

## HEALTH SCIENCES CAREER PATHWAY

This pathway includes careers related to the promotion of health as well as the treatment of injuries, conditions and diseases. This may include medicine, dentistry, nursing, therapy and rehabilitation, nutrition, fitness and hygiene, and animal health care.

Students in nursing or allied health programs that require clinical rotations at local hospitals may be required to submit to a drug test. If the student tests positive for illicit drugs he/she will be removed from the program. Criminal background checks may also be performed and may prevent admission if failed.

### DEGREES/CERTIFICATES – ALLIED HEALTH

- Cardiac Sonography
- Emergency Medical Service, EMT
- General Sonography
- Medical Assistant
- Medical Receptionist/Transcriptionist
- Medical Receptionist/Insurance Biller
- Radiography
- Respiratory Care
- Vascular Sonography

### DEGREES/CERTIFICATES – NURSING

- Nursing
- Nursing (LPN to ADN)
- Practical Nurse

### CONCENTRATION

The “concentration” process is a building block approach to completing a trade certificate program. Students can choose to complete the concentration depending upon the level of skill and knowledge desired. Students can apply for a concentration upon completion of the required courses

## TRANSFER PROGRAMS IN HEALTH SCIENCES PATHWAY

The first two years of college education usually consist of general education courses, introductory courses in the major and/or program of study, and selected electives. Refer to page 37 for additional information on transfer and MACRAO. Academic advisors will assist students in planning their transfer program. They can also provide transfer guide sheets indicating JCC courses that meet the requirements of various programs of study at four-year colleges.

Sample curricula for a few popular transfer programs are included:

- A joint program agreement between Jackson Community College and Kellogg Community College [AAS]
- Allied Health with Siena Heights, JCC and University of Michigan [BSN]
- Dental Hygiene
- Medical Sciences [pre-medicine, pre-dentistry, pre-chiropractic]
- Physical Therapy
- Pre-Veterinary Science

*Jackson Community College has published this catalog for information purposes only and its contents do not constitute a contract between this institution and prospective or enrolled students. The information contained in this general College catalog reflects the current curricula, policies and regulations of the College. However, these are subject to change at any time by action of the Board of Trustees or the administration. The information is generally believed to be accurate, but the College disclaims liability for inadvertent errors or omissions.*

## GENERAL SONOGRAPHY – ASSOCIATE IN APPLIED SCIENCE (GSON.AAS)

A sonographer is the allied health professional who, for diagnostic purposes, uses high frequency sound waves to create cross-sectional images of the patient’s anatomy. Sonographers work in professional harmony with both the radiologist and the clinical physician. Sonographers are required to demonstrate a great deal of independent judgment.

The general sonography program is an online program accredited by the Commission for Accreditation of Allied Health Educational Programs (CAAHEP) in the United States. It is a program leading to an Associate in Applied Science degree. The curriculum consists of integrated educational and clinical course work with a minimum of 1,350 supervised clinical hours in an approved clinical education affiliate.

The program prepares the students for employment in two specialties (abdomen/superficial structures and obstetrics/gynecology) within the field of general sonography; positions are located within hospitals, medical clinics, and other diagnostic imaging institutions. Upon successful completion, students are eligible to apply for the American Registry for Diagnostic Medical Sonography (ARDMS) exams in Physics and Instrumentation, Abdomen and Obstetrics/Gynecology.

There are special admissions requirements to the sonography programs, and it is the student’s responsibility to understand the requirements and adhere to them. Entry into a program is competitive and based on a “point system.” Point values are based on grades earned in prerequisite coursework and the interview process.

### Applications are processed according to the following:

- Applications must be received by the Allied Health Office by January 31.
- Questionnaires will be mailed to eligible applicants.
- Completed questionnaires must be returned by the stated due date.
- DMS Admission Committee conducts interviews.
- Students are notified by mail of application/interview results.
- Accepted students begin Spring semester.

**General education prerequisites and related requirement courses must be completed before admission to the program.**

Minimum credits: .....	75
Minimum cumulative GPA: .....	2.0
Minimum grade in BIO 132 or BIO 155 or BIO 253/254, HOC 130 and MOA 120 .....	3.0
Minimum grade in all courses.....	2.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

**GENERAL EDUCATION REQUIREMENTS – (20 credits)**

**ADO 1: Write clearly, concisely and intelligibly (3 credits)**

**Take the following:**

ENG 131 Writing Experience I

**ADO 2: Speak clearly, concisely and intelligibly (3 credits)**

**Choose one of the following:**

COM 231 Communication Fundamentals

COM 240 Interpersonal Communication

**ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)**

**Take the following:**

MTH 131 Intermediate Algebra or higher

**ADO 4: Demonstrate scientific reasoning (4-8 credits)**

**Choose one of the following:**

BIO 132 Human Biology

or BIO 155 Human Anatomy & Physiology

or BIO 253 Human Anatomy and Physiology I

and BIO 254 Human Anatomy and Physiology II

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)**

**Take the following:**

PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**

**Choose one of the following:**

ART 111 Art History: Prehistoric to 1400

ART 112 Art History: Renaissance to Present

ENG 210 Introduction to Film

ENG 246 Short Story & Novel

ENG 247 Poetry & Drama

ENG 252 Shakespeare  
 ENG 254 Children's Literature  
 ENG 255 American Literature - 19th Century  
 ENG 256 American Literature - 20th Century  
 HUM 131 Cultural Connections  
 MUS 131 Understanding Music  
 THR 116 Introduction to Theatre

**ADO 7: Think critically**

**Program courses meet this requirement**

**ADO 8: Make responsible decisions in personal and professional contexts (1-3 credits)**

**Choose one of the following:**

HPF 160 Wellness

HPF 186 Weight Training and Wellness

HPF 277 Stress Management

HPF 283 Managing Stress and Holistic Health

PHL 236 Ethics

**ADO 9: Work productively with others, recognizing individual contributions to group success**

**Program courses meet this requirement**

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**

**Program courses meet this requirement**

**GENERAL SONOGRAPHY RELATED REQUIREMENTS – (15 credits)**

**Take the following:**

CIS 101 Introduction to Computer Systems

DMS 100 Introduction to Diagnostic Imaging

DMS 104 Introduction to Sonographic Instrumentation

HOC 130 Introduction to Health Occupations

MOA 120 Medical Terminology

**GENERAL SONOGRAPHY CORE REQUIREMENTS – (40 credits)**

**Take the following:**

DMS 101 Sonographic Orientation

DMS 105 Sonographic Techniques

DMS 122 Clinical Experience I

DMS 200 Abdomen and Small Parts Sonography

DMS 201 Obstetric and Gynecologic Sonography

DMS 206 Sonographic Instrumentation

DMS 212 Comprehensive Sonography

DMS 223 Clinical Experience II

DMS 224 Clinical Experience III

**VASCULAR SONOGRAPHY – ASSOCIATE IN APPLIED SCIENCE (VSON.AAS)**

A vascular sonographer is a highly skilled allied health professional who performs arterial and venous diagnostic procedures using high frequency sound waves. A vascular sonographer operates a variety of complex diagnostic and monitoring equipment, as well as numerous ancillary devices.

The vascular sonographer performs carotid duplex scanning, lower and upper extremity Doppler examinations, venous duplex scans, abdominal vascular exams, evaluates test results, monitors physiological states of the patient, conducts patient education, and maintains accurate records and protocols during and after procedures. A thorough understanding of hemodynamics and pathophysiology is required.

The vascular sonography program is an online program accredited by the Commission for Accreditation of Allied Health Education Programs (CAAHEP) in the United States. It is a program leading to an Associate in Applied Science degree. The curriculum consists of integrated educational and clinical course work with a minimum of 1,100 supervised clinical hours with an approved clinical education affiliate.

The program is designed to prepare the student for employment in the field of vascular sonography. Vascular positions are located within hospitals, medical clinics, and other diagnostic imaging health institutions. Upon successful completion, students are eligible to apply for certification exams through the American Registry for Diagnostic Medical Sonography and, if successful, use the credentials RVT (Registered Vascular Technologist).

There are special admission requirements to the sonography programs, and it is the student's responsibility to understand the requirements and adhere to them. Entry into a program is competitive and based on a "point system." Point values are based on grades earned in prerequisite coursework and the interview process.

**Applications are processed according to the following:**

- Applications must be received by the Allied Health Office by January 31.
- Questionnaires will be mailed to eligible applicants.
- Completed questionnaires must be returned by the stated due date.
- DMS Admission Committee conducts interviews.
- Students are notified by mail of application/interview results.
- Accepted students begin Spring semester.

*General education prerequisites and related requirement courses must be completed before admission to the program.*

Minimum credits: .....	67
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grade in BIO 132 or BIO 155 or BIO 253/254, HOC 130 and MOA 120: .....	3.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

**GENERAL EDUCATION REQUIREMENTS – (20 credits)**

**ADO 1: Write clearly, concisely and intelligibly (3 credits)**

**Take the following:**

ENG 131 Writing Experience I

**ADO 2: Speak clearly, concisely and intelligibly (3 credits)**

**Choose one of the following:**

COM 231 Communication Fundamentals

COM 240 Interpersonal Communication

**ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)**

**Take the following:**

MTH 131 Intermediate Algebra or higher level

**ADO 4: Demonstrate scientific reasoning (4-8 credits)**

**Choose one of the following:**

BIO 132 Human Biology

or BIO 155 Anatomy & Physiology

or BIO 253 Human Anatomy and Physiology I

and BIO 254 Human Anatomy and Physiology II

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)**

**Take the following:**

PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**

**Choose one of the following:**

ART 111 Art History: Prehistoric to 1400

ART 112 Art History: Renaissance to Present

ENG 210 Introduction to Film

ENG 246 Short Story & Novel

ENG 247 Poetry & Drama

ENG 252 Shakespeare

ENG 254 Children's Literature

ENG 255 American Literature - 19th Century

ENG 256 American Literature - 20th Century

HUM 131 Cultural Connections

MUS 131 Understanding Music

THR 116 Introduction to Theatre

**ADO 7: Think critically**

Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts (1-3 credits)**

**Choose one of the following:**

HPF 160 Wellness

HPF 186 Weight Training and Wellness

HPF 277 Stress Management

HPF 283 Managing Stress and Holistic Health

PHL 236 Ethics

**ADO 9: Work productively with others, recognizing individual contributions to group success**

Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**

Program courses meet this requirement

**ALLIED HEALTH PREREQUISITE REQUIREMENTS – (15 credits)**

**Take the following:**

CIS 101 Introduction to Computer Systems

DMS 100 Introduction to Diagnostic Imaging

DMS 104 Introduction to Sonographic Instrumentation

HOC 130 Introduction to Health Occupations

MOA 120 Medical Terminology

**VASCULAR SONOGRAPHY CORE REQUIREMENTS – (32 credits)**

**Take the following:**

DMS 107 Sonographic Orientation – Vascular

DMS 151 Peripheral Arterial I

DMS 152 Peripheral Arterial II

DMS 155 Peripheral Venous

DMS 161 Vascular Clinical I

DMS 206 Sonographic Instrumentation

DMS 251 Cerebrovascular I

DMS 253 Cerebrovascular II

DMS 265 Vascular Clinical II

DMS 266 Vascular Clinical III

## CARDIAC SONOGRAPHY – ASSOCIATE IN APPLIED SCIENCE (CSON.AAS)

A cardiac sonographer (echocardiographer) is the allied health professional who, after an extensive and comprehensive educational process, is qualified to perform an echocardiogram (ultrasound of the heart). The primary role of the cardiac sonographer is to obtain diagnostic recordings and measurements from the ultrasound image of the heart, including hemodynamic information. This individual assumes great responsibility for the performance of this exam. The techniques for obtaining the required images and recordings require great skill. A thorough understanding of cardiac anatomy, physiology, hemodynamics, and pathophysiology is required.

The cardiac sonography program is an online program accredited by the Commission for Accreditation of Allied Health Education Programs (CAAHEP) in the United States. It is a program leading to an Associate in Applied Science degree. The curriculum consists of integrated didactic and clinical coursework with a minimum of 1,136 supervised clinical hours with an approved clinical education affiliate. This program is designed to prepare the student for employment as a cardiac sonographer with positions located in hospitals, medical clinics, and other diagnostic imaging facilities.

There are special admission requirements to the sonography programs, and it is the student's responsibility to understand the requirements and adhere to them. Entry into a program is competitive and based on a "point system." Point values are based on grades earned in prerequisite coursework and the interview process.

### Applications are processed according to the following:

- Applications must be received by the Allied Health Office by August 31.
- Questionnaires will be mailed to eligible applicants.
- Completed questionnaires must be returned by the stated due date.
- DMS Admission Committee conducts interviews.
- Students are notified by mail of application/interview results.
- Accepted students begin Winter semester.

### General education prerequisites and related requirement courses must be completed before admission to the program.

Minimum credits: .....	68
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grade in BIO 132 or BIO 155 or BIO 253/254, HOC 130 and MOA 120: .....	3.0
Minimum JCC credits: .....	33
MACRAO Agreement: .....	No

### GENERAL EDUCATION REQUIREMENTS – (20 credits)

#### ADO 1: Write clearly, concisely and intelligibly (3 credits)

##### Take the following:

ENG 131 Writing Experience I

#### ADO 2: Speak clearly, concisely and intelligibly (3 credits)

##### Choose one of the following:

COM 231 Communication Fundamentals

COM 240 Interpersonal Communication

#### ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)

##### Take the following:

MTH 131 Intermediate Algebra or higher

#### ADO 4: Demonstrate scientific reasoning (4-8 credits)

##### Choose one of the following:

BIO 132 Human Biology

or BIO 155 Human Anatomy & Physiology

or BIO 253 Human Anatomy and Physiology I

and BIO 254 Human Anatomy and Physiology II

#### ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)

##### Take the following:

PSY 140 Introduction to Psychology

#### ADO 6: Understand aesthetic experience and artistic creativity (3 credits)

##### Choose one of the following:

ART 111 Art History: Prehistoric to 1400

ART 112 Art History: Renaissance to Present

ENG 210 Introduction to Film

ENG 246 Short Story & Novel

ENG 247 Poetry & Drama

ENG 252	Shakespeare
ENG 254	Children's Literature
ENG 255	American Literature - 19th Century
ENG 256	American Literature - 20th Century
HUM 131	Cultural Connections
MUS 131	Understanding Music
THR 116	Introduction to Theatre

### ADO 7: Think critically

#### Program courses meet this requirement

### ADO 8: Make responsible decisions in personal and professional contexts (1-3 credits)

#### Choose one of the following:

HPF 160 Wellness

HPF 186 Weight Training and Wellness

HPF 277 Stress Management

HPF 283 Managing Stress and Holistic Health

PHL 236 Ethics

### ADO 9: Work productively with others, recognizing individual contributions to group success

#### Program courses meet this requirement

### ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures

#### Program courses meet this requirement

### CARDIAC SONOGRAPHY RELATED REQUIREMENTS – (15 credits)

#### Take the following:

CIS 101 Introduction to Computer Systems

DMS 100 Introduction to Diagnostic Imaging

DMS 104 Introduction to Sonographic Instrumentation

HOC 130 Introduction to Health Occupations

MOA 120 Medical Terminology

### CARDIAC SONOGRAPHY CORE REQUIREMENTS – (33 credits)

#### Take the following:

DMS 140 Sonographic Orientation & Technique

DMS 141 Adult Echo I

DMS 143 Echo Clinical I

DMS 144 Cardiovascular Principles

DMS 147 Echo Clinical II

DMS 206 Sonographic Instrumentation

DMS 240 Adult Echo II

DMS 242 Echo Clinical III

## **EMERGENCY MEDICAL TECHNOLOGY – ASSOCIATE IN APPLIED SCIENCE (EMMS.AAS)**

The emergency medical technology program prepares students for employment as emergency medical care givers. Content areas are covered in lectures; practical skills are developed in laboratory settings; and clinical applications are divided between ambulances and hospital emergency rooms.

The curriculum meets the requirements of the Michigan Department of Labor and Economic Growth and need to be taken in sequence. Each course prepares the student for the respective level of state licensing examination.

Students are evaluated in three areas: content, practical skills, and clinical performance. Students achieving an 80 percent or higher will receive a certificate of completion and be eligible for the State licensure. Practical skills are graded on a pass/fail basis, and students must pass all practical exams to successfully complete each course. Clinical performance is evaluated by attendance and feedback from ambulance and hospital personnel. Attendance policies are regulated by the state. Upon successfully completing all college requirements, a student will qualify for an Associate in Applied Science.

Minimum credits: .....	68
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

### **GENERAL EDUCATION REQUIREMENTS – (22 credits)**

#### **ADO 1: Write clearly, concisely and intelligibly (3 credits)**

Take the following:

ENG 131 Writing Experience I

#### **ADO 2: Speak clearly, concisely and intelligibly (3 credits)**

Take the following:

COM 231 Communication Fundamentals

#### **ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)**

Take the following:

MTH 120 Beginning Algebra or higher

#### **ADO 4: Demonstrate scientific reasoning (4-8 credits)**

Choose one of the following:

BIO 132 Human Biology

or BIO 155 Human Anatomy & Physiology

or BIO 253 Human Anatomy and Physiology I

and BIO 254 Human Anatomy and Physiology II

#### **ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3–4 credits)**

Take the following:

PSY 140 Introduction to Psychology

#### **ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**

Choose one of the following:

ART 111 Art History: Prehistoric to 1400

ART 112 Art History: Renaissance to Present

ENG 210 Introduction to Film

ENG 246 Short Story & Novel

ENG 247 Poetry & Drama

ENG 252 Shakespeare

ENG 254 Children's Literature

ENG 255 American Literature - 19th Century

ENG 256 American Literature - 20th Century

HUM 131 Cultural Connections

MUS 131 Understanding Music

THR 116 Introduction to Theatre

#### **ADO 7: Think critically**

Program courses meet this requirement

#### **ADO 8: Make responsible decisions in personal and professional contexts (3 credits)**

Take the following:

PHL 236 Ethics

#### **ADO 9: Work productively with others, recognizing individual contributions to group success**

Program courses meet this requirement

#### **ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**

Program courses meet this requirement

### **EMERGENCY MEDICAL TECHNOLOGY RELATED REQUIREMENTS – (16 credits)**

Take the following:

EMS 120 Emergency Medical Technology - Basic

MOA 120 Medical Terminology

NUR 121 Pharmacology

### **EMERGENCY MEDICAL TECHNOLOGY CORE REQUIREMENTS – (30 credits)**

Take the following:

EMS 210 Paramedic Technology I

EMS 220 Paramedic Technology II

EMS 230 Paramedic Technology III

### **EMERGENCY MEDICAL TECHNOLOGY – CERTIFICATE (EMMS.CERT)**

Minimum credits: ..... 59

Minimum cumulative GPA: ..... 2.0

Minimum grade in all course: ..... 2.0

Minimum JCC credits: ..... 12

MACRAO Agreement: ..... No

### **GENERAL EDUCATION REQUIREMENTS (12 credits)**

Take the following:

ENG 131 Writing Experience I

COM 231 Communication Fundamentals

MTH 120 Beginning Algebra or higher

PHL 236 Ethics

### **RELATED REQUIREMENTS (17 credits)**

Take the following:

EMS 120 Emergency Medical Technology - Basic

MOA 120 Medical Terminology

BIO 132 Human Biology

or BIO 155 Human Anatomy & Physiology

or BIO 253 Human Anatomy and Physiology I

and BIO 254 Human Anatomy and Physiology II

### **EMERGENCY MEDICAL TECHNOLOGY CORE REQUIREMENTS – (30 credits)**

Take the following:

EMS 210 Paramedic Technology I

EMS 220 Paramedic Technology II

EMS 230 Paramedic Technology III

### EMERGENCY MEDICAL TECHNOLOGY–BASIC – CONCENTRATION (EMMS.CON)

The emergency medical technology – basic prepares students for employment as emergency medical care givers. Content areas are covered in lectures; practical skills are developed in laboratory settings; and clinical applications are divided between ambulances and hospital emergency rooms.

The curriculum meets the requirements of the Michigan Department of Labor and Economic Growth and need to be taken in sequence. This course prepares the student for the respective level of state licensing examination.

Minimum credits: .....	26
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum JCC credits: .....	12
MACRAO Agreement:.....	No

#### GENERAL EDUCATION REQUIREMENTS (9 credits)

##### Take the following:

ENG 131 Writing Experience I  
COM 231 Communication Fundamentals  
PHL 236 Ethics

#### CORE REQUIREMENTS (17 credits)

##### Take the following:

BIO 132 Human Biology  
or BIO 155 Human Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II  
EMS 120 Emergency Medical Technology - Basic  
MOA 120 Medical Terminology

### EMERGENCY MEDICAL TECHNOLOGY–BASIC – SKILL SET (EMMS.SSET)

The emergency medical technology – basic prepares students for employment as emergency medical care givers. Content areas are covered in lectures; practical skills are developed in laboratory settings; and clinical applications are divided between ambulances and hospital emergency rooms.

The curriculum meets the requirements of the Michigan Department of Labor and Economic Growth and need to be taken in sequence. This course prepares the student for the respective level of state licensing examination.

Minimum credits: .....	10
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

#### REQUIRED COURSES – (10 credits)

##### Take the following:

EMS 120 Emergency Medical Technology - Basic

#### OPTIONAL SUGGESTED ELECTIVES

MOA 120 Medical Terminology  
BIO 132 Human Biology  
or BIO 155 Human Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II

### HEALTH MANAGEMENT – ASSOCIATE IN APPLIED SCIENCE (HEMA.AAS)

Minimum credits: .....	60
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses:.....	2.0
Minimum grade .....	2.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

This Associate in Applied Science degree program is designed to prepared students in the field of health management. Health management positions are located within hospitals, medical clinics, as well as other health institutions.

#### GENERAL EDUCATION REQUIREMENTS – (28 credits)

##### ADO 1: Write clearly, concisely and intelligibly (6 credits)

###### Take the following:

ENG 131 Writing Experience I  
ENG 232 Technical & Business Writing

##### ADO 2: Speak clearly, concisely and intelligibly (3 credits)

###### Take the following:

COM 231 Communication Fundamentals

##### ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)

###### Take the following:

MTH 120 Beginning Algebra or higher

##### ADO 4: Demonstrate scientific reasoning (4-5 credits)

###### Take one of the following:

BIO 110 Introductory Biology  
BIO 131 General Biology  
BIO 132 Human Biology  
BIO 155 Human Anatomy & Physiology  
BIO 253 Human Anatomy and Physiology I

##### ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)

###### Take the following:

PSY 140 Introduction to Psychology

##### ADO 6: Understand aesthetic experience and artistic creativity (3 credits)

###### Choose one of the following:

ART 111 Art History: Prehistoric to 1400

ART 112 Art History: Renaissance to Present  
 ENG 210 Introduction to Film  
 ENG 246 Short Story & Novel  
 ENG 247 Poetry & Drama  
 ENG 252 Shakespeare  
 ENG 254 Children's Literature  
 ENG 255 American Literature - 19th Century  
 ENG 256 American Literature - 20th Century  
 HUM 131 Cultural Connections  
 MUS 131 Understanding Music  
 THR 116 Introduction to Theatre

**ADO 7: Think critically**

Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts (3 credits)**

Take the following:

HPF 283 Managing Stress and Holistic Health

**ADO 9: Work productively with others, recognizing individual contributions to group success**

Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures (3 credits)**

Take the following:

SOC 235 Minority Groups in America

**HEALTH MANAGEMENT RELATED REQUIREMENTS –**

**(4 credits)**

Take the following:

FYS 105 College Success Seminar  
 or FYS 110 Life Maps  
 or FYS 120 Professional Seminar  
 STM 101 Introduction to Sustainability

**HEALTH MANAGEMENT CORE REQUIREMENTS – (28 credits)**

Take the following:

ACC 216 Financial Accounting Concepts  
 BUA 120 Human Relations in Business  
 BUA 121 Leadership  
 BUA 220 Principles of Management  
 CIS 101 Introduction to Computer Systems  
 HOC 130 Introduction to Health Occupations

HOC 201 Quality Improvement - Health Care  
 or BUA 130 Customer Service  
 MOA 120 Medical Terminology  
 PHL 236 Ethics

**MEDICAL ASSISTANT – ASSOCIATE IN APPLIED SCIENCE (MEDA.AAS)**

The medical assistant-AAS program prepares the student for an entry-level position as a medical assistant in a medical office, clinic, hospital or other health care facility. Clinical (diagnostic and treatment), administrative (communication and business) skills and transdisciplinary knowledge and skills are included in the course work. A 225-hour non-paid externship experience with a licensed health care practitioner is the capstone course.

All students complete the medical assistant certificate program which is accredited by AAMA/CAAHEP. Upon completion, the student becomes eligible for the AAMA Medical Assistant Certification exam to be a Certified Medical Assistant (CMA). The medical assistant certificate program and completion of the general education requirements listed qualifies the student for a Associate in Applied Science–Medical Assistant. Students are welcome to enter this program in any semester, but must meet prerequisite course and grade level requirements to proceed in the program and qualify for MOA 204 Internship/Externship.

*Prerequisite requirements: Keyboarding skills of 45 WPM or CIS 110.*

Minimum credits: .....	60
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grade required in MOA 111, 120, 204, 211 and 240 .....	2.5
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

**GENERAL EDUCATION REQUIREMENTS – (19 credits)**

**ADO 1: Write clearly, concisely and intelligibly (3 credits)**

Take the following:

ENG 131 Writing Experience I

**ADO 2: Speak clearly, concisely and intelligibly (3 credits)**

Choose one of the following:

COM 231 Communication Fundamentals  
 COM 240 Interpersonal Communication

**ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)**

Take the following:

MTH 120 Beginning Algebra or higher

**ADO 4: Demonstrate scientific reasoning (4-5 credits)**

Choose one of the following:

BIO 110 Introductory Biology  
 BIO 131 General Biology  
 BIO 132 Human Biology  
 BIO 155 Human Anatomy & Physiology  
 BIO 220 Microbiology  
 BIO 253 Human Anatomy and Physiology I  
 CEM 131 Fundamentals of Chemistry  
 CEM 141 General Chemistry I  
 GEL 160 Introduction to Geology  
 PHY 131 Conceptual Physics  
 PHY 151 Astronomy  
 PHY 231 College Physics I  
 PHY 251 Modern University Physics I

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)**

Take the following:

PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**

Choose one of the following:

ART 111 Art History: Prehistoric to 1400  
 ART 112 Art History: Renaissance to Present  
 ENG 210 Introduction to Film  
 ENG 246 Short Story & Novel  
 ENG 247 Poetry & Drama  
 ENG 252 Shakespeare  
 ENG 254 Children's Literature  
 ENG 255 American Literature - 19th Century  
 ENG 256 American Literature - 20th Century  
 HUM 131 Cultural Connections  
 MUS 131 Understanding Music  
 THR 116 Introduction to Theatre

**ADO 7: Think critically**

Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts**

Program courses meet this requirement

**ADO 9: Work productively with others, recognizing individual contributions to group success**

Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**  
Program courses meet this requirement

#### MEDICAL ASSISTANT RELATED REQUIREMENTS – (9 credits)

Take the following:

- CIS 101 Introduction to Computer Systems
- DMS 100 Introduction to Diagnostic Imaging
- EMS 110 CPR & First Aid
  - or current Healthcare Provider CPR and Basic First Aid certification
- LPN 132 Medications
  - or NUR 121 Pharmacology

#### MEDICAL ASSISTANT CORE REQUIREMENTS – (31 credits)

Take the following:

- MOA 112 Insurance Reports Law & Ethics
- MOA 111 Medical Assistant Techniques I
- MOA 120 Medical Terminology
- MOA 141 Body Structure & Function
  - or LPN 141 Body Structure & Function
  - or BIO 155 Human Anatomy & Physiology
  - or BIO 253 Human Anatomy and Physiology I and BIO 254 Human Anatomy and Physiology II
- MOA 145 Nutrition
- MOA 204 Internship/Externship
- MOA 211 Medical Assistant Techniques II
- MOA 240 Medical Office Procedures
- MOA 241 Medical Records

#### ELECTIVES

Select electives from courses (except those with prefixes CCE, CED, CEU, CFO, CSS and ESL) so that degree equals 60 credits.

#### MEDICAL ASSISTANT – CERTIFICATE (MEDA.CERT)

The medical assistant certificate program prepares the student for an entry-level position as a medical assistant in a medical office, clinic, hospital or other health care facility. Clinical (diagnostic and treatment), administrative (communication and business) skills and transdisciplinary knowledge and skills are included in the course work. A 225-hour non-paid externship experience with a licensed health care practitioner is the capstone course.

Upon successful completion of this program, the student is eligible for a professional credential by passing the American Association of Medical Assistant (AAMA) examination to become a Certified Medical Assistant (CMA). This program is accredited by the AAMA and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and meets national standards for quality. Students are welcome to enter this program in any semester, but must meet prerequisite course and grade level requirements to proceed in the program and qualify for MOA 204 Internship/Externship.

*Prerequisite requirements: Keyboarding skills of 45 WPM or CIS 110.*

Minimum credits: .....	50
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grade in MOA 111, MOA 120, MOA 211 and MOA 240: .....	2.5
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

#### GENERAL EDUCATION REQUIREMENTS – (10 credits)

Take the following:

- ENG 131 Writing Experience I
- MTH 120 Beginning Algebra or higher
- PSY 140 Introduction to Psychology

#### RELATED REQUIREMENTS – (9 credits)

Take the following:

- CIS 101 Introduction to Computer Systems
- DMS 100 Introduction to Diagnostic Imaging
- EMS 110 CPR & First Aid
  - or current Healthcare Provider CPR and Basic First Aid certification
- NUR 121 Pharmacology
  - or LPN 132 Medications

#### MEDICAL ASSISTANT CORE REQUIREMENTS – (31 credits)

Take the following:

- MOA 111 Medical Assistant Techniques I
- MOA 112 Insurance, Reports, Law & Ethics
- MOA 120 Medical Terminology
- MOA 141 Body Structure & Function
  - or LPN 141 Body Structure & Function
  - or BIO 155 Human Anatomy & Physiology
  - or BIO 253 Human Anatomy and Physiology I and BIO 254 Human Anatomy & Physiology II
- MOA 145 Normal/Therapeutic Nutrition
  - or LPN 145 Normal/Therapeutic Nutrition
  - or NUR 207 Normal/Therapeutic Nutrition
- MOA 204 Internship/Externship
  - (225 hours + 30-hour seminar)
- MOA 211 Medical Assistant Techniques II
- MOA 240 Medical Office Procedures
- MOA 241 Medical Records

#### OPTIONAL MULTI-SKILLED ELECTIVES (Not needed for this certificate)

- BIO 220 Microbiology
- MOA 230 Medical Machine Transcription
- MOA 235 Advanced Medical Transcription
- MOA 242 Advanced Medical Billing

*Graduates may take the AAMA/CMA exam in January, June, or October. Applications are available from the medical assistant program coordinator.*

## MEDICAL RECEPTIONIST/INSURANCE BILLER – CERTIFICATE (MRIB.CERT)

The medical receptionist/insurance biller certificate program prepares the student to work in a medical office, clinic or hospital. Emphasis is placed on: interpersonal, written and oral communication; office procedures; medical terminology; use of computers; diagnostic and procedure coding and medical insurance billing; record keeping; medical insurance; and accounting. On-the-job experience is provided in a 150-hour non-paid externship. The student may enter any semester part-time or full-time.

*Prerequisite requirements: Keyboarding skills of 45 WPM or CIS 110.*

Minimum credits: .....	38
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grades in ACC 211 or ACC 231, MOA 240, MOA 241, and CIS 101: .....	2.5
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

## GENERAL EDUCATION REQUIREMENTS – (6 credits)

ENG 131 Writing Experience I  
MTH 120 Beginning Algebra

## RELATED REQUIREMENTS – (7 credits)

Take the following:

COM 240 Interpersonal Communication  
or COM 231 Communication Fundamentals  
or BUA120 Human Relations in Business  
MOA 141 Body Structure & Function  
or BIO 155 Human Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II  
or LPN 141 Body Structure & Function

## RECEPTIONIST/INSURANCE BILLER CORE REQUIREMENTS – (25 credits)

Take the following:

ACC 211 General Accounting  
or ACC 231 Principles of Accounting I  
CIS 101 Introduction to Computer Systems  
MOA 112 Insurance Reports, Law & Ethics  
MOA 120 Medical Terminology  
MOA 240 Medical Office Procedures

MOA 241 Medical Records  
MOA 242 Advanced Medical Billing  
MOA 245 Internship/ Externship\*

*\*Program coordinator approval needed to register for MOA 245. Student must validate 2.5 or better in MOA 240, MOA 241 and CIS 101 for entrance into this course.*

## MEDICAL RECEPTIONIST/TRANSCRIPTIONIST – CERTIFICATE (MRTR.CERT)

The medical receptionist/transcriptionist certificate program prepares the student for an entry level position as a medical office receptionist or as the first step to becoming a professional medical transcriptionist. Course work includes study of the human body, medical terminology, office organization, reception, telephone use, insurance billing, communication skills, record keeping, law and ethics, billing and advanced medical machine transcription, introduction to computers and word processing. The graduate of this program will have sufficient training for entry level employment as a transcriptionist, health information desk assistant or receptionist in a medical setting.

Exceptional typing (60 WPM or more), medical terminology, and transcribing skills are needed for hospital transcribing. This would be emphasized in course choices, if this is the student's goal. Prerequisite courses and required grades qualify the student for progression through the program and MOA 245 Billing/ Transcription Externship, a non-paid externship of 150 hours on the job experience. The student may begin during any semester and may attend either part-time or full-time.

*Prerequisite requirements: Keyboarding skills of 45 WPM or CIS 110.*

Minimum credits: .....	37
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grades in MOA 120, MOA 230, MOA 235 and MOA 240: .....	3.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

## GENERAL EDUCATION REQUIREMENTS – (6 credits)

ENG 131 Writing Experience I  
MTH 120 Beginning Algebra

## RELATED REQUIREMENTS – (10 credits)

Take the following:

COM 240 Interpersonal Communication  
or COM 231 Communication Fundamentals  
or BUA 120 Human Relations in Business  
MOA 112 Insurance Reports, Law & Ethics  
MOA 141 Body Structure & Function  
or BIO 155 Human Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II  
or LPN 141 Body Structure & Function

## RECEPTIONIST/TRANSCRIPTIONIST CORE REQUIREMENTS – (21 credits)

Take the following:

CIS 101 Introduction to Computer Systems  
CIS 120 Microsoft® Word® Comprehensive  
MOA 120 Medical Terminology  
MOA 230 Medical Machine Transcription  
MOA 235 Advanced Medical Machine Transcription  
MOA 240 Medical Office Procedures  
MOA 245\* Internship/ Externship

## OPTIONAL MULTI-SKILLED ELECTIVES

(Not Required for Certificate)

LPN 132 Medication  
NUR 121 Pharmacology

*\*Program coordinator approval needed to register for MOA 245. Student must validate a 3.0 or better grade in MOA 120, MOA 230, MOA 235 and MOA 240 for entrance into MOA 245.*

## NURSING

Nursing is a dynamic and changing field with broader employment opportunities than ever before. It is expected to have one of the largest number of new job openings in the next decade. Many future nurses will be employed in home health, long-term or ambulatory care, although nursing careers are still available in traditional settings such as hospitals, medical offices and clinics. Program options reflect the variety of career paths available to future nursing professionals.

### JCC PROGRAM CHOICES

- Nursing, JCC and University of Michigan - Bachelor of Science in Nursing
- Nursing, ADN - Associate in Applied Science
- Nursing, LPN to ADN - Associate in Applied Science
- Practical Nurse - Certificate

*Note: Students who wish to begin a bachelor's degree in nursing and transfer to a four-year college or university (other than those in the JCC/U of M program) should contact the university where they are planning to transfer.*

## NURSING – ASSOCIATE IN APPLIED SCIENCE (NURS.AAS)

The Associate in Applied Science, Nursing (ADN) program consists of integrated lectures, labs, and clinicals conducted in approved clinical education affiliates. The program prepares students to demonstrate competency in providing nursing care in a variety of health care settings and for employment in the field of registered nursing. Candidates successfully completing the ADN program are eligible to apply for the licensing examination (NCLEX-RN) required for licensure as a registered professional nurse (RN).

Students must apply for admission to the nursing program, and must do so within the application deadlines. Admission to the nursing program is highly competitive and is not guaranteed. There are special admission requirements to the nursing program, and it is the student's responsibility to understand the requirements and adhere to them. Students must meet all admission requirements. Admission into the program is based on a competitive point system, a pre-admission standardized exam and completion of prerequisite

courses. The selection process is subject to change. You must work with an academic advisor to plan your prerequisite course sequence and to make application to the nursing program. The advisor will explain the point system on the "ADN Selection Process-Worksheet."

Students are required to take the NCLEX Review Program as part of the curriculum in order to graduate. Multiple standardized exams are also required at various points. Based on State of Michigan Senate Bill 0621 (2005) Public Act 28 of 2006, students applying for admission will be subject to a criminal background check including fingerprinting. Exclusions for convictions can range from one year to permanent exclusion. Further information can be found at [www.miltpartnership.com](http://www.miltpartnership.com) and additional questions should be directed to the legal affairs department.

In addition, all students must pass a drug screen to enter any nursing program at JCC, as well as complete immunizations, meet technical standards, and complete a physical form. Following graduation, applicants for licensure as a nurse are also asked about criminal convictions and substance abuse, and this can impact the individual's ability to become licensed.

### Prerequisites are:

- ENG 131 Writing Experience I
- MTH 120 Beginning Algebra or higher
- PSY 140 Introduction to Psychology
- CEM 132 Fundamentals of Organic & Biological Chemistry or CEM 137 Chemistry of Life
- BIO 155 Human Anatomy & Physiology or BIO 253 Human Anatomy and Physiology I and BIO 254 Human Anatomy and Physiology II
- BIO 220 Microbiology

Applications are accepted for Fall or Winter admission. See an academic advisor for application deadlines. It is highly recommended that CEM be taken prior to Human Anatomy & Physiology. All sciences and pharmacology must be taken within the last eight years. Nursing courses MUST be taken in sequence, with the exception of pharmacology. Students are required to take and pass the Nursing Entrance Test (NET) prior to admission.

Minimum credits: .....	76
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grades in BIO 155 or BIO 253 and BIO 254 and CEM 132 or 137: .....	3.0
Minimum JCC credits: .....	41
MACRAO Agreement: .....	No

### GENERAL EDUCATION REQUIREMENTS – (18 credits)

#### ADO 1: Write clearly, concisely and intelligibly (3 credits)

##### Take the following:

ENG 131 Writing Experience I

#### ADO 2: Speak clearly, concisely and intelligibly

##### Program courses meet this requirement

#### ADO 3: Demonstrate computational skills and mathematical reasoning (3 credits)

##### Take the following:

MTH 120 Beginning Algebra or higher

#### ADO 4: Demonstrate scientific reasoning (5-8 credits)

##### Take the following:

BIO 155 Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II

#### ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (4 credits)

##### Take the following:

PSY 140 Introduction to Psychology

#### ADO 6: Understand aesthetic experience and artistic creativity (3 credits)

##### Choose one of the following:

ART 111 Art History: Prehistoric to 1400  
ART 112 Art History: Renaissance to Present  
ENG 210 Introduction to Film  
ENG 246 Short Story & Novel  
ENG 247 Poetry & Drama  
ENG 252 Shakespeare  
ENG 254 Children's Literature  
ENG 255 American Literature - 19th Century  
ENG 256 American Literature - 20th Century  
HUM 131 Cultural Connections  
MUS 131 Understanding Music  
THR 116 Introduction to Theatre

ADO 7: Think critically  
Program courses meet this requirement

ADO 8: Make responsible decisions in personal and professional contexts  
Program courses meet this requirement

ADO 9: Work productively with others, recognizing individual contributions to group success  
Program courses meet this requirement

ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures  
Program courses meet this requirement

**NURSING RELATED REQUIREMENTS – (14 credits)**  
Take the following:

BIO 220 Microbiology  
CEM 132 Fundamentals of Organic & Biological Chemistry  
or CEM 137 Chemistry of Life  
NUR 121 Pharmacology  
PSY 252 Developmental Psychology

**NURSING CORE REQUIREMENTS – (44 credits)**  
Take the following:

NUR 101 Fundamentals of Nursing  
NUR 170 Self-Care  
NUR 245 Health Assessment  
NUR 171 Supportive Educative Nursing  
NUR 172 Pathophysiology  
NUR 173 Family I  
NUR 270 Partially Compensatory  
NUR 271 Family II  
NUR 272 Mental Health  
NUR 273 Wholly Compensatory  
NUR 274 Leadership

*\*PSY 252 may be taken prior to Semester I but must be completed prior to Semester II. This course MUST be completed prior to NUR 173 (Family I) in the nursing sequence, if not taken prior to Semester I.*

*\*NUR 121 if not completed prior to admission into the program, MUST be taken during Semester I—concurrent with NUR 101.*

*\*\*It is highly recommended that general education courses be taken before the nursing course sequence if at all possible.*

*NOTE: Nursing courses are assigned various labs and clinicals. Be sure to follow directions. The schedule is subject to change on short notice. Specific clinical sites and times cannot be guaranteed.*

*The nursing department reserves the right to change the curriculum, policies and program requirements.*

*The nursing program requirements are highly demanding and time consuming. Following admission, full time employment is not recommended.*

### **NURSING – LPN TO ADN – ASSOCIATE IN APPLIED SCIENCE (TNUR.AAS)**

The Associate in Applied Science, Nursing – LPN to ADN program begins in the Fall semester. The program consists of integrated lectures, labs, and clinicals conducted in approved clinical education affiliate settings. The program is designed to educate students to provide competent nursing care in a variety of health care settings and for employment in the field of registered nursing. Candidates who successfully complete the LPN to ADN programs are eligible to apply for the licensing examination (NCLEX-RN) required for licensure as a registered professional nurse (RN).

There are special admission requirements to the LPN to ADN nursing program and it is the student's responsibility to understand the requirements and adhere to them. Students must apply for the program within published time frames. Students must meet with an academic advisor who will explain the program and admission process. Admission is not guaranteed and spaces are limited. The selection process is subject to change. Students must meet all admission requirements.

Candidates entering the LPN to ADN program must have a valid Michigan unencumbered LPN license and must pass the following competency exams: National League for Nursing (NLN) Foundations of Nursing, NET Test, and Pharmacology NLN exam (or take the course). Based on State of Michigan

Senate Bill 0621 (2005) Public Act 28 of 2006, students applying for admission will be subject to a criminal background check including fingerprinting. Exclusions for convictions can range from one year to permanent exclusion. Further information can be found at [www.miltcpartnership.com](http://www.miltcpartnership.com) and additional questions should be directed to the legal affairs department.

In addition, all students must pass a drug screen to enter any nursing program at JCC, as well as complete immunizations, meet technical standards and complete a physical form. Following graduation, applicants for licensure as a nurse are also asked about criminal convictions and substance abuse, and this can impact the individual's ability to become licensed.

Minimum credits: ..... 63  
Minimum cumulative GPA: ..... 2.0  
Minimum grades in all courses: ..... 2.0  
Minimum JCC credits: ..... 29  
MACRAO Agreement: ..... No

*It is highly recommended that CEM be taken prior to Human Anatomy & Physiology (BIO 155 or BIO 253 & 254). All sciences and NUR 121 must be taken within the last eight years. Nursing courses MUST be taken in sequence, with the exception of pharmacology. Students are required to take the NCLEX review course as part of the curriculum in order to graduate. Students may apply to be admitted for the Fall start of this program. An academic advisor must be consulted to apply to the program. The nursing program requirements are highly demanding and time consuming. Following admission, full-time employment is not recommended.*

**GENERAL EDUCATION REQUIREMENTS – (18 credits)**

**ADO 1: Write clearly, concisely and intelligibly (3 credits)**

Take the following:

ENG 131 Writing Experience I

**ADO 2: Speak clearly, concisely and intelligibly**  
Program courses meet this requirement

**ADO 3: Demonstrate computational skills and mathematical reasoning (3 credits)**

Take the following:

MTH 120 Beginning Algebra or higher

**ADO 4: Demonstrate scientific reasoning (5-8 credits)**

Take the following:

BIO 155 Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (4 credits)**

Take the following:

PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**

Choose one of the following:

ART 111 Art History: Prehistoric to 1400  
ART 112 Art History: Renaissance to Present  
ENG 210 Introduction to Film  
ENG 246 Short Story & Novel  
ENG 247 Poetry & Drama  
ENG 252 Shakespeare  
ENG 254 Children's Literature  
ENG 255 American Literature - 19th Century  
ENG 256 American Literature - 20th Century  
HUM 131 Cultural Connections  
MUS 131 Understanding Music  
THR 116 Introduction to Theatre

**ADO 7: Think critically**

Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts**

Program courses meet this requirement

**ADO 9: Work productively with others, recognizing individual contributions to group success**

Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**

Program courses meet this requirement

**NURSING (LPN TO ADN) RELATED REQUIREMENTS – (14 credits)**

Take the following:

BIO 220 Microbiology

GEM 132 Fundamentals of Organic & Biological Chemistry  
or CEM 137 Chemistry of Life  
NUR 121 Pharmacology\*  
PSY 252 Developmental Psychology

**NURSING (LPN TO ADN) CORE REQUIREMENTS – (31 credits)**

Take the following:

NUR 119 Transition Bridge  
NUR 170 Self-Care  
NUR 172 Pathophysiology  
NUR 270 Partially Compensatory  
NUR 271 Family II  
NUR 272 Mental Health  
NUR 273 Wholly Compensatory  
NUR 274 Leadership

*\*May take before nursing sequence but must be completed prior to NUR 270, NUR 271, and NUR 272. Students may test out of NUR 121.*

*\*\*It is highly recommended that general education courses be taken before the nursing course sequence if at all possible.*

*NOTE: Nursing courses are assigned various labs and clinicals. Be sure to follow directions each semester you register. The schedule is subject to change on short notice. Specific clinical sites and times cannot be guaranteed. The nursing department reserves the right to change the curriculum and program requirements.*

**HEALTH STUDIES – ASSOCIATE IN APPLIED SCIENCE (HEST.AAS)**

Minimum credits: .....	64
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses:.....	2.0
Minimum grade .....	2.0
Minimum JCC credits: .....	25
MACRAO Agreement: .....	No

The Jackson Community College/ University of Michigan/ Bachelor of Science in Nursing (BSN) Transfer Program is a collaborative agreement between the Jackson Community College Nursing Department and the University of Michigan School of Nursing. The JCC portion of the program prepares

students for a smooth transition into the junior level of the U of M BSN curriculum. While at JCC, admitted students will concentrate on foundational courses in the sciences, general education and nursing. Students will not be eligible to take the National Council State Boards Licensing Exam – Registered Nurse (NCLEX-RN) until completion of the baccalaureate degree at U of M. Students will graduate from JCC with an Associate in Applied Science in health studies.

Students must apply for admission to the program and must do so within the application deadline. Admission is competitive is not guaranteed. There are specific admission criteria and it is the student's responsibility to understand the requirements. Qualifying and accepted students are admitted to JCC in the fall of the academic year with anticipated transfer to the U of M two years later.

Students will be subject to a criminal background check including fingerprinting. Questions about exclusion from a nursing program of study based on a past criminal conviction should be directed to the legal affairs department. All nursing students must pass a drug screen, provide evidence of immunization status, meet technical standards and submit a signed health certificate. Students are required to take and pass the Nursing Entrance Test (NET) prior to admission. The program is rigorous and requires that each admitted student carry a full-time load (a minimum of 12 credits) each semester, maintain a minimum overall GPA of a 3.0 and earn a minimum of a 3.0 in all science and nursing courses.

Students are required to follow a pre-determined, full time course sequence. A copy of the course sequence is included in the application packet. For further information and/or to schedule an admission interview, contact the program coordinator at 517.796.8492.

**GENERAL EDUCATION REQUIREMENTS – (24 credits)****ADO 1: Write clearly, concisely and intelligibly (3 credits)**

Take the following:

ENG 131 Writing Experience I

**ADO 2: Speak clearly, concisely and intelligibly**

Program courses meet this requirement

**ADO 3: Demonstrate computational skills and mathematical reasoning (3 credits)**

Take the following:

MTH 133 Introduction to Probability & Statistics

**ADO 4: Demonstrate scientific reasoning (5 credits)****Take the following:**

BIO 155 Human Anatomy & Physiology

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (4 credits)****Take the following:**

PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)****Choose one of the following:**

ART 111 Art History: Prehistoric to 1400  
 ART 112 Art History: Renaissance to Present  
 ENG 210 Introduction to Film  
 ENG 246 Short Story & Novel  
 ENG 247 Poetry & Drama  
 ENG 252 Shakespeare  
 ENG 254 Children's Literature  
 ENG 255 American Literature - 19th Century  
 ENG 256 American Literature - 20th Century  
 HUM 131 Cultural Connections  
 MUS 131 Understanding Music  
 THR 116 Introduction to Theatre

**ADO 7: Think critically**

Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts (3 credits)****Take the following:**

HPF 277 Stress Management  
 HPF 160 Wellness

**ADO 9: Work productively with others, recognizing individual contributions to group success**

Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures (3 credits)****Take the following:**

SOC 246 Family and Marriage

**HEALTH STUDIES RELATED REQUIREMENTS – (15 credits)**

BIO 220 Microbiology  
 CEM 131 Fundamentals of Chemistry  
 CEM 132 Fundamentals of Organic & Biological Chemistry  
 PSY 252 Developmental Psychology

**HEALTH STUDIES CORE REQUIREMENTS – (25 credits)****Take the following:**

NUR 101 Fundamentals of Nursing  
 NUR 103 Introduction to Professional Nursing  
 NUR 121 Pharmacology  
 NUR 172 Pathophysiology  
 NUR 207 Nutrition  
 NUR 245 Physical Assessment  
 NUR 246 Holistic Health Assessment

**PRACTICAL NURSING – CERTIFICATE (LPNU.CERT)**

This program prepares students to provide direct nursing care, under supervision, to individuals in a variety of health care settings. The program consists of integrated lectures, labs and clinical experiences. Students who successfully complete the curriculum receive the certificate in practical nursing and are eligible to take the state licensing examination (NCLEX-PN) required for licensure as a practical nurse (LPN).

Students must apply for admission to the nursing program, and must do so within the application deadlines. Admission to the nursing program is highly competitive and is not guaranteed. There are special admission requirements to the nursing program and it is the student's responsibility to understand the requirements and adhere to them. Students must meet all admission requirements. Admission into the program is based on a competitive point system, a pre-admission standardized exam and completion of prerequisite courses. The selection process is subject to change. Students must work with an academic advisor to plan the prerequisite course sequence and to make application to the nursing program. The advisor will explain the point system on the "Practical Nursing Selection Process-Worksheet."

The practical nursing program begins in March of each year and concludes the following May. There is a short break from mid July to late August between Semester I and Semester II. Practical nursing classes are on a different course calendar than other classes.

All science classes must be taken within the last eight years. Practical nursing courses must be taken in sequence. Students are required to take a licensure preparation course at JCC as part of their curriculum in order to graduate. Based on State of Michigan Senate Bill 0621 (2005) Public Act 28 of 2006, students applying for admission will be subject to a criminal background check including fingerprinting. Exclusions for convictions can range from one year to permanent exclusion. Further information can be found at [www.miltcpartnership.com](http://www.miltcpartnership.com) and additional questions should be directed to the legal affairs department.

In addition, all students must pass a drug screen to enter any nursing program at JCC, as well as complete immunizations, meet technical standards and complete a physical form. Following graduation, applicants for licensure as a nurse are also asked about criminal convictions and substance abuse, this can impact the individual's ability to become licensed.

**Prerequisites are:**

LPN 132 Medications  
 or NUR 121 Pharmacology  
 LPN 141 Body Structure & Function  
 or MOA 141 Body Structure & Function  
 or BIO 155 Human Anatomy & Physiology  
 or BIO 253 Human Anatomy and Physiology I  
 and BIO 254 Human Anatomy and Physiology II

NUR 207 Normal/Therapeutic Nutrition  
 or MOA 145 Normal/Therapeutic Nutrition  
 or LPN 145 Normal/Therapeutic Nutrition

Minimum credits: ..... 51  
 Minimum cumulative GPA: ..... 2.0  
 Minimum grades in all prerequisite  
 and nursing classes\*: ..... 2.0

*\*HOWEVER – Check "The Point System" on the "PN Selection Process Worksheet" regarding values of points for designated grades. Admission is competitive and based on grades.*

Minimum JCC credits: ..... 32  
 MACRAO Agreement: ..... No

**GENERAL EDUCATION REQUIREMENTS – (6 credits)**

ENG 131 Writing Experience I  
 MTH 120 Beginning Algebra or higher

**PRACTICAL NURSING RELATED REQUIREMENTS – (13 credits)**

Take the following:

- LPN 132 Medications  
or NUR 121 Pharmacology
- LPN 141 Body Structure & Function  
or MOA 141 Body Structure & Function  
or BIO 155 Human Anatomy & Physiology I  
and BIO 254 Human Anatomy and Physiology II
- NUR 207 Normal/Therapeutic Nutrition  
or MOA 145 Normal/Therapeutic Nutrition  
or LPN 145 Normal/Therapeutic Nutrition
- MOA 120\* Medical Terminology

**PRACTICAL NURSING CORE REQUIREMENTS – (32 credits)**

Take the following:

- LPN 131 Foundations of Nursing
- LPN 180 Nursing Care of Adults-1A
- LPN 181 Nursing Care of Adults-1B
- LPN 182 Role of the Practical Nurse
- LPN 183 Nursing Care of Adults II
- LPN 184 Maternal/Child Concepts

*\*Preferable to be taken before being admitted to the nursing program. See advisor.*

*NOTE: Nursing courses include various labs and clinicals, this must be taken in addition to the lectures. Be sure to follow directions each semester and consult with an academic advisor for guidance. This schedule is subject to change on short notice. Specific clinical sites and times cannot be guaranteed. The nursing department reserves the right to change the curriculum and program requirements as necessary.*

*The nursing program requirements are highly demanding and time consuming. Following admission, full time employment is not recommended.*

**RADIOGRAPHY – ASSOCIATE IN APPLIED SCIENCE (RADI.AAS)**

A radiographer is the allied health professional who uses ionizing radiation to image patients in hospitals and various health clinical settings. Radiographers perform general x-ray imaging of the body and may also go on to perform advanced imaging procedures such as CT, MRI, mammography and more.

It is a two-year program leading to an Associate in Applied Science degree. The curriculum consists of integrated didactic and clinical course work in an approved clinical education affiliate. The program is designed to prepare the student for employment in the field of diagnostic radiography. Positions are located within hospitals, medical clinics and other diagnostic imaging institutions. Upon successful completion, students are eligible to write the American Registry of Radiological Technologists (ARRT) exams. Satisfactory completion of the ARRT board certifying exams allows the radiographer to use the initials of R.T. (R), Registered Technologist (Radiography).

There are special admission requirements to the radiography programs, and it is the student's responsibility to understand the requirements and adhere to them. Entry into a program is competitive and based on a "point system." Point values are based on grades earned in prerequisite coursework and the interview process.

**Applications are processed according to the following:**

- Applications must be received by the Allied Health Office by January 31.
- Questionnaires will be mailed to eligible applicants.
- Completed questionnaires must be returned by the stated due date.
- Radiography Admission Committee conducts interviews.
- Students are notified by mail of application/interview results.
- Accepted students begin Spring semester.

*BIO 132 or BIO 155 or BIO 253 and BIO 254, DMS 100, HOC 130 and MOA 120 must be successfully completed before applying to the program.*

Minimum credits: .....	82
Minimum cumulative GPA: .....	2.0
Minimum grade in BIO 132 or BIO 155 or BIO 253/254, DMS 100, HOC 130 and MOA 120 .....	3.0
Minimum grade in all courses: .....	2.0
Minimum JCC credits: .....	12
MACRAO Agreement: .....	No

**GENERAL EDUCATION REQUIREMENTS – (22 credits)**

**ADO 1: Write clearly, concisely and intelligibly (3 credits)**

Take the following:

- ENG 131 Writing Experience I

**ADO 2: Speak clearly, concisely and intelligibly (3 credits)**

Choose one of the following:

- COM 231 Communication Fundamentals  
COM 240 Interpersonal Communication

**ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)**

Take the following:

- MTH 131 Intermediate Algebra or higher level

**ADO 4: Demonstrate scientific reasoning (4-8 credits)**

Choose from the following:

- BIO 132 Human Biology  
or BIO 155 Anatomy & Physiology  
or BIO 253 Human Anatomy and Physiology I  
and BIO 254 Human Anatomy and Physiology II

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)**

Take the following:

- PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**

Choose one of the following:

- ART 111 Art History: Prehistoric to 1400  
ART 112 Art History: Renaissance to Present  
ENG 210 Introduction to Film  
ENG 246 Short Story & Novel  
ENG 247 Poetry & Drama  
ENG 252 Shakespeare  
ENG 254 Children's Literature  
ENG 255 American Literature - 19th Century

ENG 256 American Literature - 20th Century  
 HUM 131 Cultural Connections  
 MUS 131 Understanding Music  
 THR 116 Introduction to Theatre

**ADO 7: Think critically**  
 Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts (3 credits)**  
 Take the following:  
 PHL 236 Ethics

**ADO 9: Work productively with others, recognizing individual contributions to group success**  
 Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**  
 Program courses meet this requirement

**RADIOGRAPHY RELATED REQUIREMENTS – (12 credits)**  
 Take the following:

CIS 101 Introduction to Computer Systems  
 DMS 100 Introduction to Diagnostic Imaging  
 HOC 130 Introduction to Health Occupations  
 MOA 120 Medical Terminology

**RADIOGRAPHY CORE REQUIREMENTS – (48 credits)**  
 Take the following:

RAD 120 Radiographic Orientation  
 RAD 121 Radiographic Positioning I  
 RAD 125 Radiographic Positioning II  
 RAD 126 Clinical Practicum I  
 RAD 162 Clinical Practicum II  
 RAD 210 Clinical Practicum III  
 RAD 214 Clinical Practicum IV  
 RAD 219 Clinical Practicum V  
 RAD 160 Fundamentals of Radiologic Science  
 RAD 161 Radiographic Exposure  
 RAD 212 Special Radiographic Studies  
 RAD 213 Radiobiology  
 RAD 218 Radiographic Pathology

**RESPIRATORY CARE – ASSOCIATE IN APPLIED SCIENCE (RECA.AAS)**

Respirator care is an allied health profession whose practitioners focus on diagnosis and treatment of cardiopulmonary disorders and diseases. A respiratory care practitioner can be instrumental in assisting a physician in the diagnosis, treatment and prevention of a wide spectrum of disorders affecting the heart and lungs, and specializes in the application of scientific knowledge and theory to practical, clinical problems of respiratory care. A respiratory care practitioner is qualified to assume primary clinical responsibility for all respiratory care modalities, including responsibilities involved in supervision of respiratory technician functions.

This is a two-year program leading to an Associate in Applied Science degree. The curriculum consists of integrated didactic and clinical course work in approved clinical education affiliates. The program is designed to prepare the student for employment in the field of respiratory care. Positions are located within hospitals, long-term care facilities and other outpatient settings.

Upon successful completion, students are eligible to write the national Board for Respiratory Care (NBRC) exams. Satisfactory completion of the NBRC board certifying exams allow the respiratory care practitioner to use the initials of RRT, Registered Respiratory Therapist. Admission to the program is not guaranteed: entry into the program is competitive and based on a "points system." The order of acceptance of qualified applicants will be based on points achieved.

Minimum credits: .....	90
Minimum cumulative GPA: .....	2.0
Minimum grade in all courses: .....	2.0
Minimum grade in BIO 132 or BIO 155 or BIO 253 and BIO 254, ENG 131,HOC 130, MOA 120 and MTH 131 .....	3.0
Minimum JCC credits:.....	12
MACRAO Agreement: .....	No

**GENERAL EDUCATION REQUIREMENTS – (22 credits)**  
**ADO 1: Write clearly, concisely and intelligibly (6 credits)**  
 Take the following:

ENG 131 Writing Experience I  
 ENG 132 Writing Experience II

**ADO 2: Speak clearly, concisely and intelligibly (3 credits)**  
 Choose one of the following:  
 COM 231 Communication Fundamentals  
 COM 240 Interpersonal Communication

**ADO 3: Demonstrate computational skills and mathematical reasoning (3-5 credits)**  
 Take the following:  
 MTH 131 Intermediate Algebra or higher level

**ADO 4: Demonstrate scientific reasoning (4-5 credits)**  
 Choose one of the following:  
 BIO 132 Human Biology  
 or BIO 155 Human Anatomy & Physiology  
 or BIO 253 Human Anatomy and Physiology I  
 and BIO 254 Human Anatomy and Physiology II

**ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)**  
 Take the following:  
 PSY 140 Introduction to Psychology

**ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**  
 Choose one of the following:

ART 111 Art History: Prehistoric to 1400  
 ART 112 Art History: Renaissance to Present  
 ENG 210 Introduction to Film  
 ENG 246 Short Story & Novel  
 ENG 247 Poetry & Drama  
 ENG 252 Shakespeare  
 ENG 254 Children's Literature  
 ENG 255 American Literature - 19th Century  
 ENG 256 American Literature - 20th Century  
 HUM 131 Cultural Connections  
 MUS 131 Understanding Music  
 THR 116 Introduction to Theatre

**ADO 7: Think critically**  
 Program courses meet this requirement

**ADO 8: Make responsible decisions in personal and professional contexts**  
 Program courses meet this requirement

**ADO 9: Working productively with others, recognizing individual contributions to group success**  
 Program courses meet this requirement

**ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures**  
Program courses meet this requirement

**RESPIRATORY CARE RELATED REQUIREMENTS – (13 credits)**

Take the following:

- CEM 131 Fundamentals of Chemistry or higher
- CIS 101 Introduction to Computer Systems
- HOC 130 Introduction to Health Occupations
- MOA 120 Medical Terminology

**RESPIRATORY CARE CORE REQUIREMENTS – (55 credits)**

Take the following:

- RES 100 Respiratory Care Techniques I
- RES 104 Cardiopulmonary Assessment I
- RES 110 Respiratory Care Techniques II
- RES 114 Cardiopulmonary Pathophysiology I
- RES 115 Clinical Practice I
- RES 120 Respiratory Care Techniques III
- RES 124 Respiratory Pharmacology
- RES 125 Clinical Practice II
- RES 126 Cardiopulmonary Pathophysiology II
- RES 203 Diagnostic Theory
- RES 205 Clinical Practice III
- RES 207 Advanced Cardiopulmonary Anatomy & Physiology
- RES 210 Perinatal & Pediatric Respiratory Care
- RES 220 Respiratory Seminar
- RES 225 Clinical Practice IV

**TRANSFER PROGRAMS**

**MEDICAL LABORATORY TECHNOLOGY**

Medical laboratory technicians search for clues about the presence, extent and causes of disease. They use their knowledge of how diseases affect test results to provide an accurate and complete picture of a patient's condition. MLTs analyze blood and body fluids for a wide variety of chemical changes, using the latest biomedical instruments. They culture and identify bacteria that cause disease and examine blood to detect anemias, leukemias and infections, ensuring that donor blood is safe for transfusion.

Kellogg Community College and JCC jointly offer an Associate of Applied Science degree program in medical laboratory technology. This program allows students to take the specified general education courses identified in this agreement at JCC and complete their program by taking the occupational specific courses at Kellogg Community College. These courses may be taken concurrently provided students are formally admitted to the program at Kellogg Community College and all prerequisite course requirements are adhered to. Consult an academic advisor for more information.

The Bachelor of Applied Science in Allied Health option with Siena Heights University offers a unique degree program for JCC students with training and/or experience in diagnostic medical sonography, emergency medical services, medical assistant, nursing and related fields. This career-oriented degree for graduates of the JCC two-year programs is structured on an inverted major concept. All the courses needed to earn a bachelor's degree is available on JCC's main campus through the Siena Heights University degree completion center.

**JCC/U OF M BACHELOR OF SCIENCE IN NURSING PROGRAM**

A Bachelor of Science in Nursing (BSN) degree prepares students for a critically important, well-paid and secure career. It also allows broader advancement opportunities since some positions are open only to nurses with a minimum of a bachelor's degree. Careers may include advancement to positions in management or clinical education. Students must meet the admission requirements to JCC and the U of M School of Nursing, which requires a 3.0 cumulative GPA in all prior college experience. The program is competitive with a limited number of spaces

available annually. The JCC/U of M Bachelor of Science in nursing program allows students to enroll and complete the first two years of the baccalaureate nursing program at JCC and then transfer with junior status directly to the University of Michigan. Students will be awarded an associate in health studies upon completing the required courses at JCC. Students are eligible to sit for the nursing licensure exam (NCLEX-RN) at the completion of the BSN degree at U of M. For more information contact: Office of Nursing Admissions at 517.796.8424.

**DENTAL HYGIENE**

Dental hygienists work under the direction or supervision of a licensed dentist, and must be licensed by the state in which they practice. Clinical responsibilities of the dental hygienist in Michigan includes oral examination; scaling and polishing teeth; exposing, processing, mounting and interpreting x-rays; taking impressions and preparing diagnostic models; and other activities related to the oral health of the patient. JCC offers only prerequisite and general education courses that can be transferred to a dental hygiene program. Five colleges/universities offer a dental hygienist program. Some offer an associate degree and others a bachelor's degree. Consult an academic advisor for more information on transfer options available.

**MEDICAL SCIENCES (PRE-MEDICINE, PRE-DENTAL, PRE-PHARMACY)**

The medical sciences major is designed for pre-professional students who are interested in graduate training in human medicine. Students have a variety of areas of specialization within the field of medicine available to them at the postgraduate level. They may pursue medical, osteopathic or dental school, graduate level pharmacy programs and physicians assistant or pathology assistant programs.

**SUGGESTED COURSE SEQUENCE**

**First Year, Fall Semester**

BIO 131, CEM 141, ENG 131, MTH 140 or MTH 151

**First Year, Winter Semester**

BIO 232, CEM 142, ENG 132, PSY 140

**First Year, Spring Semester**

PSY 252, MACRAO humanities course

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**Second Year, Fall Semester**

CEM 241, PHL 236, PHY 231, MACRAO social science course

**Second Year, Winter Semester**

CEM 242, PHY 232, MACRAO humanities course, program-specific course requirement

**PHYSICAL THERAPY**

Physical therapists provide clients, infants through elderly adults, with services at the preventive, acute and rehabilitative stages directed toward achieving increased functional independence and decreased functional impairment. Physical therapists interact and practice in collaboration with a variety of health professionals.

**SUGGESTED COURSE SEQUENCE****First Year, Fall Semester\***

BIO 131, CEM 141, ENG 131, MTH 140

**First Year, Winter Semester**

CEM 142, ENG 132, PHL 236, PSY 140

**Second Year, Fall Semester**

BIO 253, MTH 133, PHY 231, MACRAO humanities course

**Second Year, Winter Semester**

BIO 254, PHY 232, PSY 252, MACRAO humanities course

**PRE-VETERINARY**

Veterinarians play a major role in the health care of pets, livestock, and zoo, sporting, and laboratory animals. Veterinarians also use their skills to protect humans against diseases carried by animals, and conduct clinical research on human and animal health problems.

**SUGGESTED COURSE SEQUENCE****First Year, Fall Semester**

BIO 131, CEM 141, ENG 131, MTH 140 or MTH 151

**First Year, Winter Semester**

BIO 232, CEM 142, ENG 132, MACRAO Social science course

**Second Year, Fall Semester**

CEM 241, PHY 231, MACRAO Humanities & Social science courses

**Second Year, Winter Semester**

BIO 220, CEM 242, PHY 232, MACRAO Humanities course



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**HUMAN SERVICES CAREER PATHWAY**

This career pathway includes careers related to economic, political and social systems including education, government, law and law enforcement, early childhood development and education, civil service, education, leisure and recreation, military, religion, personal services and social services. These may include law and legal studies, law enforcement, public administration and child and family services.

**DEGREES/CERTIFICATES**

- Corrections
- Law Enforcement

**CONCENTRATION**

The “concentration” process is a building block approach to completing a trade certificate program. Students can choose to complete the concentration depending upon the level of skill and knowledge desired. Students can apply for a concentration upon completion of the required courses.

**TRANSFER PROGRAMS IN HUMAN SERVICES PATHWAY**

The first two years of college education usually consist of general education courses, introductory courses in a major and/or program of study, and selected electives. Refer to page 37 for additional information on transfer and MACRAO. Academic advisors assist in planning transfer programs, and provide transfer guide sheets indicating courses that meet the requirements of various programs of study at four-year colleges. Sample curricula for a few popular transfer programs are included.

- Criminal Justice/Corrections or Law Enforcement to Siena Heights University
- Psychology
- Social Work
- Pre-Law
- Education

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