Science	BI, CH, ES, <b>or</b> PS	4-5
Intermediate Algebra	MT110 or higher	3
Microcomputer Applications	BT160	3
Humanities Elective		3

## Program Requirements

Course Title	Course Number	Hours
First Aid & Emergency Procedures or *Red Cross & CPR card	AH223	2
Foundations of Education	ED200	3
Multicultural Education	ED265	3
Education of Exceptional Learners	ED285	3
Health, Safety & Nutrition	CD205	3
Teaching Profession w/Field Experience	ED201	3
Literature for Children <b>or</b> Preschool Literature <b>or</b> Language Development & Early Literacy	EN196 <b>or</b> CD209 <b>or</b> CD220	3
Practicum in Paraprofessional Education	ED290	3
Electives-Child Psychology <b>or</b> any course(s) with the prefix CD or ED	PY225	9

**NOTE:** \*Red Cross First Aid & CPR Cards must be current at time of graduation.

# HEALTH SCIENCES

## Allied Health and Continuing Education

The College provides both allied health and continuing education courses relevant to health related services. Objectives include offering cost effective postsecondary training for employees of health care delivery agencies or facilities, offering area health care professionals opportunities for quality continuing education for their particular interests and subject areas, and encouraging public awareness and concern in the area of self care and preventive measures by offering courses with this emphasis. For a complete listing of allied health courses see the AH course descriptions in this catalog. Some continuing education classes also will be found under the AH section.

# Health Care Management AAS

This program is designed to provide an opportunity for those who wish to enter management in a health care setting. The business of health care requires trained management personnel responsible for planning and coordinating health care delivery in the diverse, ever changing health care industry. This program will prepare individuals for entry level managerial leadership roles in a variety of settings that comprise the dynamic health care industry. The goal of the program is to establish a solid foundation of knowledge designed to guide professional, competent practice in health care management.

*A minimum grade of “C” is required for all courses in the degree plan.*

## Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
General Biology w/Lab	BI100	5
Basic Medical Terminology	AH160	3
Introduction to Business	BA101	3
Microcomputer Applications I	BT160	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
Office Procedures	BT230	3
Medical Coding	AH103	3
Speech	SP175	3
Principles of Management	BA150	3
<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
General Psychology	PY121	3
National Government or American History to 1877	PL216 or HI103	3

## Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Human Resources Management	BA161	3
Medical Law & Ethics	AH211	3
Health Insurance Billing	AH202	3
Database Concepts	BT170	3
Employment Strategies	BT240	1
Business Communications	BT130	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Health Care Management	HC201	3
Business Law	BA221	3
Elementary Accounting	AC136	3
Elementary Statistics	MT125	3
Spreadsheet Applications	BT190	3

# Health Information Technology AAS

This program is designed to provide an opportunity for those who wish to establish a technical career in health care. The program prepares individuals to organize and manage health information data by ensuring its quality, accuracy, accessibility, and security. Records management practices that are consistent with medical, administrative, ethical, legal, and regulating entity requirements are emphasized within the program curriculum. The business of health care information management requires specialized training and effective communication skills. The schedule can vary based upon the rate of course completion, need for developmental courses and transfer credit.

*A minimum grade of "C" is required for all courses in the degree plan.*

## Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
Digitools	BT180	2
Elementary Statistics	MT125	3
Human Anatomy w/Lab	BI240	4
Basic Medical Terminology	AH160	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Microcomputer Applications I	BT160	3
Human Physiology w/Lab	BI242	4
Medical Law & Ethics	AH211	3
Medical Coding	AH103	3
Medical Transcription	AH212	3
<b>Summer Session</b>	<b>Course Number</b>	<b>Hours</b>
Speech	SP175	3
General Psychology	PY121	3
Employment Strategies	BT240	3

## Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Microcomputer Applications II	BT260	3
Human Health body & disease	AH103	3
Health Insurance Billing	AH202	3
Health Information& Records Mgmt.	HT215	3
Database Concepts	BT170	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Business Communications	BT130	3
Health Care Delivery Systems	HT245	3
Medical Office Internship	AH221	3
National Government	PL216	3
Spreadsheet Applications	BT190	3

# Medical Assistant AAS

Medical Assisting is a program of study that prepares the student to work in a wide variety of health care environments, including hospitals, physicians' offices, clinics, laboratories and state health facilities. The Medical Assistant is an important link between the patient and the health care delivery system and provides essential support in the areas of patient care, medical and lab procedures, records management and office administration. Students will be exposed to practical administrative, interpersonal and clinical skills, which will prepare them with the technical ability and versatility needed to establish careers in the field of allied health services. .

*A minimum grade of "C" is required for all courses in the degree plan.*

## Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Basic Medical Terminology	AH160	3
*Business Math	BT110	3
Microcomputer Applications I	BT160	3
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
Human Body: Health & Disease	AH102	3
DigiTools	BT180	2
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Accounting I	AC136	3
English I	EN101	3
Medical Coding	AH103	3
Employment Strategies	BT240	1
Word Processing II	BT250	3
Database Concepts	BT170	3

## Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Business Communications	BT130	3
Speech	SP175	3
Pharmacology (non-nursing)	AH200	3
First Aid & Emergency Procedures	AH223	2
Health Insurance Billing	AH202	3
General Psychology	PY121	3

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<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Medical Machine Transcription	AH212	3
Office Procedures	BT230	3
Medical Assisting: Clinical Procedures	AH210	3
Medical Law & Ethics	AH211	3
Medical Assisting Internship	AH222	4

**NOTE:** \*If a student has taken a higher level math class they do not need to take Business Math.

## Medical Assisting Certificate

This program is designed to prepare individuals to work in ambulatory health care facilities in both the administrative and clinical areas. Administrative skills are developed in the areas of medical office procedures, written communications, financial management, insurance billing, International Classification of Diseases- 9th and 10th Editions (ICD-9; ICD-10), and Physicians Current Procedural Terminology (CPT) coding. Clinical skills include assisting with physical examinations, diagnostic tests, and treatment procedures. [Credits from this program may be transferred into the Medical Assistant Program (A.A.S. degree), Medical Transcriptionist certificate program, and the Medical Insurance and Billing Specialist certificate program.] .

*A minimum grade of “C” is required for all courses in the degree plan.*

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Human Body: Health & Disease	AH102	3
Basic Medical Terminology	AH160	3
Microcomputer Applications I	BT160	3
Pharmacology (non-nursing)	AH200	3
First Aid & Emergency Procedures	AH223	2
DigiTools	BT180	2

<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Database Concepts	BT170	3
Medical Law & Ethics	AH211	3
Medical Machine Transcription	AH212	3
Medical Coding	AH103	3
Business Communications	BT130	3
Office Procedures	BT230	3

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Health Insurance Billing	AH202	3
Employment Strategies	BT240	1
Accounting I	AC136	3
Medical Assisting: Clinical Proc.	AH210	3
Medical Assisting Internship	AH222	4

# Medical Insurance & Billing Specialist Certificate

This program is designed to prepare individuals to work in an administrative role as a medical insurance and billing specialist. As the act of properly filing insurance claims by health care providers takes on more importance, it is necessary to understand the terminology and processes used by the insurance carriers, as well as the medical procedures. The program prepares the student to process information successfully. A certificate is awarded those successfully completing the required courses. [Credits from this program may be transferred into the Medical Assistant Program (AAS), Medical Assisting certificate program and the Medical Transcriptionist certificate program.]

*A minimum grade of "C" is required for all courses in the degree plan.*

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Human Body: Health & Disease	AH102	3
Medical Coding	AH103	3
Basic Medical Terminology	AH160	3
Medical Law & Ethics	AH211	3
Microcomputer Applications I	BT160	3
DigiTools	BT180	2
Employment Strategies	BT240	1
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Health Insurance Billing	AH202	3
Medical Office Internship	AH221	3
Database Concepts	BT170	3
Spreadsheet Applications	BT190	3
Office Procedures	BT230	3
Word Processing II	BT250	3

# Medical Transcriptionist Certificate

This program is designed to prepare individuals to work in any health care setting. It develops proficiency in the specialized field of Medical Transcription and provides knowledge of secretarial/administrative skills of the medical office. Upon completion, the student is able to transcribe dictated medical reports to typed chart records and assist with certain clerical office procedures, such as medical coding, filing, and records management. A certificate is awarded those successfully completing the required courses. [Credits from this program may be transferred into the Medical Assistant Program (AAS) or other career paths such as the Medical Assisting certificate program and the Medical Insurance and Billing Specialist certificate program.] .

*A minimum grade of "C" is required for all courses in the degree plan.*

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Basic Medical Terminology	AH160	3
Microcomputer Applications I	BT160	3
Human Body: Health & Disease	AH102	3
DigiTools	BT180	2
Business Communications	BT130	3
Pharmacology (non-nursing)	AH200	3
Employment Strategies	BT240	1
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Database Concepts	BT170	3
Word Processing II	BT250	3
Medical Machine Transcription	AH212	3
Office Procedures	BT230	3
Medical Law & Ethics	AH211	3
Medical Office Internship	AH221	3

# Nursing Career Programs

The Nursing programs at North Central Missouri College are designed to meet the needs of the health care workplace and students. NCMC's programs provide practical nursing certificate training through the first year Level I program. An additional two semesters are required for students to complete Level II for an Associate in Applied Science degree in Nursing. All NCMC nursing programs are fully approved by the Missouri State Board of Nursing, the State Department of Elementary & Secondary Education and the Missouri Department of Higher Education.

## Nursing Level I–PN Certificate

The Level I program is an INTENSE, FAST-PACED certificate program that takes three (3) semesters to complete or four (4) semesters at Bethany and is designed to prepare individuals for the role of a Licensed Practical Nurse as staff nurses in a variety of health care settings. Clinical experience is acquired at hospitals, extended care facilities, physicians' offices, and community agencies. Upon successful completion of Level I, the graduate is eligible to apply to take the NCLEX-PN (licensing) Examination for Licensed Practical Nurses. It is important to note that the Missouri State Board of Nursing may refuse to grant a student permission to take the licensing exam for reasons outlined in the State of Missouri Nursing Practice Act, Chapter 335.066.

Applicants to the program must complete the entrance requirements. Admission criteria shall reflect consideration of the potential for the applicant to complete the program and meet the standards to apply for licensure (see section 335.046.2,RSMo). General admission to the college does not admit a student to the nursing program.

## **Nursing Level I–PN Admission Requirements**

### **Submit to the College’s Admissions Office:**

1. College application (\$15 application fee)
2. One copy of official transcript from: high school or GED; vocational schools: colleges or universities attended. Transcript request forms are provided. You may make copies of request form if necessary.
3. ACT, ASSET or COMPASS test scores.

### **Requirements for Admission into the Level I Practical Nursing Program:**

Submit documentation to the appropriate nursing office:

**Trenton & Bethany LPN program:** North Central Missouri College, Attn: Allied Health Sciences, 1301 Main Street, Trenton, MO 64683; Phone: 660-359-3948, ext. 1316

**Maryville LPN program:** Northwest Technical School, NCMC Nursing Programs, Attn: Allied Health Sciences, 1515 South Munn, Maryville, MO 64468; Phone: 660-562-4185 or 660-359-3948, ext. 1900

1. Acceptance as a student of North Central Missouri College.
2. Completed nursing department application form.
3. Required pre-entrance exam scores.
4. Waiver form with **notarized signature**.
5. Successful completion (“C” or above) of the required pre-entry courses: Anatomy, Physiology, Speech and Math for Allied Health Sciences.
6. Certification in cardiopulmonary resuscitation must be achieved prior to starting clinical; certification must be maintained throughout nursing education program.

***NOTE:** These are minimum admission criteria and DO NOT guarantee admission. Prior to clinical experience, a physical examination, immunization record, criminal background check, EDL screening, drug screen, proof of health insurance or signed waiver, and driving record are required.*

## Selection Process

All requirements for admission must be met and submitted to the nursing office by May 15, for the Trenton and Maryville programs and October 1 for the Bethany program, of the current academic year. All applicants who meet the admission criteria will receive a file review without consideration of race, color, national origin, sex, age, or handicap. Applicants whose records indicate the greatest potential for successful achievement in nursing will be selected.

Greatest potential for successful achievement is determined by an overall score assigned from points earned for the application, essay, testing scores (ACT, ASSET, or COMPASS and pre-entrance exam), and grades. The grade used to determine required pre-entry course requirements for both programs and designated nursing courses from the PN program for Level II applicants.

Applicants are accepted into the class contingent on a physical examination, immunizations, criminal background check, EDL screening, drug screen, proof of health insurance or signed waiver, driving record and CPR Certification. If acceptance is offered/given a student and they defer or lose eligibility for ANY reason, a re-entry application is required. Please refer to the pre-admission data packet for a copy of the score sheet for each program.

Inform the nursing secretary and registrar's office IMMEDIATELY if any personal information changes (name, address, telephone number).

# Nursing Level I–PN Curriculum Trenton & Maryville

The Level I program is offered on NCMC’s campus or at the Outreach site at Northwest Technical School in Maryville, MO.

*A minimum grade of “C” is required for all courses in the degree plan.*

<b>Pre-entry Requirements</b>	<b>Course Number</b>	<b>Hours</b>
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
Speech	SP175	3
Math for Allied Health Sciences or College Algebra	AH106 or MT122	3
<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
*Foundations of Nursing I	NR108	2
Foundations of Nursing II	NR109	7
Personal & Vocational Concepts	NR113	1
Family & Community Living	NR116	1
Introduction to Mental Health Nursing	NR105	1
Pharmacology	NR117	4
Geriatric Nursing	NR120	2
<b>Spring Semester</b>		
Basic Nutrition	NR104	3
Nursing of Adults I	NR121	11
Maternal Child Nursing I	NR129	6
<b>Summer Semester</b>		
Nursing of Adults II	NR162	6
Maternal Child Nursing II	NR183	5
Employment Strategies	BT240	1

*NOTES: Pre-entry courses must be successfully completed prior to entry into the program. \*Credit for Foundations of Nursing I is awarded to Missouri Certified Nursing Assistants, in good standing, upon successful completion of Foundations II. All nursing courses must be taken in sequence.*

# Nursing Level I–PN Curriculum

## Bethany

This Level I program is offered at North Central Career Center in Bethany, MO.

*A minimum grade of “C” is required for all courses in the degree plan.*

<b>Pre-entry Requirements</b>	<b>Course Number</b>	<b>Hours</b>
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
Speech	SP175	3
Math for Allied Health Sciences or College Algebra	AH106 or MT122	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
*Foundations of Nursing I	NR108	2
Foundations of Nursing II	NR109	7
Pharmacology	NR117	4
<b>Summer Semester</b>		
Nursing of Adults I	NR121	11
<b>Fall Semester</b>		
Nursing of Adults II	NR162	6
Introduction to Mental Health Nursing	NR105	1
Geriatrics	NR120	2
Employment Strategies	BT240	1
Personal Vocation concepts	NR113	1
Family and Community Living	NR116	1
<b>Spring Semester</b>		
Maternal Child Nursing I	NR129	6
Maternal Child Nursing II	NR183	5
Basic Nutrition	NR104	3

**NOTES:** *Pre-entry courses must be successfully completed prior to entry into the program. \*Credit for Foundations of Nursing I is awarded to Missouri Certified Nursing Assistants, in good standing, upon successful completion of Foundations II. All nursing courses must be taken in sequence.*

## Nursing Level II–ADN

The Level II program takes two (2) semesters to complete. This program is an INTENSE, FAST-PACED program and is designed to prepare LPN's for the role of a Registered Professional Nurse (RN) in a variety of health care settings. It is a rigorous course of academic studies and clinical experiences, which includes pre-entry courses and nursing classes. The program is designed to give graduates a broad scope of knowledge, and ability in order to meet the needs of the changing health care delivery systems. Clinical experience is acquired at various acute care hospitals and community agencies. Field trips and workshops are incorporated into the educational plan. Upon successful completion of Level II, the graduate is eligible to apply to take the NCLEX-RN (licensing) Examination for Registered Professional Nurses. The Missouri State Board of Nursing may refuse to grant a student permission to take licensing exams as outlined in the State of Missouri Nursing Practice Act, Chapter 335.066.

Applicants to the program must complete the entrance requirements. Admission criteria shall reflect consideration of the potential for the applicant to complete the program and meet the standards to apply for licensure (see section 335.046.2,RSMo). General admission to the college does not admit a student to the nursing program.

### Nursing Level II–ADN Admission Requirements

#### Submit to the College's Admissions Office:

1. College Application (\$15 application fee)
2. One copy of official transcript from: High School or GED; Vocational Schools; Colleges or Universities attended. Transcript request forms are provided. You may make copies of request form if necessary.
3. ACT, ASSET or COMPASS test scores.

#### Requirements for Admission into the Level II Practical Nursing Program:

Submit documentation to the appropriate Nursing Office:

**Trenton ADN program:** North Central Missouri College, Attn: Allied Health Sciences, 1301 Main Street, Trenton, MO 64683; Phone: 660-359-3948, ext. 1316

**Maryville ADN program:** Northwest Technical School, NCMC Nursing Programs, Attn: Allied Health Sciences, 1515 South Munn, Maryville, MO 64468; Phone: 660-562-4185 or 660-359-3948, ext. 1900.

1. Acceptance as a student of North Central Missouri College.
2. Completed nursing department application form.
3. Required pre-entrance exam scores.
4. Waiver form with **notarized signature**.

5. Successful completion (“C” or above) of the required pre-entry courses: Anatomy, Physiology or Body Structure & Function with Human Chemistry; Speech; English I; General Psychology; National Government or American History and Microbiology.
6. Documentation of current Missouri unencumbered license as a practical nurse. New graduates must provide proof prior to the first day of classes of the second semester (January).
7. Certification in cardiopulmonary resuscitation must be achieved prior to starting clinical; certification must be maintained throughout nursing education program.

*NOTES: These are minimum admission criteria and DO NOT guarantee admission. Prior to clinical experience, a physical examination, immunization, criminal background check, EDL screening, drug screen, proof of health insurance or signed waiver, and driving record are required.*

## Selection Process

All requirements for admission must be met and submitted to the nursing office by May 15, for the Trenton and Maryville programs and October 1 for the Bethany program, of the current academic year. All applicants who meet the admission criteria will receive a file review without consideration of race, color, national origin, sex, age, or handicap. Applicants whose records indicate the greatest potential for successful achievement in nursing will be selected.

Greatest potential for successful achievement is determined by an overall score assigned from points earned for the application, essay, testing scores (ACT, ASSET, or COMPASS and pre-entrance exam), and grades. The grade used to determine required pre-entry course requirements for both programs and designated nursing courses from the PN program for Level II applicants.

Applicants are accepted into the class contingent on a physical examination, immunizations, criminal background check, EDL screening, drug screen, proof of health insurance or signed waiver, driving record and CPR Certification. If acceptance is offered/given a student and they defer or lose eligibility for ANY reason, a re-entry application is required. Please refer to the pre-admission data packet for a copy of the score sheet for each program.

Inform the nursing secretary and registrar’s office IMMEDIATELY if any personal information changes (name, address, telephone number).

## Nursing Level II–ADN Curriculum Trenton & Maryville

The Level II program is offered on NCMC’s campus or at the outreach site at Northwest Technical School in Maryville, MO..

*A minimum grade of “C” is required for all courses in the degree plan.*

<b>Pre-entry Requirements</b>	<b>Course Number</b>	<b>Hours</b>
Speech	SP175	3
*Human Anatomy w/Lab	BI240	4
*Human Physiology w/Lab	BI242	4
*Human Chemistry w/Lab	BI241	3
General Psychology	PY121	3
Microbiology w/Lab	BI243	4
English I	EN101	3
American History to 1877	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
Maternal Child Nursing III	NR250	4
Nursing of Adults III	NR253	7
Trends and Issues in Nursing	NR230	1
Leadership in Nursing	NR295	2
<b>Spring Semester</b>		
Maternal Child Nursing IV	NR251	4
Mental Health Nursing	NR242	3
Nursing of Adults IV	NR258	7

*NOTES: \*Students from Practical Nursing Programs with less than the required eight (8) credit hours of Anatomy and Physiology, with or without lab, or Body Structure and Function may be required to take additional course work, such as Human Chemistry. Transcripts are evaluated on an individual basis. Required pre-entry courses must be successfully completed prior to entry into the program. All nursing classes must be taken in sequence.*

## Pharmacy Technology AAS

If you have an interest in science and health care, if you are seeking a position in health care without the delivery of “hands on” care, if you are searching for opportunities to improve your career and salary, if you have an aptitude for math and problem solving, then you might be interested in becoming a Pharmacy Technician.

Pharmacy Technicians work in a variety of practice settings, including community pharmacies, hospitals, military, home health care, long term care, mail service facilities, managed health care facilities and training programs.

The nationwide shortage of pharmacists and the growing demand for prescription medications creates an opportunity for pharmacy technicians to broaden their knowledge to allow them to assist and provide support for pharmacists.

*A minimum grade of “C” is required for all courses in the degree plan.*

### Freshman Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
General Biology w/Lab	BI100	5
Medical Law & Ethics	AH211	3
Pharmacy Calculations	PM101	3
Microcomputer Applications I	BT160	3
Speech	SP175	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Pharmacology (non-nursing)	AH200	3
Pharmacology Practice I w/Lab	PM105	4
Basic Medical Terminology	AH160	3
Employment Strategies	BT240	1
Intermediate Algebra or College algebra	MT110 or MT122	3

### Sophomore Year

<b>Fall Semester</b>	<b>Course Number</b>	<b>Hours</b>
General Psychology	PY121	3
Introduction to Chemistry w/Lab	CH107	4
Pharmacology Practice II w/Lab	PM205	4
English I	EN101	3
American History to 1877 or National Government	HI103 or PL216	3
<b>Spring Semester</b>	<b>Course Number</b>	<b>Hours</b>
Database Concepts	BT170	3
Pharmacy Technician Internship Sem.	PM210	5
Pharmacy Technician Internship	PM220	4

# HEALTH SCIENCE PARTNERSHIPS

## Dental Hygiene AAS

The impetus for this program is to provide a solution to the oral health care crisis in northwest and north central Missouri. In response, North Central Missouri College and Hillyard Technical Center (HTC), of St. Joseph, Missouri, collaborated to develop a Dental Hygiene program as an essential step in overcoming the shortage of oral health care workers across the northern tier of Missouri. NCMC will provide the general education courses specific to the associate degree while HTC will provide the dental hygiene classes, laboratory experiences and clinics.

Through an agreement, NCMC students will be awarded thirty college credit hours for successful completion (C or above in all classes) of the Dental Hygiene Program at HTC. These hours will be applied to the associate degree program in dental hygiene at NCMC. Trenton area students will take classes which originate in St. Joe via ITV and will only have to travel to St. Joe two times per week to attend the clinics and labs. A new class will start every fall with ten students per CODA (Commission on Dental Accreditation) standards..

*A minimum grade of "C" is required for all courses in the degree plan.*

### Pre-requisites–NCMC

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to Chemistry w/Lab	CH107 <b>or</b> higher	4
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
Microbiology w/Lab	BI243	4
Basic Nutrition	NR104	3

*NOTE: Students may take BIOL 110 Human Anatomy (5 cr hrs) at HTC and BI241 Human Chemistry (3 cr hrs) at NCMC to replace BI240 & BI242 at NCMC.*

### General Education–NCMC

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Employment Strategies	BT240	1
English I	EN101	3
American History to 1877 <b>or</b> National Government	HI103 <b>or</b> PL216	3
College Algebra	MT122	3
General Psychology	PY121	3
General Sociology	SO107	3
Speech	SP175	3

# Emergency Medical Technology–Paramedic AAS

This degree is designed to meet the needs of Licensed Paramedics (EMT-P) who are currently employed, but wish to pursue further education. The program will provide preparation in either management or health sciences.

Paramedics licensed in the state of Missouri will receive advanced placement into the Associate in Applied Science degree in Emergency Medical Technology-Paramedic program. Thirty (30) college credit hours will be awarded, for completion of requirements of the paramedic program, towards the degree. Credit for paramedic training will be awarded after completion of the 31-33 college credit hours required for the degree.

NCMC cooperates with area vocational-technical schools in providing EMT Paramedic training. Call the NCMC Allied Health Sciences Division at 359-3948, ext. 1284, for more information.

*A minimum grade of “C” is required for all courses in the degree plan.*

## Health Track

Course Title	Course Number	Hours
English I	EN101	3
Speech	SP175	3
American History to 1877 or National Government	HI103 or PL216	3
Math for Allied Health Sciences	AH106 or higher	3
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
Microbiology w/Lab	BI243	4
Basic Medical Terminology	AH160	3
Employment Strategies	BT240	1
Pharmacology (non-nursing)	AH200	3

## Management Track

Course Title	Course Number	Hours
English I	EN101	3
Speech	SP175	3
American History to 1877 or National Government	HI103 or PL216	3
Math for Allied Health Sciences	AH106 or higher	3
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
Employment Strategies	BT240	1
Social Psychology	PY214	3
Principles of Management	BA150	3
Human Resource Management	BA161	3
Microcomputer Applications I	BT160	3

## Medical Laboratory Technician AAS

This degree is designed to assist an individual who desires a career in a health profession. The program is an affiliate program with Ozarks Technical College (OTC) in Springfield, Missouri.

A medical laboratory technician performs a wide variety of medical tests on blood, tissue and other bodily fluids that assist physicians in making a diagnosis and guiding therapeutic decisions. In addition to employment in medical laboratories, graduates can pursue positions in research, crime labs, blood banks, veterinary laboratories and medical equipment sales. The program will include clinical experience in area medical facilities along with campus classroom and laboratory training.

Students can enroll in the required pre-entry general education courses through NCMC once accepted into the college. Application for the Medical Laboratory Technician program must be submitted to OTC; This application can be obtained from OTC's website, [www.otc.edu](http://www.otc.edu), or the Dean of Allied Health Sciences at NCMC. Participants will be required to spend eight weeks at the beginning of each semester at OTC's outreach campus in Ozark, Missouri for a portion of the didactic and skills related courses. The remainder of the didactic will be delivered via ITV to the NCMC campus. Future plans are for the program to be offered in its entirety from the NCMC campus. This program has been approved by the Missouri Department of Higher Education is accredited through National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

*A minimum grade of "C" is required for all courses in the degree plan.*

# Medical Laboratory Technician AAS

## General Education–NCCM

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
Introduction to Chemistry	CH107	4
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
National Government	PL216	3
Basic Medical Terminology	AH160	3
General Psychology	PY121	3
Intermediate Algebra	MT110	3
Microbiology	BI243	4
Speech	SP175	3

## Core–OTC

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to the Medical Lab	MLT100 (on-line)	1
Introduction to Phlebotomy	PLB100 (on-line)	2
Phlebotomy Clinical	PLB101 (area med lab)	1
Hematology	MLT200	4
Clinical Chemistry	MLT210	4
Urinalysis & Body Fluids Analysis	MLT215	2
Clinical Practicum II	MLT260	8
Immunohematology	MLT220	4
Clinical Microbiology	MLT230	4
Clinic Seminar & Review	MLT240	2
Clinical Practicum III	MLT270	8

# Physical Therapy Assistant AAS

This program is an affiliate program with Linn State Technical College in Linn, Missouri.

Physical Therapy assistants perform a variety of tasks. Under the direction and supervision of physical therapists, they provide part of a patient’s treatment. This might involve exercises, massages, electrical stimulation, paraffin baths, hot and cold packs, traction, and ultrasound. Physical therapist assistants record the patient’s responses to treatment and report the outcome of each treatment to the physical therapist.

The duties of physical therapist assistants include some clerical tasks, such as ordering depleted supplies, answering the phone, and filling out insurance forms and other paperwork. Physical therapist assistants should be well-organized, detail oriented, and caring. They usually have strong interpersonal skills and a desire to help people in need.

## General Education–NCMC

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
Speech	SP170	3
College Algebra	MT122	3
American History to 1877 or National Government	HI103 or PL216	3
General Psychology	PY121	3
Introduction to Chemistry w/Lab or other physical science	CH107	4
Employment Strategies	BT240	1
Microcomputer Applications I	BT160	3
Basic Medical Terminology	AH160	3
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4

## Core–Linn Tech

Basic Patient Care w/Lab	Neurological Therapeutic
Functional Kinesiology w/Lab	Exercise w/Lab
PTA as a Profession	Clinical I (4 weeks)
Health and Disease	Clinical II (6 weeks)
Physical Agents & Modalities w/Lab	Job Search Strategies
Orthopedic Therapeutic Exercise w/Lab	Trends and Issues
Electrotherapy w/Lab	PTA Capstone
	Clinical III (6 weeks)

# Radiology Technology AAS

The degree is designed for continuing the education of the Radiology Technicians who graduate from Hillyard Technical Center (HTC) in St. Joseph, Missouri or Research Medical Center (RMC) in Kansas City, Missouri. By obtaining the A.A.S. degree, it will benefit the student as well as the patient. Radiology Technicians will be able to gain employment at more facilities with the A.A.S. degree. Many facilities require a degree before they will hire any employee.

Radiology Technicians, registered by the American Registry of Radiologic Technologists will receive advanced placement into the Radiology Technology A.A.S. program. Thirty college hours will be awarded for completion of the Radiology Technology program at Hillyard Technical School or Research Medical Center, upon completion of requirements for the Associate Degree program.

*A minimum grade of "C" is required for all courses in the degree plan.*

## Pre-requisites for HTC–NCMC

Course Title	Course Number	Hours
*Math for Allied Health	AH106 or higher	3
**Human Anatomy w/Lab	BI240	4
**Human Physiology w/Lab	BI242	4
Microcomputer Application I	BT160	3

### **NOTES:**

*\*College Algebra will be needed to pursue a Bachelor's degree.*

*\*\*BIOL110 Human Anatomy, 5 cr hrs, at HTC plus BI241 Human Chemistry w/lab, 3 cr hrs, at NCMC can take the place of BI238 Anatomy & Physiology, 8 cr hrs, at NCMC.*

## Pre-requisites for RMC–NCMC

Course Title	Course Number	Hours
Basic Medical Terminology	AH160	3
*Human Anatomy w/Lab	BI240	4
*Human Physiology w/Lab	BI242	4
**English I	EN101	3
***Intermediate Algebra	MT110 or higher	3
Speech	SP175	3

### **NOTES:**

*\*A&P 101, 102, 03,207; Sectional Anatomy 104; Skull & Brain Anatomy 103 at RMC plus BI241 Human Chemistry w/lab, 3 cr hrs, at NCMC can take the place of BI240 Anatomy & BT242 Physiology at NCMC for 8 cr hrs.*

*\*\*This course has pre-requisites*

*\*\*\*College Algebra will be needed to pursue a Bachelor's degree.*

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## Radiology Technology AAS Continued

### General Education for HTC–NCMC

Medical Law & Ethics	AH211	3
*General Biology w/Lab	BI100	5
Employment Strategies	BT240	1
*English I	EN101	3
*American History to 1877	HI103	
<b>or</b> *National Government	<b>or</b> PL216	3
General Psychology	PY121	3
Speech	SP175	3

### General Education for RMC–NCMC

Medical Law & Ethics	AH211	3
*General Biology w/Lab	BI100	5
Microcomputer Application I	BT160	3
Employment Strategies	BT240	1
*American History to 1877	HI103	
<b>or</b> *National Government	<b>or</b> PL216	3
General Psychology	PY121	3

**NOTES:** \*These courses have pre-requisites. Credit articulated from Hillyard Technical Center will be awarded upon completion of NCMC requirements.

# Registered Nurse to Bachelor of Science in Nursing (RN-to-BSN)

Northwest Missouri State University will offer a curriculum leading to a Bachelor of Science in Nursing (BSN) on campus at North Central Missouri College and at NCMC’s outreach site in Maryville at Northwest Technical School.

The program allows licensed professional nurses to complete a BSN. As a liberal arts degree, the program includes the General Education requirements and institutional, as well as upper-division nursing courses. Successful completion of the program results in the conferral of the BSN degree. Program delivery will be through a combination of on-site and on-line (internet) methods. Admission to the RN to BSN Completion program requires a student meet Northwest Missouri State University requirements.

## Pre-requisites

An Associate Degree in Nursing and an unencumbered license are required for entry.

## Core–Northwest Missouri State University

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Theories & Models of Nursing	NURS 01-301	3
Health Care Delivery Systems	NURS 01-311	3
Pathophysiology	NURS 01-371	3
Intermediate Pharmacology	NURS 01-381	3
Leadership & Mgmt. in Nursing	NURS 01-401	5
Health Assessment	NURS 01-411	5
Community Nursing	NURS 01-421	5
Family & Child Nursing	NURS 01-431	3
Research Methods in Nursing	NURS 01-481	3
Health Promotion	PE 22-552	3
Electives–Gerontological Nursing, Informatics, or Human Sexuality		2-3

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## **RN-to-BSN Continued**

### **General Education-NCMC**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
English I	EN101	3
English II	EN102	3
Speech Communication	SP175	3
Elementary Statistics	MT125	3
General Biology w/Lab	BI100	4
Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4
Microbiology w/Lab	BI243	4
Intro to Chemistry	CH107	4
General Sociology	SO107	3
General Psychology	PY121	3
National Government	PL216	3
American History to 1877	HI103	3
Humanities & Fine Arts	PH, AR, MU, EN,	9
Foreign Language	FL	3
Micro Computer Applications	BT160	3

# Surgical Technology AAS

The degree is designed for continuing the education of the Surgical Technologists who graduate from Hillyard Technical Center (HTC) in St. Joseph, MO. By obtaining the A.A.S. degree, it will benefit the student as well as the patient. Surgical technologists will be able to gain employment at more facilities with the A.A.S. degree. Many facilities require a degree before they will hire any employee.

Surgical Technologists, certified by the Liaison Council on Certification for the Surgical Technologist, will receive advanced placement in the Surgical Technology A.A.S. program with proof of certification, which is applied to the Associate Degree program.

*A minimum grade of “C” is required for all courses in the degree plan.*

## Pre-requisites–NCMC

Human Anatomy w/Lab	BI240	4
Human Physiology w/Lab	BI242	4

## General Education–NCMC

English I	EN101	3
Speech	SP175	3
American History to 1877	HI103	
<b>or</b> National Government.	<b>or</b> PL216	3
Math for Allied Health Sciences,	AH106	
<b>or</b> higher level math course.		3
Medical Law & Ethics	AH211	3
General Biology w/Lab	BI100	5
Microcomputer Applications I	BT160	3
Employment Strategies	BT240	1
Psychology	PY121	3
Sociology	SO107	3

**NOTES:** *Human Chemistry must be taken if BIOL 110 Human Anatomy was taken at Hillyard Technical Center.*

*Credit articulated from Hillyard Technical Center will be awarded upon completion of NCMC requirements.*

## **PENDING HEALTH SCIENCES PARTNERSHIP**

*Pending programs are in various stages of development and are subject to change and/or cancellation. For the start-up dates of these programs or other questions consult your advisor.*

### **Occupational Therapy Assistant AAS**

Occupational Therapy assistants help clients with rehabilitative activities and exercises outlined in a treatment plan developed in collaboration with an occupational therapist. Activities range from teaching the proper method of moving from a bed into a wheelchair to the best way to stretch and limber the muscles of the hand. Assistants monitor an individual's activities to make sure that they are performed correctly and to provide encouragement. They also record their client's progress for the occupational therapist.

According to the Occupational Outlook Handbook on the U.S. Department of Labor web site, employment is expected to grow much faster than average and the demand for occupational therapist assistants and aides will continue to rise because of the increasing number of individuals with disabilities or limited function. The median annual earnings of occupational therapist assistants are \$42,060.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2008-09 Edition, Occupational Therapist Assistants and Aides, on the Internet at <http://www.bls.gov/oco/ocos166.htm> (visited October 21, 2009).

# INDUSTRIAL & ENERGY SYSTEMS

## Industrial & Energy Systems Technology AAS

This program is designed to provide students with technical skills necessary to be successful in the emerging “green” and alternative energy fields as well as in today’s manufacturing and production operations. This degree will offer students a variety of career options due to the wide-range of technical courses offered. Students will be able to choose an emphasis area within the degree plan.

### General Education

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Microcomputer Applications	BT160	3
Employment Strategies	BT240	1
English I	EN101	3
American History	HI103	
<b>or</b> National Government	<b>or</b> PL216	3
Intermediate Algebra	MT110	3
Speech	SP175	3

### Emphasis Area: Alternative Fuels

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to Chemistry	CH107	4
General Biology	BI100	5
Agriculture Economics	EC223	3
Plant Science	AG105	3
Plant Science Lab	AG106	1
Crop Science	AG114	3
Programmable Logic Controllers	MF141	3
AutoCAD I	MF220	3
Biomass Crops	AG116	3
Introduction to Biofuels	IEXXX	3
Biodiesel Production	IEXXX	3
Bioethanol Production	IEXXX	3
Biogas Production	IEXXX	3
Biofuel Systems Technology	IEXXX	3
Biofuel Technology Internship	IEXXX	3

*NOTE: Courses ending in XXX were under development when this catalog went to print.*

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### **Emphasis Area: Solar**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to Physics	PS108	4
Intro. to Electricity & Electronics	MF120	3
Basic Electricity I	MF122	3
Basic Electricity II	MF126	3
Materials of Construction	CT107	2
Residential Plumbing	CT195	3
Programmable Logic Controllers	MF141	3
AutoCAD I	MF220	3
Introduction to Solar	IEXXX	3
Passive Solar	IEXXX	3
Passive Solar Lab	IEXXX	2
Solar Thermal Systems	IEXXX	3
Solar Thermal Systems Lab	IEXXX	2
Solar Electrical Systems	IEXXX	3
Solar Electrical Systems Lab	IEXXX	2
Industry Standards	IEXXX	3
Solar Technology Internships	IEXXX	3

### **Emphasis Area: Wind**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to Physics	PS108	4
Intro. to Electricity & Electronics	MF120	3
Basic Electricity I	MF122	3
Basic Electricity II	MF126	3
Materials of Construction	CT107	2
Principles of Safety	MF150	3
Programmable Logic Controllers	MF141	3
AutoCAD I	MF220	3
Principles of Maintenance	MF155	3
Basic Fluid Power	MF145	3
Introduction to Wind	IEXXX	3
Turbine Troubleshooting	IEXXX	3
Agriculture Mechanics	AGXXX	4
Industry Standards	IEXXX	3
Wind Turbines and Farms Internship	IEXXX	3

*NOTE: Courses ending in XXX were under development when this catalog went to print.*

## **Emphasis Area: Industrial Maintenance**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Introduction to Physics	PS108	4
Principles of Management	BA150	3
Intro. to Electricity & Electronics	MF120	3
Basic Electricity I	MF122	3
Basic Electricity II	MF126	3
Motor Controls	MF128	3
Principles of Safety	MF150	3
Programmable Logic Controllers	MF141	3
AutoCAD I	MF220	3
Industrial Robotics	MF235	3
Basic Fluid Power	MF145	3
Industrial Electronics	MF201	3
Industry Standards	IEXXX	3
Agriculture Mechanics	AGXXX	4
Industrial Maintenance Technology Internship	IEXXX	3

## **Industrial & Energy Systems Technology Certificate**

This certificate program is designed to provide applicable technical skills for today's competitive workplace while meeting the needs of manufactures, industry, and alternative energy operations. Credits from this certificate program may be transferred into the Industrial and Energy Systems Technology A.A.S. program.

### **Emphasis Area: Solar**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Speech	SP175	3
Intermediate Algebra	MT110	3
Employment Strategies	BT240	1
Basic Electricity I	MF122	3
Introduction to Solar	IEXXX	3
Passive Solar	IEXXX	3
Passive Solar Lab	IEXXX	2
Solar Thermal Systems	IEXXX	3
Solar Thermal Systems Lab	IEXXX	2
Solar Electrical Systems	IEXXX	3
Solar Electrical Systems Lab	IEXXX	2

*NOTE: Courses ending in XXX were under development when this catalog went to print.*

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### **Emphasis Area: Wind**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Speech	SP175	3
Intermediate Algebra	MT110	3
Employment Strategies	BT240	1
Intro. to Electricity & Electronics	MF120	3
Basic Electricity I	MF122	3
Basic Electricity II	MF126	3
Introduction to Wind	IEXXX	3
Turbine Troubleshooting	IEXXX	3
Wind Turbines & Farms Internship	IEXXX	3

### **Emphasis Area: Industrial Maintenance**

<b>Course Title</b>	<b>Course Number</b>	<b>Hours</b>
Speech	SP175	3
Intermediate Algebra	MT110	3
Employment Strategies	BT240	1
Intro. to Electricity & Electronics	MF120	3
Basic Electricity I	MF122	3
Motor Controls	MF128	3
Principles of Safety	MF150	3
Programmable Logic Controllers	MF141	3
Basic Fluid Power	MF145	3

*NOTE: Courses ending in XXX were under development when this catalog went to print.*