

# Bachelor of Science in **Computer Information Systems** **Programming Track**

School of Mathematics, Science and Engineering

## PROGRAM OVERVIEW

The Bachelor of Science (B.S.) in Computer Information Systems (CIS) – Programming in the School of Math, Science and Engineering at the University of the Incarnate Word provides its students with a broad base of theoretical and experiential knowledge and skills that responds to the rapid changes in the field. Graduates of the UIW CIS program can plan, design, assemble and operate computer systems and networks for a wide range of organizations. CIS students install, configure, program, protect, administer and apply hardware and software systems. They also gain the types of social skills required to be successful today, including team working, decision-making, visual modeling, project management, and effective technical and non-technical communications.

## QUICK FACTS

Learning to program is learning how to speak the computer's language so you can get these machines to do what you want them to do. This powerful skill is the key to enabling much of modern world to make technology for them. UIW's programming curriculum covers both the most common general languages that are compiled to create the software or apps we use, as well as specialized languages used to develop websites. Since programmers speak to the computer, they must also know how the computer works in finer detail than other users do. Therefore, a course in computer science will help you develop a circuit level understanding required for lower level languages.

## PREREQUISITES AND COURSES

- CIS 2330 – Programming Languages I
- CIS 2368 – Website Development I
- CIS 3330 - Programming Languages II
- CIS 3360 - Computer Science
- CIS 3365 - Website Development II
- CIS 4330 - Programming Languages III
- CIS 4375 - Creating Dynamic Websites

## CONTACT

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## B.S. in Computer Information Systems - Programming

### FRESHMAN YEAR

#### Fall

CIS 1100: Orientation to CIS (1 hour)  
 CIS 1301: Computer Information Systems (3 hours)  
 CIS 2328: Hardware and Systems Software (3 hours)  
 MATH 1304/1308/1310 or Higher (3 hours)  
 ENGL 1311: Composition I (3 hours)  
 Modern Language I (3 hours)

**Total Hours: 16**

#### Spring

CIS 2340: Intro to Operating Systems (3 hours)  
 CIS 2330: Programming Languages I (3 hours)  
 CIS 2335: Computer Networks (3 hours)  
 ENGL 1312: Composition II (3 hours)  
 Modern Language II (3 hours)

**Total Hours: 15**

### SOPHOMORE YEAR

#### Fall

CIS 2350: UNIX/Linux Operating System (3 hours)  
 CIS 2368: Website Development I (3 hours)  
 CIS 3330: Programming Languages II (3 hours)  
 PHIL 1381: Introduction to Philosophy (3 hours)  
 ECON 2301: Macroeconomics (3 hours)

**Total Hours: 15**

#### Spring

CIS 2333: Scripting Languages (3 hours)  
 CIS 3367: Networks and Telecommunications (3 hours)  
 CIS 3365: Website Development II (3 hours)  
 ENGL 2310: World Literature Studies (3 hours)  
 PHIL 3312: Logic (3 hours)

**Total Hours: 15**

### JUNIOR YEAR

#### Fall

CIS 3362: Systems Analysis and Design (3 hours)  
 CIS 4330: Object-Oriented Programming (3 hours)  
 CIS 4375: Creating Dynamic Websites (3 hours)  
 CIS 4190: Seminar in CIS (1 hour)  
 HIST 1311, 1312, 1321 or 1322 (3 hours)  
 Elective (3 hours)

**Total Hours: 16**

#### Spring

CIS 3353: Computer Systems Security (3 hours)  
 CIS 3310: Database Management Systems (3 hours)  
 \*Additional CIS Specialization Course (3 hours)  
 Science Course with Lab (4 hours)  
 RELS Religious Studies (3 hours)

**Total Hours: 16**

### SENIOR YEAR

#### Fall

CIS 3319: Internship in CIS (3 hours)  
 CIS 3360: Computer Science (3 hours)  
 \*Additional CIS Specialization Course (3 hours)  
 Fine Arts (3 hours)  
 Elective (3 hours)

**Total Hours: 15**

#### Spring

CIS 4390: CIS Capstone (3 hours)  
 Any Advanced Course (3000+) (3 hours)  
 DWHP 1200: Dimensions of Wellness (2 hours)  
 PEHP Physical Fitness Course (1 hour)  
 Elective Course (3 hours)

**Total Hours: 12**

**\*Note 1: Specialization options include CIS 3330, CIS 3335, CIS 3345, CIS 3365, CIS 3380, CIS 4370 and CIS 4380**

120 hours needed to complete the B.S. in Computer Information Systems with a Programming track.