

# Computer Information Systems

Level I Certificate Information Technology Program Code 161A

**Advisor:** Shawn Hisle, (269) 927-8166, shisle@lakemichigancollege.edu

## Program Prerequisites

Proficiency in reading, English, and mathematics on the assessment or successfully complete recommended classes. See course descriptions for specific course prerequisites.

## Certificate Requirements Credit Hours

---

Computer Information Systems 106, Intro to Operating Systems.....	3
Computer Information Systems 108, Computer Operations, Microcomputing .....	3
Computer Information Systems 111, Database Concepts .....	3
Computer Information Systems 118, Basic Web Design.....	3
Computer Information Systems 140, Computer Networking Fundamentals .....	3

## About the Area of Study

The CIS Information Technologies option emphasizes the overall business support function of computer information systems. It can lead to careers as database managers and computer support specialists.

**Level I certificate is 15 credit hours.**

## Sample Course Sequence

An advisor will help you make necessary changes to these recommended sequences.

### Level I Certificate Program

Semester 1	Semester 2
CIS 106	CIS 111
CIS 108	CIS 118
CIS 140	

# Computer Information Systems

**Level I Certificate PC and Network Technician** Program Code 161B

**Associate in Applied Business Degree - Networking** Program Code 160B

**Certificate of Achievement - Cisco** Program Code 165

**Advisor:** Shawn Hisle, (269) 927-8166, shisle@lakemichigancollege.edu

## Program Prerequisites

Proficiency in reading, English, and mathematics on the assessment or successfully complete recommended classes. See course descriptions for specific course prerequisites.

## Degree & Certificate Requirements Credit Hours

### College Requirements

# English 101, English Composition .....	3
English 103, Technical Writing .....	3
History 201, American History to 1865, or History 202, American History 1865 to Present, or Political Science 101, National Government, or Political Science 102, State Governments .....	3
** PHED 200, Healthful Living, or PHED 212, Health and Fitness, or PHED 214, Personal Health .....	1 or 3

### Support Courses

MATH 122, Intermediate Algebra .....	4
PSYC 201, Introduction to Psychology .....	3
BUSA 204, Principles of Economics (Micro) .....	3
BUSA 201, Principles of Accounting I .....	4
PHYS 101, General Physics I, or any Group 1a or b .....	4

### Major Requirements

#* CIS 100 Intro to computer literacy, or #* CIS 108 Computer Operations, Microcomputing .....	3
#* CIS 140 Computer Networking Fundamentals .....	3
#* CIS 155 Comparative Operating Systems .....	3
#* CIS 156 Practical Security .....	3
#* CIS 200 PC Hardware .....	3
#* CIS 226 Cisco INTRO review .....	3
# CIS 228 Switched and Routed Networks .....	3
# CIS 242 Windows Servers .....	3

### Electives (Select 9 credit hours)

COMM 101, Introduction to Public Speaking .....	3
PHIL 250, Sophomore Seminar in Philosophy .....	3
PHIL 102, Intro to Logic .....	3
MATH128 Pre-Calculus Algebra .....	4
CIS 111 Database Concepts .....	3
CIS 118 Basic Web Design .....	3
CIS 124 Database skills .....	1
CIS164 Introduction Programming C++ .....	3
CIS 219 Advanced Web Design .....	3
CIS 220 Web Programming .....	3
CIS 221 Server Side Programming .....	3
CIS 224 Advanced Database skills .....	1
# CIS 227 Cisco ICND 2/CCNA review .....	3
# CIS 241 Switching and Routing .....	3
CIS 250 Advanced Topics, CIS .....	4
CIS 251 Computer Programming - BASIC .....	3
CIS 254 Computer Programming - C .....	3
CIS 255 Structured Query Language .....	3
CIS 261 Co-op I .....	3
CIS 264 Computer Programming - C++ .....	3

\* Indicates courses needed for Level I certificate.

\*\* Transferring students are encouraged to take PHED 212 or PHED 214.

# Indicates courses need for Certificate of Achievement - Cisco

You should notify your advisor and the co-op coordinator of your intention to take CIS 261 before beginning your second-year classes.

## About the Area of Study

The CIS Networking option emphasizes the networking software, hardware, and preparation for certification exams. It can lead to careers in network and computer systems administration working with local area networks, wide area networks, Internet and Intranet systems, and network segments.

## Associate's Degree

When you complete the 63-credit program, you may apply for an Associate in Applied Business degree.

## Transfer Resources

If you are planning to transfer to a four-year college or university, you should become familiar with your chosen school's requirements. See your Academic Advisor for assistance in developing your Student Education Plan or visit [www.lakemichigancollege.edu/transfer](http://www.lakemichigancollege.edu/transfer)

## Sample Course Sequence

An advisor will help you make necessary changes to these recommended sequences.

### Level I Certificate Program PC and Network Technician

Semester 1	Semester 2
CIS 100, or 108	CIS 155
CIS 140	CIS 200
CIS 156	CIS 226

### Cisco Certificate of Achievement

Semester 1	Semester 2
CIS 100, or 108	CIS 155
CIS 140	CIS 200
CIS 156	CIS 226

Semester 3	Semester 4
CIS 228	CIS 227
CIS 242	ENGL 101

### Associate Degree Program

Semester 1	Semester 2
ENGL 101	ENGL 103
CIS 100, or 108	CIS 155
CIS 140	CIS 200
CIS 156	CIS 226
College requirement, support course, or elective	College requirement, support course, or elective

Semester 3	Semester 4
CIS 228	College requirement, support course, or elective
CIS 242	
College requirement, support course, or elective	

# Computer Information Systems

**Level I Certificate Programming** Program Code 161C

**Associate in Applied Science Degree - Programming** Program Code CISP

**Advisor:** Shawn Hisle, (269) 927-8166, shisle@lakemichigancollege.edu

## Program Prerequisites

Proficiency in reading, English, and mathematics on the assessment or successfully complete recommended classes. See course descriptions for specific course prerequisites.

## Degree & Certificate Requirements

## Credit Hours

### College Requirements

English 101, English Composition.....	3
English 103, Technical Writing, or English 102, English Composition.....	3
History 201, American History to 1865, or History 202, American History 1865 to Present, or Political Science 101, National Government, or Political Science 102, State Governments.....	3
** Physical Education 200, Healthful Living, or Physical Education 212, Health and Fitness, or Physical Education 214, Personal Health.....	1 or 3

### Support Courses

Math 128, Pre-Calculus Algebra, or Math 129, Finite Mathematics, or Math 135, Pre-Calculus Algebra/Trig.....	4
Communication 101, Introduction to Public Speaking.....	3
* Computer Information Systems 108, Computer Operations, Microcomputing....	3
Philosophy 102, Intro to Logic.....	3
Group 1a or 1b Science.....	4

### Major Requirements

CIS 111, Database Concepts.....	3
CIS 118, Basic Web Design.....	3
* CIS 119, Programming Logic & Design.....	3
CIS 140, Computer Networking Fundamentals.....	3
CIS 155, Comparative Operating Systems.....	3
CIS 156, Practical Computer Security.....	3
* CIS 164, Introduction Programming C++.....	3
* CIS 170, Introduction to Unix/Linux.....	3
* CIS 264, Computer Programming - C++.....	3
CIS 266, Java Programming.....	3
* CIS 268, Programming C#.....	3

### Electives (select to attain 61 credits)

Business 201, Principles of Accounting I.....	4
Business 202, Principles of Accounting II.....	4
Business 204, Principles of Economics (Micro).....	3
CIS 145, Computer Programming - COBOL I.....	3
CIS 158, Geospatial Technologies.....	3
CIS 200, PC Hardware.....	3
CIS 208, Adv. Microcomputer Applications.....	3
CIS 242, Windows Server.....	3
CIS 245, Computer Programming - COBOL II.....	3
CIS 250, Advanced Topics, CIS.....	4
CIS 251, Computer Programming - BASIC.....	3
CIS 254, Computer Programming - C.....	3
CIS 255, Structured Query Language.....	3
CIS 260, Computer Programming - Visual BASIC.....	3
CIS 261, Co-op I, or BUSA 261 or OIS 261.....	3

\* Indicates courses needed for Level I certificate.

\*\* Transferring students are encouraged to take PHED 212 or PHED 214.

You should notify your advisor and the co-op coordinator of your intention to take CIS 261 before beginning your second-year classes.

## About the Area of Study

The CIS Programming option will allow you to develop skills in a variety of popular programming languages. Programmers can be found in almost every industry including telecommunications, financial institutions, educational institutions, government agencies, and management firms.

## Associate's Degree & Certificate Options

When you complete the 63-credit program, you may apply for an Associate in Applied Science degree.

Level I certificate is 18 credit hours

## Transfer Resources

If you are planning to transfer to a four-year college or university, you should become familiar with your chosen school's requirements. See your Academic Advisor for assistance in developing your Student Education Plan or visit [www.lakemichigancollege.edu/transfer](http://www.lakemichigancollege.edu/transfer)

## Sample Course Sequence

An advisor will help you make necessary changes to these recommended sequences.

### Level I Certificate Program

<b>Semester 1</b>	<b>Semester 2</b>
CIS 108	CIS170
CIS 119	
<b>Semester 3</b>	<b>Semester 4</b>
CIS 164	CIS 264
	CIS 268

### Associate's Degree Program

<b>Semester 1</b>	<b>Semester 2</b>
ENGL 101	ENGL 103
BUSA 204	BUSA 201
COMM 101	CIS 260
CIS 106	CIS 108
CIS 251	MATH 128
PHED 200	
<b>Semester 3</b>	<b>Semester 4</b>
PSYC 201	Elective
CIS 155	PHIL 250
CIS 200	CIS 261
CIS 245	CIS 264
Elective	POSC 101 or POSC 102 or HIST 201 or HIST 202

# Computer Information Systems

**Level I Certificate Web** Program Code 161D

**Advisor:** Shawn Hisle, (269) 927-8166, shisle@lakemichigancollege.edu

## Certificate Options

### Program Prerequisites

Proficiency in reading, English, and mathematics specific course prerequisite

### Certificate Requirements Credit Hours

---

CIS 108, Computer Operations, Microcomputing .....	3
CIS 118, Basic Web Design .....	3
CIS 219, Professional Web Design .....	3
CIS 220, Web Programming .....	3
CIS 221 Server-Side Scripting .....	3
CIS 251, Computer Programming - BASIC .....	3

### About the Area of Study

The CIS Web option will allow you to develop skills in a variety of popular Web design and programming languages. Web Designers and Programmers can be found in almost every industry including telecommunications, financial institutions, educational institutions, government agencies, and management firms. Web Design and Maintenance are regular features on any business whether large or small.

**Level I certificate is 18 credit hours**

### Sample Course Sequence

An advisor will help you make necessary changes to these recommended sequences.

#### Level I Certificate Program

Semester 1	Semester 2	Semester 3
CIS 108	CIS 118	CIS 219
CIS220	CIS 251	
CIS221		