2026-27 Academic Year

COMPUTER INFORMATION SYSTEMS > PROGRAMMER/ANALYST

Do you have a strong desire to work on the latest software or make the next best app or video game on the market? If so, consider the computer programming degree program at Wayne State. In the Programmer/Analyst program, you'll learn computer programming and computing theories that will prepare you for a careers in information technology. You will learn principles and concepts of computing along with organizational and business concepts. You'll learn programming fundamentals and gain practical skills in the areas of introductory networking, systems development, hardware, operating systems, and databases. You'll be able to work independently, as well as in groups, across a range of diverse situations. With a computer information systems degree focusing on computer programming, you'll be ready for a wide variety of careers in the IT sector, or you can choose a more specific path in areas such as software engineering and application development.

fast facts

Credit hours: 57

Students must also take 30 credit hours of General Studies courses. A total of 120 credit hours are needed to graduate from WSC. Additional majors or minors can be added to help meet graduation requirements.

Degree options: B.A. or B.S.

Department: Computer Technology and Information Systems

School: Business and Technology

Popular pairings: Business Administration, Computer Science, Networking and Cybersecurity, Web and Mobile App Design

focus on results

Skills Learned

- Scripting languages
- Object-oriented programming
- Procedural programming
- Mainframe technologies
- Project management
- Networking concepts and technologies
- Analysis and design of computer information systems
- Advanced database design and development using SQL
- Business management and leadership

Possible Careers

- Computer programmer
- Software developer
- Application developer
- Web developer
- Systems analyst
- IT administrator
- IT support specialist
- Database administrator
- Computer repair technician
- Computer forensics specialist
- Chief information officer

Types of Employers

- Businesses and corporations
- Software companies
- Computer companies
- Private organizations
- IT companies
- Manufacturing companies
- Banking and financial institutions
- Insurance companies
- Government agencies
- Schools, colleges, and universities
- Non-profit organizations

outside the classroom

Visit www.wsc.edu/clubs to learn more about clubs and organizations on campus.

Activities / Opportunities

- Career Scholars Program
- Programming and robotics competitions
- Workshops and presentations
- Peer tutoring and mentoring
- Service-Learning
- Study Abroad

Clubs / Organizations

- Association for Computing Machinery (ACM)
- SkillsUSA
- Upsilon Pi Epsilon (International Computing Honorary)

Courses and outcomes

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The following courses are required for the program of study described on this sheet. Every effort is made to ensure this information is current, but please be aware that some content may have changed. To develop a plan for registering and taking these courses, please consult the current academic catalog and your advisor.

Program courses

Computer Information Systems Core Courses

CIS 132 Principles of Computing and Information Systems	3
CIS 171 Networking I	3
CIS 360 Software Engineering I	3
CIS 361 Software Engineering II	3
CIS 366 Introduction to Database	3
CIS 372 Computer Hardware and Operating Systems	3
CIS 430 Management Information Systems	3
CIS 480 Seminar in Computer Information Systems	3
CSC 150 Programming Fundamentals I	3
CSC 165 Web Development I	3
CSC 302 Fundamentals of Artificial Intelligence	3
CSC 380 Operating Systems	3

Programmer/Analyst Concentration Courses

CIS 272 Principles of Cybersecurity	3
CIS 462 Software Engineering III	3
CIS 466 Advanced Database	3
CIS 477 Project Management	3
CSC 160 Programming Fundamentals II	3
CSC 365 Python for Automation and Scripting	3
Elective (upper-level CIS or CSC course)	3

Student learning outcomes

1. Apply the foundational concepts of computer information systems
2. Work in team settings found in computer information systems contexts
3. Communicate in professional computer information systems contexts
4. Establish a plan for maintaining professional relevance in computer information systems
5. Apply an appropriate ethical framework to a computer information systems ethical dilemma

computer information systems faculty

Visit www.wsc.edu/computer-technology-information-systems-department to learn more about the Department of Computer Technology and Information Systems.

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