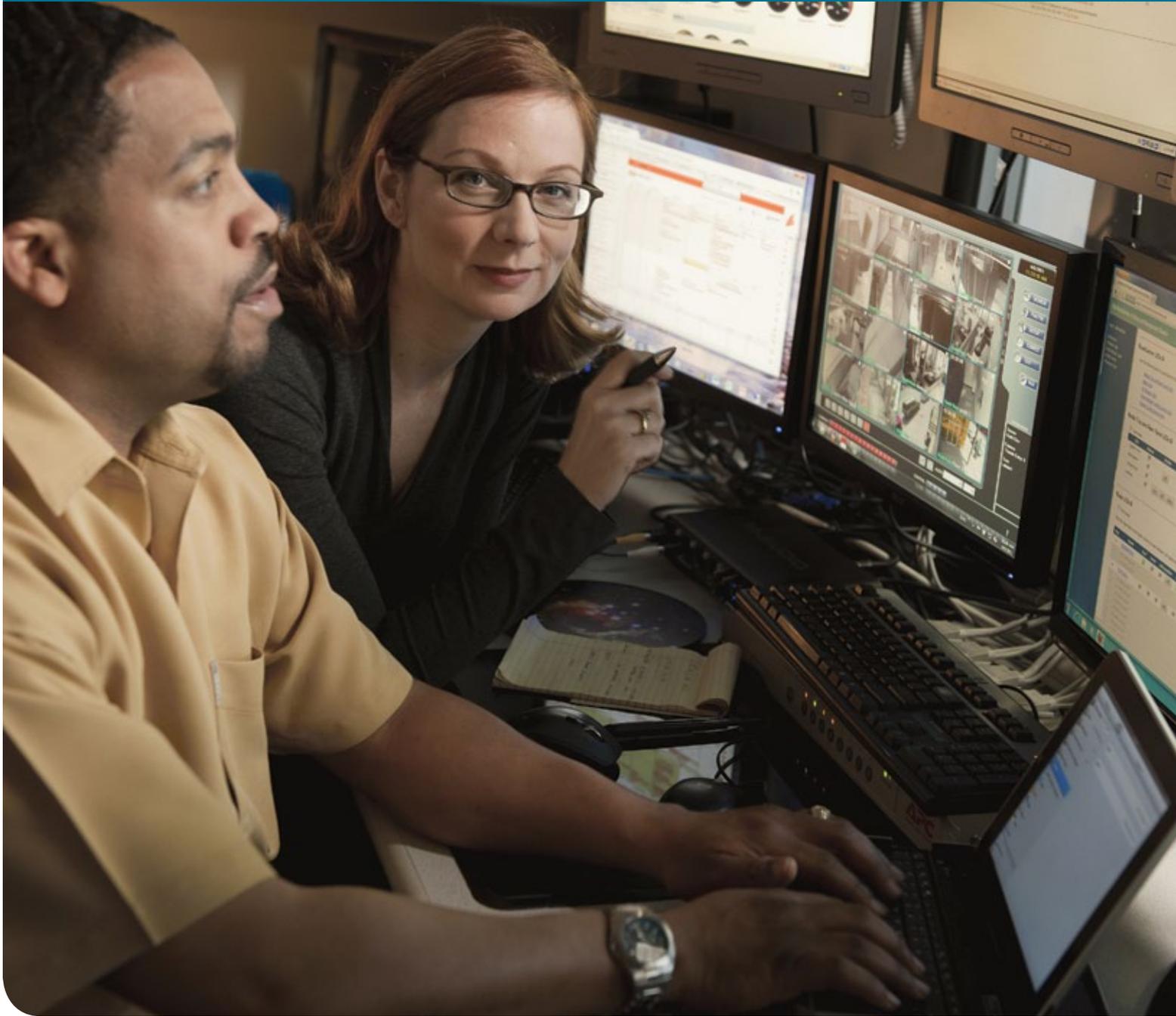


# WALDEN UNIVERSITY'S GUIDE FOR INFORMATION SYSTEMS AND TECHNOLOGY CAREERS



**WALDEN UNIVERSITY**  
*A higher degree. A higher purpose.*

# DISCOVER CAREER OPPORTUNITIES IN THE GROWING FIELDS OF INFORMATION SYSTEMS AND INFORMATION TECHNOLOGY



Rapid advances in technology are creating new and exciting career opportunities for professionals with strong technical, analytical, management, and leadership skills. Because technology is one of the fastest-growing occupations in the U.S. economy, these professionals are in high demand.\*

## Employers are seeking information technology professionals who have the skills needed for:

- Programming, including systems languages such as .NET, Java, MySQL, PHP, Silverlight, and Flex.
- Integrating global systems through enterprise resource planning (ERP) and related software.
- Establishing security systems that prevent fraud and safeguard information and networks.
- Supporting infrastructure, including upgrading operating systems and staffing help desks.
- Networking complex systems, virtualization software, and cloud computing.
- Installing, updating, and supporting systems and software for employees as well as corporate entities.

\*Bureau of Labor Statistics, U.S. Department of Labor, "Employment Outlook: 2004–14: Occupational Employment Projections to 2014," on the Internet at <http://www.bls.gov/opub/mlr/2005/11/art5full.pdf> (viewed online April 27, 2011).

Career positions may require additional experience, training, or other factors beyond the successful completion of the degree programs listed in this guide.

## Did You Know . . .

Positions for computer systems, network, and database administrators are expected to increase by 30%. Leading the way, with 53% projected growth, are opportunities for network systems analysts and data analysts.\*

\*Bureau of Labor Statistics, U.S. Department of Labor, "Occupational Outlook Handbook, 2010–11 Edition: Overview of the 2008–18 Projections," on the Internet at [www.bls.gov/oco/oco2003.htm#occupation](http://www.bls.gov/oco/oco2003.htm#occupation) (viewed online March 19, 2011).

# WHICH CAREER PATH IS RIGHT FOR YOU—INFORMATION TECHNOLOGY OR INFORMATION SYSTEMS?

Although many people use the term “IT” broadly, the field of technology actually consists of two distinct areas—information technology (IT) and information systems (IS). You can choose between these two paths to pursue your degree and your career.

## Information Technology

As an IT professional, you’ll focus on the technology used to convey information. You’ll explore how to address an organization’s technology needs, including systems and networks. Your responsibilities as an IT professional may include:

- Selecting, configuring, maintaining, and upgrading hardware and software products.
- Administering and securing networks.
- Overseeing data and other communication systems.
- Planning and managing the technology life cycle.

## Information Systems

As an IS professional, you’ll focus on the information needs of an organization and use technology as a means to generate, process, and share information. You’ll discover how information systems can serve organizations, how to integrate IT solutions with business processes, and how to communicate effectively with both technical and management staff. Your responsibilities as an IS professional may include:

- Determining systems requirements and specifications.
- Designing communication and collaboration systems.
- Customizing databases and other applications.
- Guiding the deployment of new systems.

The table below follows an information systems project from conception to implementation. It displays each step of the process and indicates who is responsible for that step, the IS or the IT professional.

ACTIVITY		IS	IT
Conceptual Design	Interview people to learn how the organization works	✓	
	Study information flows within the company	✓	
	Gather data on the use of an existing information system	✓	
	Gather data on the use of the corporate network		✓
	Analyze capacity use and limits of Web and database servers		✓
	Create conceptual design of a new information system	✓	
System Design	Identify resources needed for the new system	✓	
	Analyze the network capacity needed for the new system		✓
	Design new system software	✓	
	Design a network to support the new system		✓
Implementation	Implement new system software		✓
	Physically install the new machines and network		✓
	Configure the new machines and network		✓
	Install and configure the new database server		✓
	Install and configure new Web servers		✓
Release and Testing	Install and test the new software		✓
	Train end-users on the new information system	✓	
	Provide help-desk support to users of the new system		✓
	Monitor performance and usage of the network and servers		✓
	Evaluate people’s use of the new system	✓	
	Evaluate the new system’s impact on the organization	✓	
Operations	Evaluate and set data security policies	✓	
	Monitor data and system security		✓
	Analyze data from security incidents		✓
	Respond to security incidents	✓	✓

Career positions may require additional experience, training, or other factors beyond the successful completion of the degree programs listed in this guide. Find information on costs, occupation types, completion rates, and median loan debt for Walden’s School of Information Systems and Technology programs [www.WaldenU.edu/programdata](http://www.WaldenU.edu/programdata).

## CHOOSING THE RIGHT DEGREE FOR AN IT CAREER

Career Goals	Program Options	Description
<ul style="list-style-type: none"> <li>• Applications development</li> <li>• Consulting and systems integration</li> <li>• Data administration</li> <li>• Quality assurance</li> <li>• Internet and e-commerce</li> <li>• Networking</li> <li>• Operations</li> <li>• Security</li> <li>• Software development</li> </ul>	<p><b>B.S. in Information Technology</b> <i>Specializations:</i></p> <ul style="list-style-type: none"> <li>• Application Development, Testing, and Quality Assurance</li> <li>• Database Administration and Data Center Operations</li> <li>• Healthcare Informatics</li> <li>• Networking and Operations</li> <li>• Security and Forensics</li> <li>• Self-Designed</li> <li>• Web and Mobile Applications Development</li> </ul> <p><b>M.S. in Information Technology</b> <i>Specializations:</i></p> <ul style="list-style-type: none"> <li>• Information Security</li> <li>• Software Engineering</li> </ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Application programming (Java, Python)</li> <li>• Server programming (JSP, PHP, SQL, etc.)</li> <li>• Network hardware programming and operation</li> <li>• Server operations</li> <li>• Use of network monitoring tools</li> </ul> <p><b>Estimated Program Length</b> Bachelor's: 4.5 years, including capstone course Master's: Two years, including capstone course</p>

## CHOOSING THE RIGHT DEGREE FOR AN IS CAREER

Career Goals	Program Options	Description
<ul style="list-style-type: none"> <li>• Applications development</li> <li>• Consulting and systems integration</li> <li>• Data administration</li> <li>• Quality assurance</li> <li>• Operations</li> <li>• Software development</li> <li>• Web development and e-commerce</li> <li>• Networking and telecommunications</li> <li>• Security</li> <li>• Technical support</li> </ul>	<p><b>B.S. in Computer Information Systems</b> <i>Specializations:</i></p> <ul style="list-style-type: none"> <li>• Healthcare Informatics</li> <li>• Human Computer Interaction</li> <li>• Information Systems Management</li> <li>• Information Systems Security</li> <li>• New Media Communication Technologies</li> <li>• Online Work and Communities</li> <li>• Self-Designed</li> <li>• Web and Mobile Applications Design</li> </ul> <p><b>M.S. in Information Systems</b></p>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Systems analysis and design</li> <li>• Network design</li> <li>• Application design and development</li> <li>• User interface design</li> <li>• Information assurance</li> </ul> <p><b>Estimated Program Length</b> Bachelor's: 4.5 years, including capstone course Master's: Two years, including capstone course</p>

Career positions may require additional experience, training, or other factors beyond the successful completion of the degree programs listed in this guide.

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# CHOOSING THE RIGHT DEGREE FOR AN IS MANAGEMENT CAREER

Career Goals	Program Options	Description
<p>Senior management and leadership positions in:</p> <ul style="list-style-type: none"> <li>• Applications development</li> <li>• Consulting and systems integration</li> <li>• Data administration</li> <li>• Quality assurance</li> <li>• Networking</li> <li>• Operations</li> <li>• Software development</li> <li>• Technical services</li> </ul>	<p><b>Master of Information Systems Management</b></p> <p><i>Specializations:</i></p> <ul style="list-style-type: none"> <li>• Business Information Management</li> <li>• Enterprise Information Security</li> <li>• Health Informatics</li> <li>• IT Strategy and Governance</li> <li>• Managing Global Software and Service Supply Chains</li> <li>• Project Management</li> </ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Project management</li> <li>• Supply chain management</li> <li>• Team management</li> <li>• Budgeting and scheduling</li> <li>• Policy creation</li> <li>• Organizational governance</li> </ul> <p><b>Estimated Program Length</b></p> <p>Master's: Two years, including capstone course</p> <p>Doctorate: Time to completion may vary by student, depending on individual progress and credits transferred, if applicable.</p>
<p>You can work in a variety of roles within private and public sectors, consulting firms, and academia. Potential career options may include:</p> <ul style="list-style-type: none"> <li>• Chief information officer</li> <li>• Chief technology officer</li> <li>• Entrepreneur</li> <li>• Information technology consultant</li> <li>• Information technology strategist</li> <li>• Higher education faculty or administrator</li> <li>• Technical manager/director</li> </ul>	<p><b>Doctor of Information Technology</b></p>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Strategic leadership</li> <li>• Research</li> <li>• Project Management</li> <li>• Compliance</li> <li>• Corporate Responsibility</li> <li>• Design and integration of IT systems</li> </ul> <p><b>Estimated Program Length</b></p> <p>Time to completion may vary by student, depending on individual progress and credits transferred, if applicable.</p>

## Graduate Certificate Options

A graduate certificate provides another way to gain professional knowledge applicable to a career in technology. In addition to master's degree programs, Walden offers graduate certificates in:

### • Project Management

Choose from two certificate programs to help enhance your strategic perspective and effectiveness as a project manager.

### • Information Systems

Gain technology and programming knowledge that can help advance your career.

Credits earned from these certificates may be applied toward a Walden master's degree.

Career positions may require additional experience, training, or other factors beyond the successful completion of the degree programs listed in this guide.

Find information on costs, occupation types, completion rates, and median loan debt for Walden's School of Information Systems and Technology programs [www.WaldenU.edu/programdata](http://www.WaldenU.edu/programdata).

### Did You Know . . .

Money magazine's 2010 list of the top 100 careers for high pay and growth prospects included 26 related to information technology. Two of these careers—software architect and database administrator—were among the top 10, and eight others were in the top 30.\*

\*CNNMoney.com, "Best Jobs in America: Sectors," on the Internet at [www.cnnmoney.com/magazines/moneymag/bestjobs/2010/sectors](http://www.cnnmoney.com/magazines/moneymag/bestjobs/2010/sectors) (viewed online April 25, 2011).

# WIDE-RANGING POTENTIAL CAREER OPPORTUNITIES

A variety of organizations, from startup companies to Fortune 500 firms, are seeking knowledgeable professionals who have expertise in information technology and information systems.

If you have the right skills and background, you can pursue roles at organizations that offer positions such as:

## Applications Development

(Salary range: \$48,500–\$125,250 annually\*)

Create, improve, and maintain business applications.

- Applications developer
- Systems analyst
- Project leader
- Programmer analyst

## Consulting

(Salary range: \$63,000–\$148,000 annually\*)

Help organizations meet their technology needs by designing effective computer systems and networks.

- Staff consultant
- IT auditor
- Project manager

## Data and Database Administration

(Salary range: \$58,250–\$130,000 annually\*)

Develop, maintain, and manipulate data to support business goals.

- Database manager
- Database administrator
- Data analyst
- Data architect

## Quality Assurance and Testing

(Salary range: \$53,250–\$103,500 annually\*)

Use technology to create and implement processes to ensure that products meet desired standards.

- Quality assurance analyst
- Quality assurance manager

## Internet and E-Commerce

(Salary range: \$50,750–\$110,750 annually\*)

Create Web pages and integrate them with database systems.

- Web developer
- Web administrator
- Web consultant
- E-commerce analyst

## Networking and Telecommunications

(Salary range: \$50,750–\$129,250 annually\*)

Develop and maintain reliable networks and devices to communicate data and information.

- Network manager
- Wireless network administrator
- Network security administrator
- Telecommunications manager

## Operations

(Salary range: \$32,000–\$81,750 annually\*)

Ensure that computer systems operate continuously and efficiently.

- Operations manager
- Computer operator
- Mainframe systems programmer

## Security

(Salary range: \$81,000–\$137,750 annually\*)

Develop effective policies and processes to protect data and computer resources.

- Data security analyst
- Systems security administrator
- Information systems security manager
- Network security administrator

## Software Development

(Salary range: \$65,750–\$119,000 annually\*)

Create and manage software for business and consumer use.

- Software developer
- Software engineer
- Product manager
- Programmer analyst

## Technical Services and Support

(Salary range: \$29,000–\$106,000 annually\*)

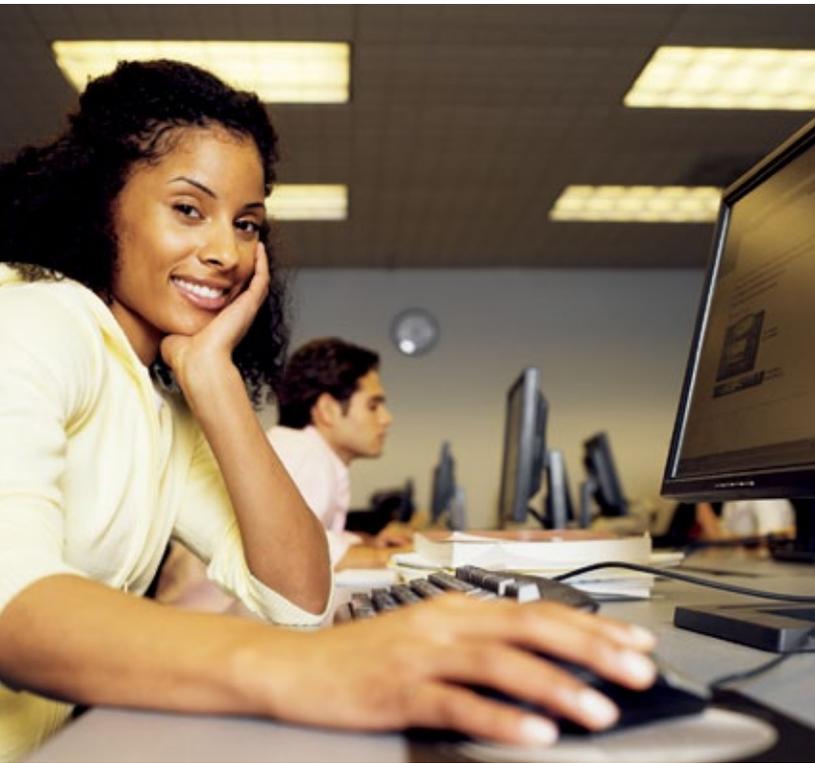
Respond to computer hardware and software problems.

- Systems administrator
- Systems support analyst
- Systems engineer
- Help desk administrator

\*Robert Half Technology Salary Center, "Salary Guide 2011," on the Internet at [www.roberthalftechnology.com/SalaryCenter](http://www.roberthalftechnology.com/SalaryCenter) (viewed online April 25, 2011).

Career positions may require additional experience, training, or other factors beyond the successful completion of the degree programs listed in this guide.

# CHOOSE WALDEN



## Program Options

Choose a program, specialization, or concentration that best fits your skills and career goals. Walden offers a variety of information technology and information systems degree programs, specializations, and concentrations that can help you achieve your learning objectives.

## Real-World Knowledge

You know how important it is to collaborate as a team, communicate effectively, and understand the perspective of end-users. Our courses focus on helping you develop these career-oriented skills so you can then apply them immediately to your work.

## Flexible Learning Format

In addition to offering you the flexibility of online study, Walden incorporates a variety of media, case studies, discussion formats, library resources, and virtual laboratories in your IT courses. This online format helps you gain practical experience working effectively as part of a geographically dispersed, multidisciplinary project team, a skill that employers value highly.



Some programs offer MobileLearn<sup>SM</sup>, which lets you choose when and how to learn. Gain direct access to course content using your laptop, smartphone, or other hand-held device to download videos, texts, lectures, and other course content.

## The Walden Advantage

For more than 40 years, Walden University, an accredited institution, has been serving the needs of working professionals by offering quality distance-learning education. As a Walden student, you can benefit from a flexible online learning environment and relevant programs that provide knowledge and skills you can apply immediately in the field.

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Walden University is accredited by The Higher Learning Commission and a member of the North Central Association, [www.ncahlc.org](http://www.ncahlc.org); 1-312-263-0456.