



Tech Support

Occupational Profile for CUNY Kingsborough Community College

SUMMER 2016

What is Tech Support? This is a service that offers help and advice to people who use computers and related devices. Tech support staff install hardware, software or peripheral equipment such as printers, fax machines or copiers, and perform minor repairs when necessary. They also monitor the performance of computer systems. To promote efficiency, they build on best practices through maintaining records of daily communications, problems and remedial actions taken. They may refer unresolved hardware or software problems to higher level IT technicians or vendors.

Tech support jobs by the numbers:

- The **median pay** in NYC is **\$58,960**.¹
- There are **16,470 jobs** in New York City.²
- Between 2012 and 2022, these jobs are **projected to grow by 21.9 percent**.³
- There were **2,279 job advertisements** posted online within the last 12 months.⁴

Top titles. Top titles advertised by employers are mostly general, like IT Technician, IT Assistant, and IT Specialist. Desktop Support followed, and then Help Desk.⁵

As a rule of thumb, the titles of these positions usually begin with “IT,” “help desk,” “desktop support” or some combination of the three, and end with “Technician,” “Analyst” or “Specialist.”⁶

Where do they work? Virtually every business and organization requires some degree of technical support. Depending on its size and technology needs, a business may provide tech support in-house or contract out this function to vendors known as “Managed Service Providers” (“MSPs” for short). Top industries where tech support workers are most likely to work include computer systems design and related services, colleges and universities, and elementary and secondary schools. They are also commonly found in company headquarters, public administration, legal services, and hospitals.⁷

Top employers: Within the past 12 months, employers who posted the most ads online for tech support positions in New York City include Cynet Systems, Open Systems Technologies, Columbia University, Brightstack Technologies, Nyctss, Operation IT, CUNY, TD Bank, CBS Broadcasting and Integrated Support Strategies.⁸

Who enjoys working in tech support? Tech support involves working with others in order to resolve technical issues. Because users who experience problems with their computers or other devices are often upset, it is critical for tech support staff to calm them, instill confidence, and explain things in a nontechnical way. To do this successfully, they must be patient and self-assured. People who are tinkerers and get

¹ “Computer User Support Specialist, SOC 15-1151, New York State Department of Labor (NYS DOL), Occupational Employment Statistics (OES), 2015.

² Computer User Support Specialist, NYSDOL OES.

³ Computer User Support Specialist, NYSDOL, Long-Term Occupational Employment Projections, New York City region, 2012-2022.

⁴ Period ranges from March 31, 2015 to March 31, 2016. Source: Burning Glass Technologies, Labor Insights.

⁵ This includes a data feed of online work histories maintained by Payscale.com and supplied by Monster Government Solutions with a starting occupation of Computer User Support Specialist, SOC 15-1151.

⁶ Labor Insights 2016 and O*NET OnLine.

⁷ NYSDOL, Staffing Patterns, 2015.

⁸ Labor Insights.



satisfaction from helping others may be a natural fit for this type of work.

What qualifications do they need?⁹ Employers prefer candidates with:

EXPERIENCE. Practical experience, especially with installation, troubleshooting and repair, is necessary.

EDUCATION AND TECHNICAL TRAINING. A high school diploma or equivalent plus an industry-recognized certification such as CompTIA's A+ or Network + is preferred. College coursework or a degree in Computer Information Systems or a related field gives jobseekers a competitive advantage, plus it can help them to accelerate a career in this field.

RELEVANT FIELDS OF STUDY. Tech support is one of many disciplines within technology, and there are three fields of study that best translate into tech support careers: Computer Information Systems; Computer Science; and Information/Computer Technology.

Computer Information Systems (CIS). A CIS degree is valuable to employers because it focuses on the practical applications of technology within business environments by teaching students how technology works and how to use it to benefit a company.¹⁰ As an indication of its importance within the business domain, of the 12 CIS programs within the CUNY system, three-quarters are housed in business schools or divisions.

Computer Science (CS). Computer Science is more theoretical and it is grounded in math, physics and engineering. Computer Science teaches computer operating systems, data structures and algorithms, programming, artificial intelligence, computer

networking, security, computer architecture and database design.¹¹ It gives students the theoretical framework and applied technical skills to install, use and maintain the hardware and software products businesses typically use. It also forms a broad foundation for entry into other technology disciplines. CUNY offers nine CS programs and most are housed in STEM-oriented divisions and schools. This seems a natural fit given its roots in math and science.

Computer/Information Technology (IT). In this field, students learn about existing operating systems, software and applications and how to form a network that serves business needs out of these building blocks.¹² Four out of six CUNY computer/information are housed in STEM-oriented schools or division.

Other popular fields of study within technology concern engineering, networking and web development, to name a few. Each of these may also have market value in tech support, but they are more appropriate for students seeking careers that specialize within these disciplines, which tend to have greater education demands for entry.

⁹ Payscale data and Table 1.11: Educational attainment for workers 25 years and older, U.S. B.L.S., December 2015.

¹⁰ Computer Science Degree Hub: What is the Difference Between a Computer Science (CS) Degree and a Computer Information Systems (CIS) Degree? <http://www.computersciencedegreehub.com/faq/difference-computer-science-degree-computer-information-systems-cis-degree/>

<http://www.computersciencedegreehub.com/faq/difference-computer-science-degree-computer-information-systems-cis-degree/>

¹¹ Computer Science Degree Hub.

¹² Difference Between a Computer Science & Information Technology Degree. King University Online. <http://online.king.edu/information-technology/difference-between-a-computer-science-information-technology-degree/>



CUNY capacity.¹³ The CUNY system offers the following relevant programs:

- 8** Industry-recognized certifications (CompTIA and Cisco)
- 1** Credit-bearing certification
- 1** Certificate of completion
- 13** Relevant 2-year degree programs: 5 CIS; 3 CS; and 5
- 14** Relevant 4-year degree programs: 7 CIS; 6 CS; and 1

For details see **Appendix A: CUNY Offerings**.

NYC capacity outside of CUNY.¹⁴

- 2** Industry-recognized certifications
- 2** Credit-bearing certifications
- 1** Certificate of completion
- 6** 2-year degree programs: 1 CS; 5 IT
- 19** 4-year degree programs: 9 CIS; 8 CS; 2 IT

For details see **Appendix B: Offerings Outside CUNY**.

What other qualities do employers seek?¹⁵

- Team player
- Strong written, verbal and computer skills
- Positive attitude
- Customer service skills
- Ability to problem solve

How is the work organized and what talent requirements follow?

FUNCTIONS

“Help desk” and “Desktop Support” are frequently advertised titles in this field, but they are not one in the same. *Help desk* jobs normally involve telephone or online requests for assistance, and assistance is provided using these or other vehicles, such as remote-control tools. *Desktop*

support can be remote, but it usually involves in-person, face-to-face assistance.

SETTINGS

Firm size also influences tech support jobs. Smaller firms might require tech support staff to cover a wider range of activities, while larger firms may offer more opportunity for advancement and specialization.

LEVELS OF RESPONSIBILITY

Work in this field tends to be tiered. At the Tier 1 level, tech support workers field initial inquiries and manage relatively simple and basic hardware, software or network issues. Unresolved problems are referred to the Tier 2 technician.¹⁶ Technicians at Tiers 2 and 3 troubleshoot more complex system and application problems, identify trends in issue reporting and research prevention techniques.

Entry-Level. Entry level positions in tech support include Tier 1 Help Desk Analyst/Technician or IT Assistant. These jobs require a high school diploma or equivalent plus industry-recognized certifications, such as CompTIA’s A+ and Network+. In addition to technical skills, employers are also looking for candidates with customer service experience, strong communication skills, a positive attitude and an ability to problem solve.

Mid-Level. To be promoted to mid-level work, workers must have a greater depth of knowledge. At this level, employers strongly prefer additional education, especially an associate degree in a relevant field. Many also seek more advanced certifications such as Network+, Cisco Certified Network Associate (CCNA) or Professional (CCNP), or Microsoft Certified Solutions Associate (MCSA).

¹³ This analysis is informed by the Integrated Postsecondary Education Data System (IPEDS). It concerns postsecondary programs that actively participated in federal student financial aid last year. Understanding there may be some relevant programs that have since come online while others may have recently closed, there may be other relevant offerings within CUNY that are omitted from this discussion.

¹⁴ This analysis is also informed by IPEDS.

¹⁵ O*NET OnLine and NYCLMIS-facilitated employer information interviews.

¹⁶ “A day in the life of a help desk analyst.” Robert Half Technology. December, 2015.

<https://www.roberthalf.com/technology/blog/a-day-in-the-life-of-a-help-desk-analyst>



Some of these jobs include supervisory responsibilities and more detailed knowledge on both the technical and project management sides. Sometimes, tech support workers begin to specialize, for example, into network/server support or workstation/desktop support. If the help desk is contracted out, some people might specialize within a particular industry.

Mid-High Level. Middle to high level tech support positions include Desktop Analyst, Tier 2 Help Desk Analyst, System Analyst, and IT Manager. These positions require several years of work experience in the field as well as supervisory and management skills. An associate or bachelor's degree is generally required.

Career pathways and how to access them.

According to a sample of actual work histories of people in New York City who started out in entry level tech support positions,¹⁷ around a third remained in that role five years later. During this period, they may have gained more responsibility and moved up from Tier 1 to Tier 2 or Tier 3. Another third moved into other IT work like Systems Administrator, Systems Analyst, IT Manager or System Engineer. The rest transitioned into other work.

Most employers train new hires and offer additional training for employees. This can be hands-on, online or offsite. To build a career in this line of work, individuals need to continue their learning and professional development. This way, they stay ahead of technological change and can adapt their skills accordingly. To be promoted to a managerial role, they often need a bachelor's degree. Some internal candidates may be able to substitute more years of experience in lieu of one. But a bachelor's degree is often needed for people applying externally.

For those who stay in the field and remain in-house, advancement is possible within firms large enough to support an IT department. Here, higher level roles include senior level management jobs at the Assistant Director, Director and Vice President of Information Technology. In addition to high educational demands, these jobs also require seasoned supervisory, management and leadership skills. MSPs also need higher-skilled staff with project management experience to manage more sophisticated IT projects.

¹⁷ This includes a data feed of online work histories maintained by Payscale.com and supplied by Monster

Government Solutions with a starting occupation of Computer User Support Specialist, SOC 15-1151.



Appendix A: CUNY Offerings

(Sources: Integrated Postsecondary Education Data System and online catalogues for each profiled institution.)

= industry recognized certificate program

= credit-bearing certificate program

= certificate of completion

= 2-year degree program

= 4-year degree program

= courses

School/Program	2014 Complet.
CUNY Baruch College	
B.B.A. Computer Information Systems	na
CUNY Borough of Manhattan Community College	
Cisco Certification	na
A.A.S. Computer Information Systems	105
A.A.S. Computer Network Technology	na
A.S. Computer Science	21
CUNY Bronx Community College	
A+ Certification PC Repair Technician Program (ACE 4121)	10
Networking+ (N+) Certification Prep (ACE 4190) p. 16	10
A.A.S. Computer Information Systems	13
CUNY Brooklyn College	
B.S. Information Systems	51
CUNY City College	
B.S. Computer Science	29
CUNY City Tech	
A.A.S. Computer Information Systems	55
B.Tech Computer Systems	63
CUNY College of Staten Island	
A.A.S. Computer Technology	na
B.S. Information Systems and Informatics	47
CUNY Guttman Community College	
A.A.S. Information Technology	na
CUNY Hostos Community College	
CompTIA A+® Certification	15-25
CompTIA Network+® Certification	na
Cisco Networking Certificate Program	na
CUNY Hunter College	
B.A. Computer Science	53
CUNY John Jay College	
B.S. Computer Science and Information Security	na

School/Program	2014 Complet.
CUNY Kingsborough Community College	
A.A.S. Computer Information Systems	na
A.S. Computer Science	18
CUNY LaGuardia Community College	
Computer Service Technician Certificate	na
A.A.S. Computer Operations	32
A.A.S. Computer Technology	50
CUNY Lehman College	
A+ Computer Technician Certificate Program	20
CISCO Networking Academy: CCNET and CCNA	20
B.S. Computer Information Systems	25
CUNY Medgar Evers College	
A.A.S. Computer Applications	2
A.S. Computer Science	5
B.S. Computer Information Systems in network system management or system analysis & design	na
B.S. Computer Science	9
CUNY Queens College	
B.A. or B.S. Computer Science	83
CUNY Queensborough Community College	
Certificate - Computer Information Systems	na
A.A.S. Computer Engineering Technology	33
A.A.S. Computer Information Systems	13
CUNY York College	
B.S. Information Systems Management	24
B.S. Computer Science	11



Appendix B: Offerings Outside CUNY

(Sources: Integrated Postsecondary Education Data System and online catalogues for each profiled institution.)



= industry recognized certificate program



= credit-bearing certificate program



= certificate of completion



= 2-year degree program



= 4-year degree program



= courses

School/Program	2014 Complet.
ASA College	
Computer Support Specialist	10
A.O.S. Computer Programming and Information Technology	34
Barnard	
B.S. Computer Science	50
DeVry College of New York	
A.A.S. Network Systems Administration	22
A.A.S. Electronics and Computer Technology	na
B.S. Computer Information Systems	25
Fordham University	
Information Science Degree (BA-IS, BS-IS, MINOR-IS)	39
Information Science Degree (BA-CS, BS-CS, MINOR-CS)	na
LIU Brooklyn	
B.S. Computer Science	10
Manhattan College	
B.S. Computer Information Systems	11
B.S. or B.A. Computer Science	7
Monroe College	
A.A.S. Information Technology	1
B.B.A. Computer Information Systems	18
New York University	
B.S. Information Systems	143
B.S. Information Systems Management	1

School/Program	2014 Complet.
Pace University – New York	
Graduate Certificate in Information Systems	11
B.A. or B.S. in Computer Science	14
Information Systems (BBA, BS)	5
Information Technology (BS)	na
St. Johns University – New York	
A.S. Computer Science	1
B.S. Computer Science	33
B.S. Computer Science	28
Technical Career Institutes	
Networking Certificate leading to A+, N+, CCNA, MCTS, MCITP	na
A.A.S. Computer Software Technology	13
A.A.S. Electronics Engineering Technology	111
Touro College	
A.S. Information Technology	na
B.S. Information Technology	4
Wagner College	
B.S. Information Systems	2
B.S. Computer Science	2
Wood Tobe-Coburn School	
Computer Specialist Certificate	na
A.O.S. Computer Programming	5
Yeshiva University	
Computer Science	6