

Many Jobs ... One Degree

Information Science

www.sis.pitt.edu

THE CURRICULUM

The CORE

- ◆ **Introduction to Information Systems & Society** (INFSCI 0010)
- ◆ **Object-Oriented Programming 1 for Information Science** (INFSCI 0017)
- ◆ **Database Management Systems** (INFSCI 1022)
- ◆ **Introduction to Telecom and Networks** (INFSCI 1070)
- ◆ **Information Systems and Analysis** (INFSCI 1024)
- ◆ **Human Factors in System Design** (INFSCI 1044)

The CONCENTRATIONS

Information Systems Concentration

- Object-Oriented Programming 2 for Information Science** (INFSCI 0019)
- Geographic Information Systems** (INFSCI 1068)
- Information Systems Design** (INFSCI 1025)
- Web Services** (TBA)

User-Centered Design Concentration

- User Centered Design** (INFSCI 1052)
- Graphics** (INFSCI 1014)
- Web Programming** (INFSCI 1059)
- Information Visualization** (TBA)

The Networks and Security Concentration

- Applications of Networks** (INFSCI 1071)
- Computer Security** (INFSCI 1074)
- Introduction to Wireless Networks** (INFSCI 1072)
- Application Development for Mobile Devices** (INFSCI 1073)

The CAPSTONE (INFSCI 1085) — *invaluable practical experience*

- Internship with regional industry partners**
- Participate in leading-edge research**

Support Engineer, IBM Corp. • Vice President of Information Resources, AgWeb.com • .NET Architect Evangelist, Micro
so • Contract Advisor, FedEx • Technical Consultant, Sysme Technology • Programmer Analyst, Westinghouse
Ele • Director, Payroll Department Manager, Diocese of Pittsburgh • Project
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Corp. Fund • Principal Software Architect, Panacya • Project Manager, T... • Manager, Information Systems, Sherwin-Williams Co. • Lead Analyst, Wachovia Bank, ... • Graphic Designer, Ntr Inc. • Manager of Systems Administration, Dick's Sporting Goods • Operations Supervisor, Dreyfus
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Health Care Systems Inc. • Marketing Representative, Xerox corp. • Marketing Manager, United States Steel Corp.

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Earn your Bachelor's Degree at the University of Pittsburgh's School of Information Sciences

- Graduates will gain the practical skills essential for careers as system analysts and designers, database managers, network analysts, website designers and software engineers.
- SIS graduates work in companies from small competitive firms to multinational conglomerates. They have careers in financial services, healthcare, judicial systems, private industry, government agencies, education, and communications.
- Students are accepted into the Information Sciences program at the end of their sophomore year.

The course of study is designed to meet the future needs of industry — in fact, industry leaders have guided the development of the program. Students will take a series of core courses which provide the skill sets needed to succeed in industry. These courses cover principles of programming, database systems, networks, systems analysis, and human factors. After completing the core courses, students can further strengthen their skills by participating in the three concentrations:

The **Information Systems concentration** will enable students to use object-oriented design tools to design, build, implement, and test web-based information systems. Courses include object-oriented programming, geographic information systems, system architecture and web services.

The **User-Centered Design concentration** will provide the visual and human-computer interaction skills needed to design and build prototypes of information systems interfaces, as well as to perform usability testing of these systems. Courses offered in conjunction with this concentration include information visualization, web programming, graphics, and user-centered design.

Students who choose the **Networks and Security concentration** will learn how to design, build and test LANs, WANs, and Wireless, Internet, and Web-based networks. This concentration will also examine how to incorporate security protocols into both land-based and wireless networks. Students will be able to take courses in networks, computer security, wireless networks, and mobile applications.

BSIS majors will participate in a “Capstone Experience,” further enhancing their practical skills. Such experiences might include internships with regional industries, assisting with graduate-level research projects, or a self-designed project.

The School of Information Sciences (SIS) at the University of Pittsburgh is one of the nation's pioneering schools in the education of information professionals, with a history that reaches back more than 100 years. Throughout that century, the School has built and maintained a tradition of excellence and innovation in education, research, and professional activities pertaining to the information sciences. The SIS faculty, staff, students and programs – uniquely interdisciplinary, multicultural, and international by design – are dedicated to the building of a global society and an informed citizenship based upon access to reliable and useful information.

412-624-3988 or 800-672-9435

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ising@sis.pitt.edu

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When advising undergraduate students, you may find these talking points to be useful!

What is the Undergraduate Information Science Program about?

The undergraduate program in information science will help students to understand how people seek and create electronic information; how to build, design, and evaluate effective information systems; and how people ultimately transform information into useful knowledge.

Core courses will provide the essential skills in:

- | | |
|-------------|------------------------------------|
| Programming | Database management |
| Networks | Systems analysis and human factors |

Students then can choose one of the industry-driven concentrations:

- | | |
|-----------------------|-----------------------------|
| Information systems | User-centered design |
| Networks and security | Self-designed concentration |

How can I study Information Science at Pitt?

The undergraduate IS program at Pitt is an upper level two-year program that normally begins in the junior year.

Students may also pursue graduate IS studies leading to Masters and Ph.D. degrees.

What kinds of students are interested in Information Science?

Because Information Science is, itself, interdisciplinary, it attracts students from diverse backgrounds and with eclectic interests. The field has always been popular among students with strong analytical skills (especially in math), but technology has become so ubiquitous in society that students with interests in many non-technical disciplines such as business, psychology, media arts, and communications and design find the field particularly attractive.

Students who are motivated by interesting careers in incredibly diverse fields, from health care to national security, are information science majors.

Those excited about a new and promising field gravitate to information science.

What are Pitt's strengths in Information Science?

The University's program has been designed with input from corporate leaders and alumni.

Because Pitt is in a major urban environment which is home to many international and national companies, many IS students receive internships and placement rates routinely exceed 92%.

What is the job market for information sciences?

Demand is outstripping supply. Already companies in Pittsburgh (Alcoa, PPG, U.S. Steel, and Highmark) and nationally (Microsoft, Northrop Grumman, Freddie Mac and others) are demanding IS graduates faster than we can supply them.

Monster.com predicts that of the 10 fastest-growing occupations up to 2010, eight will be computer-related.

In a "Pennsylvanian Workforce 2010" report, the fastest growing sector is expected to be computing and data processing services, projected to grow by almost 24%.

"Employment of computer and information systems managers is expected to grow **16 percent** over the 2006-16 decade, which is faster than the average for all occupations. New applications of technology in the workplace will continue to drive demand for workers, fueling the need for more managers.," according to the Bureau of Labor Statistics' *Occupational Outlook Handbook*.

"The computer scientists and database administrators occupation is expected to grow **37 percent** from 2006 to 2016, much faster than average for all occupations. Employment of these computer specialists is expected to grow as organizations continue to adopt and integrate increasingly sophisticated technologies. Job increases will be driven by very rapid growth in computer systems design and related services, which is projected to be one of the fastest growing industries in the U.S. economy," according to the Bureau of Labor Statistics' *Occupational Outlook Handbook*.

As the global reliance on networked, digital information continues to grow, employers will increasingly be interested in employees who can develop systems to handle their information needs and problems.

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ADMISSION TO THE PROGRAM

Upon completion of 55 credits (includes current term credits), students apply to the Information Science program simply by meeting with their advisor and completing the Undergraduate Academic Program Change Form and a SIS School Transfer Application. You can also apply through the Office of Admissions and Financial Aid at the University of Pittsburgh (www.oafa.pitt.edu).

Deadlines: August 1 for the Fall Term,
 December 1 for the Spring Term,
 April 1 for the Summer Term

A student must have satisfied the following to be considered for admission:

- Completion of 55 credits (includes current term credits)
- GPA is a factor in the admissions process. We also consider your previous coursework and career aspirations
- Information Science GPA at least a 2.75
- Completion of "Introduction to Information, Systems, & Society" (INFSCI 0010) or an equivalent introductory computer course

Other courses may improve the application. Discuss these optional courses with your advisee.

- Business Calculus (MATH 0120) or Calculus 1 (MATH 0220) Or
- Discrete Mathematics (MATH 0400)
- Introduction to Logic (PHIL 0500) or Introduction to Linguistics (LING 1000)
- Statistics (STAT 0200 or STAT 1000 or STAT 1100)
- Introduction to Psychology (Psych 10 or Psych 12)

Other INFSCI Courses:

- Human Factors in System Design (INFSCI 1044)
- Introduction to Telecommunications & Networks (INFSCI 1070)
- Database Management Systems (INFSCI 1022)