



## COMPUTER SUPPORT SPECIALIST

### TARGET OCCUPATION PROFILE

Jobs in 2012	Expected Growth by 2022	Yearly Openings	Entry Level Wage	Mid-Level Wage	Experienced Wage	Average Yearly Salary
9,784	21%	459	\$16	\$26	\$45	\$58,000

#### Computer Support Specialists

Sources: EMSI 2012, O\*NET, Illinois WorkNet, American Community Survey 2009-2011 for Cook Co. Category includes several SOC's from several recent iterations of the coding system, including 15-1151 Computer User Support Specialists, 15-1152 Computer Network Support Specialist, and 15-1041 Computer Support Specialists.

#### JOB DUTIES

##### User Support

- Set up equipment and install software for use by employee/customer
- Oversee daily performance of computer systems and train users in proper use of equipment
- Help users by answering questions about computer operations and fixing problems

##### Network Support

- Install and configure local area network, wide area network, wireless routers, etc. and evaluate/maintain their performance.
- Install security software and configure security settings and permissions for users.

Visit [www.onetonline.com](http://www.onetonline.com) for more information about these occupations.

#### IS THIS JOB A GOOD FIT FOR ME?

Education	Computer support specialists are generally required to have an associate's degree or a postsecondary vocational award.
Skills/Aptitude	Depending on the employer, these workers will need familiarity with different software (for administration, operating systems, desktop communication, network monitoring, etc. Employers also seek detail oriented individuals with excellent customer service and communication skills.
Certifications	Certification is not required, but hardware and software manufacturers offer voluntary certifications on their products.
Other Requirements	May work evenings and weekends to respond to computer issues. Involves a lot of telephone and email communication.

#### ARE THERE OPPORTUNITIES FOR ADVANCEMENT?

Computer support specialists may gain additional skills and move into other IT related positions, such as computer programming. Others may open their own computer support consulting business.

#### WHERE CAN I GO TO GET TRAINING?

Visit [www.chicagolandwiatraining.com](http://www.chicagolandwiatraining.com) to search for WIA-certified training providers in Cook County, based on occupation, program cost, location, completion rate, employment, and wages.

#### WHO ARE THE LARGEST EMPLOYERS IN THE INDUSTRY?

Custom computer programming services (Forsythe Macarthur Associates, Inc.), computer systems design services (The Revere Group, Ltd.), corporate offices

#### WHAT OTHER JOB TITLES SHOULD I LOOK FOR IN HELP WANTED ADS?

IT specialist, computer technician, help desk analyst, technical support specialist, network technician





## COMPUTER SYSTEMS ANALYST TARGET OCCUPATION PROFILE

### Computer Programmers

Jobs in 2012	Expected Growth by 2022	Yearly Openings	Entry Level Wage	Mid-Level Wage	Experienced Wage	Average Yearly Salary
6,845	25%	223	\$21	\$34	\$54	\$74,100

Sources: EMSI 2012, O\*NET, Illinois WorkNet, American Community Survey 2009-2011 for Cook Co. Category includes SOC 15-1121.

### JOB DUTIES

- Determine client information processing or computation needs, and determine software and hardware to address the needs.
- Coordinate the installation of computer programs and systems, and monitor and maintain their performance
- Correct errors, often by correcting underlying code
- Link compatible systems to facilitate information sharing
- Assist users with computer related problems

Visit [www.onetonline.com](http://www.onetonline.com) for more information about these occupations.

### IS THIS JOB A GOOD FIT FOR ME?

Education	Computer support specialists are generally required to have a bachelor's degree, but in some cases experience can substitute for education.
Skills/Aptitude	Knowledge of computers and electronics, critical thinking and problem solving skills. May require a lot of communication with coworkers or outside clients.
Certifications	Some employers seek to hire individuals with certifications in systems such as Cisco, IBM, Microsoft, HP, or Alcatel-Lucent.
Other Requirements	The job may involve evening and weekend hours when responding to computer related issues. The job also requires sitting for long stretches.

### ARE THERE OPPORTUNITIES FOR ADVANCEMENT?

Systems analysts with experience can begin to work with larger and more complex systems, and perhaps move into supervisory positions.

### WHERE CAN I GO TO GET TRAINING?

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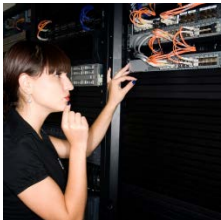
### WHO ARE THE LARGEST EMPLOYERS IN THE INDUSTRY?

Custom computer programming services (Forsythe Macarthur Associates, Inc.), computer systems design services (The Revere Group, Ltd.), corporate offices, management consulting (PWC's Diamond Advisory Services), hospitals

### WHAT OTHER JOB TITLES SHOULD I LOOK FOR IN HELP WANTED ADS?

Computer/information systems analyst, applications analyst, systems engineer, business analyst





## DATABASE, NETWORK, or SYSTEMS ADMINISTRATOR TARGET OCCUPATION PROFILE

### Database Administrators

### Network and Computer Systems Administrators

	Jobs in 2012	Expected Growth by 2022	Yearly Openings	Entry Level Wage	Mid-Level Wage	Experienced Wage	Average Yearly Salary
Database Administrators	2,410	27%	106	\$24	\$37-\$2	\$57-59	\$80,400-\$86,300
Network and Computer Systems Administrators	6,105	28%	271				

Sources: EMSI 2012, O\*NET, Illinois WorkNet, American Community Survey 2009-2011 for Cook Co. Category includes SOC 15-1141 and 15-1142.

### JOB DUTIES

#### Database administrators

- Coordinate database development and implement security measures to safeguard data
- Test and modify databases
- Develop standards for database use and implement user access settings.

#### Network and systems administrators

- Maintain computer networks, hardware, and software, including backups and recovery in emergency situations.
- Troubleshoot problems and make repairs.
- Monitor computer system performance and manage access and use.

Visit [www.onetonline.com](http://www.onetonline.com) for more information about these occupations.

### IS THIS JOB A GOOD FIT FOR ME?

Education	Computer support specialists are generally required to have a bachelor's degree, but in some cases experience can substitute for education.
Skills/Aptitude	Depending on the employer, these workers will need familiarity with different software (for database management, operating systems, administration, network monitoring, etc.) Employers also seek logical and detail oriented individuals with a knowledge of internet security.
Certifications	Certification is not required, but hardware and software manufacturers offer voluntary certifications on their products. Several schools offer certification in business information systems, data management, or programming languages.
Other Requirements	Involves repetition of physical and mental activities, May work full time, or as temporary workers or consultants.

### ARE THERE OPPORTUNITIES FOR ADVANCEMENT?

When starting out, computer administrators work under a supervisor. But as they gain experience, they are put in charge of larger projects and may take on a supervisory role.

### WHERE CAN I GO TO GET TRAINING?

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### WHO ARE THE LARGEST EMPLOYERS IN THE INDUSTRY?

Corporate offices, custom computer programming services (Forsythe Macarthur Associates, Inc.), computer systems design services (The Revere Group, Ltd.),

### WHAT OTHER JOB TITLES SHOULD I LOOK FOR IN HELP WANTED ADS?

Database analyst/coordinator/programmer, information systems manager, MIS director, LAN administrator

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## NETWORK SECURITY & WEB DEVELOPER TARGET OCCUPATION PROFILE

### Info Security Analysts, Web Developers, and Computer Network Architects

Jobs in 2012	Expected Growth by 2022	Yearly Openings	Entry Level Wage	Mid-Level Wage	Experienced Wage	Average Yearly Salary
3,924	32%	184	\$24	\$40	\$64	\$86,300

Sources: EMSI 2012, O\*NET, Illinois WorkNet, American Community Survey 2009-2011 for Cook Co. Category includes several SOC's from different iterations of the coding system over the past several years, including 15-1122 Information Security Analysts, 15-1134 Web Developers, 15-1143 Computer Network Architects and 15-1081 Network Systems and Data Communications Analysts.

### JOB DUTIES

#### Security

- Design and implement measures to encrypt or protect confidential information in files or during data transfers.
- Monitor and address computer security violations.

#### Web Developers

- Analyze user needs in order to design and build websites.
- Maintain site, including updating content and correcting problems.

#### Network Architects

- Determine network requirements (hardware, software, platforms, bandwidths, etc.)
- Coordinate network design, operations, and maintenance.

Visit [www.onetonline.com](http://www.onetonline.com) for more information about these occupations.

### IS THIS JOB A GOOD FIT FOR ME?

Education	Network architects generally have bachelor's degrees, but experience can be a substitute for educational attainment. Security analysts and web developers, however, are often able to find employment after earning an associate's degree or a postsecondary vocational credential.
Skills/Aptitude	Depending on the employer, these workers will need familiarity with different software (for administration, web platform development, graphics, configuration management, network security and monitoring, etc.) or different programming languages. Employers also seek logical thinkers and good communicators who can multi-task and perform well under pressure.
Certifications	Certification is not required, but hardware and software manufacturers offer voluntary certifications on their products.
Other Requirements	IT positions involve long stretches of sitting, and require staying up-to-date on the latest technology.

### ARE THERE OPPORTUNITIES FOR ADVANCEMENT?

Security analysts can advance to other computer related occupations such as systems analyst. Web developers and computer network architects with skills and experience can take on supervisory roles.

### WHERE CAN I GO TO GET TRAINING?

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### WHO ARE THE LARGEST EMPLOYERS IN THE INDUSTRY?

Custom computer programming services (Forsythe Macarthur Associates, Inc.), computer systems design services (The Revere Group, Ltd.), wired telecommunications carriers (AT&T)

### WHAT OTHER JOB TITLES SHOULD I LOOK FOR IN HELP WANTED ADS?

Security administrator or specialist; webmaster or web designer; telecommunications engineering specialist

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## SOFTWARE DEVELOPER & PROGRAMMER TARGET OCCUPATION PROFILE

### Computer Programmers

### Software Developers, Applications

### Software Developers, Systems Software

	Jobs in 2012	Expected Growth by 2022	Yearly Openings	Entry Level Wage	Mid-Level Wage	Experienced Wage	Average Yearly Salary
Computer Programmers	9,429	6%	280	\$21	\$36	\$59	\$80,900
Software Developers, Applications	8,980	26%	328	\$30	\$46	\$74	\$100,600
Software Developers, Systems Software	7,322	31%	300	\$30	\$46	\$65	\$96,400

Sources: EMSI 2012, O\*NET, Illinois WorkNet, American Community Survey 2009-2011 for Cook Co. Category includes SOC 15-1131, -1132, -1133.

### JOB DUTIES

#### Programmers

- Write computer programs or software to be used for specific purposes (i.e. storing data, controlling equipment).
- Conduct trials and fix errors; continually improve performance
- Document development and updates so the work can be re-created or understood by others.

Visit [www.onetonline.com](http://www.onetonline.com) for more information about these occupations.

#### Developers

- Analyze use needs and requirements and plan development or modification software systems
- Coordinate installation of new software or modification of existing system
- Supervise programmers and technicians to ensure proper installation and maintenance.

### IS THIS JOB A GOOD FIT FOR ME?

Education	Computer support specialists are generally required to have a bachelor's degree, but in some cases experience can substitute for education.
Skills/Aptitude	Depending on the job, these workers will need familiarity with different programming languages (C++, Java, etc.) and software (for program testing, development, etc.) Employers seek detail oriented, logical workers with patience, persistence, and ability to perform under pressure.
Certifications	Certification is not required, but hardware and software manufacturers offer voluntary certifications on their products. Several schools offer certification in programming languages.
Other Requirements	These workers often work alone for long stretches. Telecommuting opportunities may exist, as well as opportunities for consulting or project-based work.

### ARE THERE OPPORTUNITIES FOR ADVANCEMENT?

Programmers may gain experience and training and move into systems programming; they may gain business experience and become systems analysts; or they may work in multimedia or internet technology.

### WHERE CAN I GO TO GET TRAINING?

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### WHO ARE THE LARGEST EMPLOYERS IN THE INDUSTRY?

Custom computer programming services (Forsythe Macarthur Associates, Inc.), computer systems design services (The Revere Group, Ltd.), corporate offices, management consulting (PWC's Diamond Advisory Services)

### WHAT OTHER JOB TITLES SHOULD I LOOK FOR IN HELP WANTED ADS?

Programmer analyst, Java developer, software engineer, business systems analyst

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