Microsoft IT Academy Program

Helping students achieve industry recognized skills and certification on the latest technology.

Microsoft IT Academy provides resources that benefit all students. Acquiring skills on the latest technologies helps students to become better collaborators, communicators, critical thinkers, innovators, problem solvers and citizens of our global economy. More than 50% of today's jobs require some degree of technology skills, and experts say that percentage will increase to 77% in the next decade.¹

Studies suggest that in the next 5 to 10 years there will be a significant shortage in the supply of skilled IT professionals.² Over the next four years, IT employment will rise by 5.8 million jobs and 51% of all IT jobs will be software related, creating 75,000 new businesses.²

Microsoft believes that technology skills are essential to the prosperity of both individuals and nations. These skills contribute to economic growth through increased productivity, and by creating greater capacity to adopt new technologies, ways of working, and new sources of innovation.³

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More than 50% of today's jobs require some degree of technology skills, and experts say that percentage will increase to 77% in the next decade.

US Bureau of Labor Statistics

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Microsoft IT Academy: the complete technology education solution

Microsoft IT Academy connects students, teachers, employers and local communities through leading-edge technology skills development. The program was developed to bridge the gap between education and the real-world by empowering students with the IT skills they'll need for college and for a career in today's technology-centered job market. The program also enables educators by providing the professional development resources they need to be successful in the classroom.

Membership is open to all primary, secondary, post-secondary, preparatory schools, vocational and trade or technical accredited educational institutions, libraries, museums and accredited sources of continuing education and those qualifying for Microsoft Volume Licensing academic agreements.

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**PROJECTED IT SKILLS GAP**

<table>
<thead>
<tr>
<th>Jobs Requiring IT Skills</th>
<th>2012</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Jobs Requiring IT Skills</td>
<td></td>
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</tbody>
</table>

**IT SKILLS REQUIRED IN 2020**

<table>
<thead>
<tr>
<th>Jobs Requiring IT Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified Candidates</td>
</tr>
</tbody>
</table>

Jobs Requiring IT Skills (In Millions) 
IDC Data
Microsoft IT Academy benefits for students, teachers, academic institutions and employers.

If you join the Microsoft IT Academy (ITA) Program, you will get a full curriculum for teaching technology courses and learning tools that help students achieve success. ITA enables you and your institute to offer training not only on fundamental technology skills but also technical courses for your students who are interested in pursuing a career in IT after graduation.

**PROGRAM BENEFITS**

**Curriculum**
- The Microsoft Digital Literacy curriculum provides essential computing skills for learners new to computing
- The Microsoft E-Learning curriculum provides unlimited access to more than 400 courses aligning with Microsoft IT Academy programs
- Ready-to-use, customizable lesson plans including links to relevant Microsoft E-Learning and free demos and videos
- E-reference provides digital access for educators to more than 600 technology books, searchable by topic, technology and subject
- The Microsoft Official Academic Course (MOAC) series delivers a complete learning and teaching framework developed specifically for use in an academic setting
- Microsoft Official Courseware (MOC) is instructor-led training intended for IT professionals and developers who build, support, and implement solutions by using Microsoft technologies

**Teacher Starter Kits** include exam vouchers for Microsoft Office Specialist and Microsoft Technology Associate certification exams to enable educators to obtain globally recognized certification
- Microsoft Certified Trainer (MCT) provides tools, resources, and other benefits to support and help Microsoft IT Academy educators thrive as both technologists and educators

**Certification**
Microsoft Certifications differentiate students in today's competitive job market and broaden their employment opportunities. Certified students can support businesses by providing the expertise to optimize the use of Microsoft tools and solutions.
- Microsoft Office Specialist (MOS) exams prepare your students to be more productive in school and business careers
- Microsoft Technology Associate (MTA) exams provide an entry-level opportunity to explore various technical careers
- Microsoft Certified Solutions Associate/Expert exams provide steps to validation of a student's ability to design and build innovative solutions across multiple technologies, both on-premise and in the cloud

Microsoft IT Academy provides the steps to establish a Certiport or Prometric testing center on your campus. Microsoft IT Academy members receive academic discounts for Microsoft Certification exams.

**Professional Development**
- The Teaching with Technology Curriculum is online learning that helps educators integrate Information and Communications Technology (ICT) into their practice
- The Microsoft Innovative Educator (MIE) program provides trainers the opportunity to expand their skills integrating technology in their teacher training to positively impact teaching and learning

**Resources and Partnership**
- **Easy to Use Private Members Site** with access to all program information, support, and resources in one place
- A listing in the online Microsoft IT Academy locator for discovery by millions of potential students
- Microsoft IT Academy blog that can help you stay up to date on announcements and benefits
- Quarterly Microsoft IT Academy Newsletters keeping Microsoft IT Academies up-to-date with offers and best practices
- Download and print co-branded Certificate of Completion certificates for students who have completed any of the Microsoft Certifications
- Marketing materials, press kits and videos to help promote your Microsoft IT Academy to parents, communities and governmental leaders
- Marketing campaigns and special offers for certifications and student activities
- Access to the Microsoft Regional Support Center for program inquiries and assistance
- A comprehensive Welcome Kit with program membership plaque

How do I get started?

Microsoft IT Academy is an annual subscription acquired through these Microsoft Academic Volume Licensing programs:
- Enrollment for Education Solutions (EES)
- Open Value Subscription for Education Solutions (OV-ES)
- Campus or School Agreements
- Academic Select and Select Plus Agreements

For more information, contact your Academic Licensing Reseller or visit [www.microsoft.com/licensing/licensing-options/for-industries.aspx](http://www.microsoft.com/licensing/licensing-options/for-industries.aspx)

**Microsoft Office Certification offers discounted pricing:**
- Academic pricing on Microsoft Official Courseware (MOC) [www.microsoft.com/itacademy/program-benefits/curriculum.aspx](http://www.microsoft.com/itacademy/program-benefits/curriculum.aspx)

For more information go to [www.microsoft.com/itacademy](http://www.microsoft.com/itacademy)
With Microsoft Certification, educators are able to validate their students' technology skills, which helps them stand out from the crowd and enhance their education and career prospects.

For more than 20 years, Microsoft Certification has been the IT industry's most respected validation of technology skills.

Technology is everywhere. There is a need to provide students the appropriate business software and technology skills necessary in everyday life, whether it is basic computer skills or advanced technical skills. Almost every job today requires some form of technology skills. Students who hold a Microsoft Certification can prove their proficiency.

A thriving industry

Worldwide, Microsoft Office holds 94% of the market share (500 million customers). Students need skills on Microsoft Office whether they are moving toward advanced education or looking for a business career.

A lifetime of benefits

By earning a Microsoft Certification, students will:

• have a firm measure and increased confidence in their skills
• achieve a higher degree of success in their pursuit of higher education or a career in technology
• gain recognition among peers and employers, and a distinct edge in the competitive job market
• demonstrate their skills on the latest technologies
• chart a career development path for ongoing advancement of Microsoft technology skills

MOS certification: the global standard in Microsoft Office productivity

Educators can help students validate their skills through the Microsoft Office Specialist (MOS) certification program. For students whose sights are set on a career in business, Microsoft Office certifications are offered at three levels:

Microsoft Office Specialist

MOS certification is the recognized standard for core Microsoft Office skills.

Microsoft Office Specialist–Expert

MOS Expert certification recognizes an authority on advanced Microsoft Office functionality.

Microsoft Office Specialist–Master

MOS Master certification is the pinnacle distinction for outstanding proficiency with the Microsoft Office suite.

MTA certification: the first step to a career in IT

For students considering a career in information technology, Microsoft Technology Associate (MTA) certification is the first step. MTA certification validates a student's knowledge of technology fundamentals, and helps them stand out when submitting college and internship applications. MTA proves their understanding of a variety of entry-level technology concepts.
Microsoft Technology Certification: A clear path to success

Attract new students by offering certification on the latest technologies. Microsoft’s certification program is straightforward and helps students acquire the technology skills they need to be successful in college and a career.

Start with MTA
Microsoft Technology Associate (MTA) certification is an optional first step to progressing on to more technical certifications. The MTA certification validates core technology concepts in infrastructure, database and development.

Progress with MCSA
Microsoft Certified Solutions Associate (MCSA) validates deeper skills on Microsoft technology and is a prerequisite for becoming an MCSE.

Earn your MCSE or MCSD
Microsoft Certified Solutions Expert (MCSE) and Developer (MCSD) certifications are the global standards for IT excellence and distinguish individuals with deep expertise.

Microsoft Certifications complement institution curriculum, programs and reputation. Through certifications, educators can help students get recognized by peers and hiring managers.

Resources
The Microsoft IT Academy program provides all the curriculum and lab resources an educator needs to prepare students for certification. To learn more about the resources available, visit www.microsoft.com/itacademy

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Microsoft Technology Certification Tracks

- the pinnacle of distinction for experienced IT professionals → Microsoft Certified Solutions Master (MCSM)
- the globally recognized standard for IT excellence → Microsoft Certified Solutions Expert (MCSE), Developer (MCSD)
- the foundation for your career in Microsoft technology → Microsoft Certified Solutions Associate (MCSA)
- the gateway to technology careers and certification → Microsoft Technology Associate (MTA)

Microsoft Office Certification Tracks

- the pinnacle of recognition for Microsoft Office suite proficiency → Microsoft Office Specialist—Master
- the authority in advanced Microsoft Office functionality → Microsoft Office Specialist—Expert
- the recognized standard for proven Microsoft Office skills → Microsoft Office Specialist

→ For more information go to www.microsoft.com/itacademy

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1 2010 MCP Program Satisfaction Study 2 2010 report from the market research firm, Gartner
The Microsoft IT Academy Statewide Solution Framework for the State of Iowa

Iowa’s goal of preparing students to live, learn, and work as productive citizens in the 21st century is a goal that Microsoft shares with the State.

We are excited to demonstrate how we can support Iowa Governor Terry Branstad and the Governor’s Science, Technology, Engineering and Mathematics (“STEM”) Advisory Council.

It is our understanding that the Iowa Governor’s STEM Advisory Council has the following expressed priorities, which support the goals listed in the Governor’s Executive Order 74: Student Interest and Achievement; Technology Enhanced Instruction for Global Learning; STEM Teacher Recruitment and Preparation; STEM Learner Readiness for Post-Secondary Education and Career; STEM Education Policy; Public Awareness of the Importance of STEM Education for the Economy and Society; Public/Private Partnerships and Mapping STEM Education to Economic Development; and STEM for ALL -- the Highly-Abled, Under-Represented, and Nontraditional.

We believe in these priorities and would like to propose a customized, statewide Microsoft IT Academy solution specifically designed to help drive employability in Iowa, digital literacy, technical and STEM-focused training, and industry-recognized Microsoft certifications.

The Microsoft IT Academy Program delivers the very latest IT curriculum for students, ongoing professional development for Iowa instructors, and provides educational institutions with the instant recognition and credibility of the Microsoft brand.

The Program provides a complete IT education solution that bridges the world of education with the fast-changing world of work. In addition to boosting workforce readiness, the Program also helps drive academic transition and pre-college preparation for students eager to pursue higher education with a focus on advanced technology and STEM-related subjects.

1 Source: http://www.iowastem.gov/targeted_priorities, January 20, 2013

A search for ICT jobs in Iowa requiring Microsoft certifications and technology skills results in more than 1,700 hits.²

Employers expect and demand skilled IT workers and IT job-ready hires that can succeed in the dynamic "tech savvy” international marketplace. In order to be productive members of the workforce and society, it is imperative that students not only graduate from high school, but also graduate with real-world technology skills and validated credentials.

With more than 13,000 Microsoft IT Academy members in 160 countries (including 10 statewide IT Academy partnerships nationally), academic institutions and employers worldwide increasingly look to the Microsoft IT Academy Program to offer the latest IT education programs for Microsoft technologies (the Program is growing at an annual rate of 40%).

Preparing All Iowa Students to Live, Learn, and Work as Productive Citizens in the 21st Century

A statewide, customized Microsoft IT Academy solution for Iowa will demonstrate the depth of our investment and commitment to ensuring a successful, sustainable program in all Iowa high schools while supporting goals of driving measurable student outcomes through Microsoft certification.

A Customized Microsoft IT Academy Solution for Iowa Would Benefit:

- All high school students, including home-schooled students and students living in rural areas of the State.
- All high school teachers and staff, including IT and technical staff.
- All Iowa communities at the local level.
- All Iowa Department of Education staff.

2 Source: Indeed.com, January 20, 2013
Microsoft IT Academy Aligns With the Overarching Iowa Mission of Preparing Students for the 21st Century

It is RELEVANT by addressing statewide goals of ensuring that students are college-and-career-ready. It is INNOVATIVE by keeping pace with the leading-edge educational vision for Iowa. It is SUSTAINABLE by providing a framework for long-term success. In addition, it will support Iowa high school goals including:

- Helping high school students’ graduate with industry-recognized Microsoft certifications to be competitive in the rapidly evolving 21st century workplace.
- Helping meet statewide economic development objectives, capitalizing on job and workforce demands, and preparing the next generation workforce for IT/STEM and IT-infused jobs across industry sectors.
- Creating a sustainable long-term learning framework for the high schools of Iowa that benefits students, teachers, school staff, and the broader community and that delivers measurable learning outcomes.
- Supporting Iowa leadership in innovative IT education reform.

- Ensuring equality of access for all Iowa high school campuses regardless of location, size, or economic status.
- Providing Iowa CTE directors, teachers, and staff with the necessary training, guidance, tools, and support to most effectively benefit from the Microsoft IT Academy Program.
- Leveraging existing Iowa IT curriculum with an additional and enhanced IT education solution that is meaningful and relevant by mapping to industry-recognized Microsoft skills standards and certifications that align to the requirements of the workplace.
- Providing schools with industry-relevant, skills-based learning aligned to Microsoft certifications and emphasizing articulation of learning among high schools and postsecondary schools, including recognition of academic, higher-level credit for attainment of Microsoft certification.
- Promoting a foundation for lifelong learning—the ability to adapt and upgrade individual skills in a rapidly changing world—by providing the building blocks of essential skills students require to be active, lifelong learners in a technology intensive environment, and to compete and be at the forefront of the 21st-century global economic system.

Iowa Microsoft IT Academy Customized Framework

A customized Microsoft IT Academy Program for Iowa would include all of the following components.
Iowa IT Academy Statewide Deployment Framework

As part of our commitment to providing Iowa high schools with the most productive experience possible, included with a statewide Microsoft IT Academy solution for Iowa is provision for a comprehensive and customized Microsoft IT Academy Deployment Framework including administrator outreach, teacher training and readiness, on-boarding tools, ongoing support, and much more.

Our comprehensive Deployment Framework will demonstrate the depth of our investment and commitment to ensuring that the Microsoft IT Academy Program is successfully deployed in Iowa high schools and that we are tangibly supporting your goal of driving measurable 21st century student outcomes via Microsoft certification.

“In today’s economy, providing the Microsoft IT Academy to high school students just makes sense.”
—June Atkinson
North Carolina State School Superintendent

Iowa Statewide Deployment Overview

The deployment solution for the State of Iowa will be customized to help ensure that together, we drive a successful deployment of Microsoft IT Academy to your high schools. We take our partnership with you very seriously and are committed to providing you with the most successful deployment and program experience possible.

Our vision of a successful deployment includes:

- Collaborating with you to plan a custom deployment program and timeline that meets your needs while applying best practices from other large-scale deployments.
- Providing ample resources for CTE directors, teachers, and IT staff, including trainings, readiness materials, and support paths to ensure the most positive experience with the program.
- Ongoing engagement with you to monitor and evaluate each deployment phase to achieve mutually defined success outcomes.

A high-level framework of the proposed Deployment Solution, including the four key phases below, reflects our commitment to ensuring that the Microsoft IT Academy Program is successfully deployed in all Iowa high schools.

<table>
<thead>
<tr>
<th>Key Phases</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Microsoft Learning deployment team meets the Iowa IT Academy team to discuss the scope and details of deployment including scheduling, pilot program, desired outcomes, and dependencies.</td>
</tr>
<tr>
<td>2</td>
<td>Iowa IT Academy lead provides Microsoft with a list of Iowa high school names, addresses, and an initial primary contact at each of the campuses (template will be provided). The high school campus may amend the initial primary contact at any time.</td>
</tr>
<tr>
<td>3</td>
<td>Based on detailed discussions with the Iowa IT Academy team, Microsoft Learning will draft a detailed IT Academy Deployment Plan for review and approval. The Iowa IT Academy Deployment Plan (including roles and responsibilities for Iowa and Microsoft Learning) is approved and phased implementation begins with administrator and teacher training and the pilot launch.</td>
</tr>
</tbody>
</table>
Investment Summary

Microsoft Learning is committed to supporting the State of Iowa in its guiding mission and educational goals and will create a customized, statewide Microsoft IT Academy Program and Deployment Solution. The program is designed to serve every Iowa high school for a three-year agreement period.

To help the state of Iowa meet its educational goals, and to support the ongoing innovation of Iowa leadership, Microsoft Learning is able to provide a price of US $1,584 (ERP) per high school per year for a statewide Microsoft IT Academy solution. This includes Program access for every high school student, instructor, administrator and all employees of the Iowa Department of Education. It also includes a statewide Iowa IT Academy Deployment Solution (approximate costs in excess of $80,000).

This customized solution delivers the most holistic and rich package of benefits, training, and support from Microsoft Learning at a price that clearly demonstrates our deep level of commitment to the IT education goals of Iowa — preparing students for the 21st century workforce.

<table>
<thead>
<tr>
<th>Microsoft IT Academy Program (ITA)</th>
<th>ITA Annual Membership Cost—Standard IT Academy Program</th>
<th>ITA Annual Membership Cost—Customized Iowa Solution</th>
<th>Total ITA Annual Cost* for Iowa (351**) Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Retail Price (ERP)</td>
<td>US $1,750 per high school</td>
<td>US $1,584 per high school</td>
<td>US $555,984 per year</td>
</tr>
</tbody>
</table>

* This pricing excludes any applicable taxes. The final price is determined between the State of Iowa and the Microsoft LAR/Reseller.
** Includes 350 high schools and a single membership for the Iowa Department of Education. Number of high schools based on NCES data and should be verified by the State.

Overview of Microsoft Learning

Microsoft Learning offers comprehensive learning, certification, and readiness solutions to academic and commercial customers, partners, and students and is committed to providing a lifelong technology education that ensures relevancy in the rapidly changing 21st-century world in which we live, study, and work. The program delivers:

- Leadership in driving 21st century IT education and workforce development programs.
- A complete lifelong technology learning solution including technical readiness, competencies and increased employability potential for career enablement and enhancement.
- Industry-leading academic and commercial learning programs and solutions that help address the IT skills gap, for both technical jobs and those requiring basic IT skills.
- Learning solutions to more than 10 million industry and academic customers annually.

The program includes a global community of over 13,000 Microsoft IT Academy members, 16,000 Microsoft Certified Trainers, and 1,700 Microsoft Network Partners with Learning Competency members. During the last decade, Microsoft IT Academy has provided information and communications technologies (ICT) skills knowledge to approximately 36 million IT professionals and 15 million developers globally.

"Putting training and certification in every high school in Washington State will bridge the gap between the world of education and the world of work."

— Randy Dorn, Washington State Superintendent of Public Instruction, United States

"The Microsoft IT Academy brings greater technology to the classroom and ensures that students in every corner of the Commonwealth have access to a quality technology education."

— Bob McDonnell, Governor of the Commonwealth of Virginia, United States
North Carolina Department of Public Instruction
Providing equal access to technology skills at all public high schools

Business situation
To best prepare students for life after high school, the North Carolina Department of Public Instruction (NCDPI) searched for a way to provide all students in the state with access to technology skills training and certifications aligned with the needs of business and industry. NCDPI decided to launch the Microsoft IT Academy Program. The Microsoft IT Academy has ensured a "future proof" curriculum and certifications in which students will always be taught current technology.

A focus on Career and Technical Education is just one way that NCDPI works with school districts to help prepare students for the future. "Today's economy is hard on anyone looking for a job," says Mary Jo Nason, Section Chief, Career and Technical Education (CTE) at NCDPI. "However, the economic downturn has been especially hard on recent high school graduates. At the same time, employers are clamoring to find workers with the necessary technical skills."

The Microsoft IT Academy
The Microsoft IT Academy is a subscription-based membership program that is designed to help schools offer students and faculty learning solutions for IT skills training and certification.

"The Microsoft IT Academy is a perfect example of how our state is leading the way in preparing high school students for college and a career."
- North Carolina Board of Education

Benefits
As you can see from the table below, certification success exploded with the adoption of the Microsoft IT Academy Program both in district participation and certifications earned. Through this program, students in all North Carolina high schools will have equal access to licenses for Microsoft software, an e-learning environment, official Microsoft courseware, Microsoft-approved testing centers, and more. The program provides everything they need to learn real-world technology skills and earn certifications that can help them succeed when entering the workforce or continuing on to college.

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<tr>
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</thead>
<tbody>
<tr>
<td>Number of MOS certifications</td>
<td>21</td>
<td>8,794</td>
<td>43,630</td>
</tr>
<tr>
<td>Number of student certifications</td>
<td>16</td>
<td>8,065</td>
<td>42,563</td>
</tr>
<tr>
<td>Number of unique students certified</td>
<td>16</td>
<td>4,459</td>
<td>23,447</td>
</tr>
<tr>
<td>Number of teacher certificates</td>
<td>5</td>
<td>729</td>
<td>1,148</td>
</tr>
<tr>
<td>Number of unique teachers certified</td>
<td>3</td>
<td>304</td>
<td>507</td>
</tr>
</tbody>
</table>

Microsoft Office Specialist (MOS) Certifications through the Microsoft IT Academy across North Carolina's public high schools.
Boston City Campus and Business College
Strengthening a reputation for IT training and reducing costs for students

Organization size

- 625 employees
- about 25,000 students
- 48 campuses

Organization profile

Boston City Campus and Business College trains students for careers in a variety of fields, including IT. The school was founded in 1991.

Business situation

Boston City Campus and Business College offers workplace preparation and vocational training at 48 campuses across South Africa. The college serves about 25,000 students, some in extremely remote and impoverished parts of the country. One of the college’s most popular offerings is training for IT work, a fast-growing field in South Africa. To increase IT students’ employability, the college requires them to pass Microsoft Certification exams before graduating. Boston City Campus and Business College had long used Microsoft educational materials in its certificate training courses. To differentiate itself from competitors, the college wanted to strengthen its reputation as a high-quality provider of training for Microsoft Certifications. It also wanted to help control costs for its students, many of whom have low incomes.

Business solution

By joining the Microsoft IT Academy Program, the college receives discounted, simplified access to such tools as the Microsoft Official Curriculum, the Microsoft Official Academic Course series, test vouchers, practice tests, lab exercises, eBooks and eLabs, and lecture and study materials.

Benefits

- **Increased student employability**
  Our world-class Microsoft IT Academy offers the hands-on skills and experience that today’s graduates need to succeed in technology careers.

- **Enhanced professional development**
  Educators and other staff members have the opportunity to improve their own knowledge base with complementary resources and online courses, plus discounted software and certifications.

- **Cost savings for educators and students**
  Boston City Campus and Business College has controlled costs for its students and further strengthened its reputation as a high-quality provider of IT training.

  Students can earn certifications and college credit which help to lower future college tuition costs and advance their career opportunities.

For more information go to:
www.microsoft.com/itacademy

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Microsoft IT Academy Program: Case Study

Boston City Campus and Business College

For more information about the Microsoft IT Academy Program, please go to: www.microsoft.com/education/itacademy

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers in the United States and Canada who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5254. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to www.microsoft.com.
We have a highly skilled and productive workforce,
But it’s our way of life that keeps them motivated.

With our highly skilled workforce and world-class research universities that partner with leading-edge technology companies, it’s no wonder that information and communication technology companies Thrive in North Carolina®.

THRIEVE

in NORTH CAROLINA™

ThriveNC.com/Technology
Information and Communications Technology

North Carolina has the tangibles that businesses need as well as a lifestyle that helps employees flourish. Our secret is simple: When people Thrive, business Thrives. We understand that in today's global economy, people are your greatest source of competitive advantage—happy, fulfilled employees are more productive employees. From our business resources to our human resources to our natural resources, we offer businesses what they need to create a competitive advantage and Thrive.

BEST BUSINESS CLIMATE

Consistently ranked among the best business climates in the nation by Forbes, CNBC, Chief Executive and Site Selection.
North Carolina’s Distinct Advantages

North Carolina has world-renowned universities and community colleges as well as a highly skilled and productive workforce that continues to attract and keep the top information and communication technology companies here. When you add in the partnerships that our universities have with leading-edge technology companies and the state’s investments in infrastructure such as an advanced broadband telecommunications network, you can see why companies here flourish.

<table>
<thead>
<tr>
<th>&gt;100,000 Workers</th>
<th>&gt;3,000 IT Firms</th>
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<tbody>
<tr>
<td>More than 100,000 workers are employed in more than 3,000 IT firms. Raleigh and Charlotte named two of top 20 “Most Wired Cities” by Forbes magazine.</td>
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</table>

North Carolina Research and Education Network (NCREN) is one of the world’s leading statewide regional optical networks connecting most of the state’s colleges and universities, school districts, community initiatives and medical and research institutions.

<table>
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<tr>
<th>&gt;5,300 IT Professionals</th>
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<tbody>
<tr>
<td>More than 5,300 individuals are available to fill IT occupations.</td>
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</tbody>
</table>

More than 1,800 upperclassmen are enrolled in computer science curricula in the state’s colleges and universities.

Every year North Carolina colleges and universities graduate more than 800 students with bachelor’s degrees and more than 470 students with advanced degrees in computer and information sciences.

North Carolina’s 58-campus Community College System offers many information and communication technology-related curricula.

A Quality of Life That Attracts Talent

From our moderate climate with excellent recreational opportunities to our culture-rich history and a low cost of living, North Carolina has what people are looking for to Thrive.

- Moderate climate
- Culture rich in history and the arts
- World-class sports events
- Recreational opportunities
- Quality health care
- Low cost of living—housing, utilities, supplies and groceries, transportation and health care are all below the national average
- Low construction costs
- Diverse educational opportunities and jobs available

North Carolina offers an exceptional quality of life that contributes to a highly desirable place for businesses to attract and keep skilled workers.

The low cost of living in North Carolina makes it easier for our residents to take part in and enjoy all the great things that this state has to offer.
Strong Pipeline for Labor

The Microsoft IT Academy
North Carolina is the first state in the nation to implement the Microsoft IT Academy statewide to all 628 public high schools. The Microsoft IT Academy provides students with real-world technology skills they need to be successful in college and a career by giving students the opportunity to learn in-demand software and technical skills as well as earn industry-recognized certifications such as a Microsoft Office Specialist (MOS) or a Microsoft Certified Professional (MCP).

North Carolina Community Colleges offer curricula to develop a skilled IT workforce, including:
- Computer Engineering
- Computer Information Technology
- Computer Programming
- Database Management
- Information Systems Security
- Networking Technology
- Simulation and Game Development

Fifteen of the 16 UNC System campuses plus several private colleges and universities offer computer science curricula for bachelor’s degrees, master’s degrees and PhDs, as well as professional certificates.

We have the resources, training and infrastructure needed for growth.

Council for Entrepreneurial Development (CED)
Founded in 1984 to stimulate the creation and growth of high impact companies, today it is the largest entrepreneurial support organization in the U.S. with more than 5,500 active members.

MCNC Grid Computing Networking Services
A non-profit organization delivering next-generation information technology by continuously evaluating new hardware and software in test beds and deploying leading-edge computing and networking services all supporting and advancing the competitiveness of the research and education community throughout North Carolina.

Computer science programs in the state offer instruction in essential areas, along with an emphasis on written and oral communication skills, critical thinking, marketing concepts, independence and collaboration. Key topics include:
- Algorithms
- Artificial intelligence
- Bioinformatics
- Computer graphics
- Hardware systems
- Networks
- Operating systems and architecture
- Parallel and distributed computing
- Robotics
- Security
- Software development and engineering
- Theory
- Testing
- Web and Internet computing

North Carolina Technology Association (NCTA)
The primary voice of the information technology industry in the state, dedicated to growing and strengthening the IT industry through increasing public awareness, promoting companies and influencing key public share information on crucial technologies.

North Carolina Research and Education Network (NCREN)
Developed in 1985, it’s a reliable, robust fiber-optic network providing high-speed network services to The University of North Carolina’s 16-campus system, Duke University, Wake Forest University, UNC-TV and other private universities, colleges and non-profit institutions in the state.
Initiatives that are Thriving in North Carolina

Nanotechnology
North Carolina universities and colleges are home to more than 33 research, development, and education organizations and programs focused on nanotechnology.

North Carolina is also home to many nanotechnology leading minds, such as Dr. Joe DeSimone, a professor of chemical engineering at UNC-Chapel Hill and N.C. State University. Dr. DeSimone has been awarded several prestigious honors and has generated at least 12 start-up companies.

Some of the more than 70 companies working with nanotechnology in the state include:

- **Advaero Technologies**, Greensboro
- **Blue Nano**, Charlotte
- **nCoat Inc.**, Whitsett
- **Liquidia Technologies Inc.**, Research Triangle Park
- **Nextreme, Inc.**, Durham

Semiconductors and Chip Technology
Recognized for research and the development of semiconductors and chip technology, N.C. is home to many internationally known companies including:

- **Cree**, Research Triangle Park
- **Engineering Research Center for Advanced Materials Processing (AEMP)**, Centennial Campus at N.C. State University
- **Infineon Technologies**, Morrisville
- **Kyma**, Raleigh
- **Lord Corporation**, Cary
- **Nitronex**, Durham
- **Photonic Devices**, Cary
- **Qualcomm**, Cary
- **RFMD**, Greensboro and Charlotte
- **Silicon Wireless Corporation**, Durham
- **Ziptronix**, Morrisville

Photonics
North Carolina has emerged as a major center for global telecommunications and photonics. More than 300 telecommunications and optical networking companies call North Carolina home including:

- **Caspian Networks**, Research Triangle Park
- **Institute for Next Generation IT Systems**, N.C. State and Duke universities
- **Tessera**, Charlotte

We also have several research initiatives dedicated to further enhancing the photonics and optical industry including:

- **Charlotte Institute for Technology Innovation**, UNC-Charlotte
- **Fitzpatrick Center for Photonics and Communications Systems**, Duke University
- **Center for Advanced Computing and Communications**, N.C. State University

Digital Media
North Carolina is on the cutting-edge of interactive digital media—from video games to serious games. Support resources in the state include the North Carolina Advanced Learning Technologies Association and the Digital Games Research Center at N.C. State University, conducting a wide variety of research focused on new modes of entertainment and interaction in digital media. With more than 30 companies and over 1,000 workers in the industry, the state is home to many of the industry's pioneers and most recognizable names including:

- **Destineer**, Research Triangle Park
- **Epic Games**, Cary
- **Electronic Arts**, Morrisville
- **Emergent Game Technologies**, Chapel Hill
- **Insomniac Games**, Research Triangle Park
- **Red Storm Entertainment**, Centennial Campus at N.C. State University in Raleigh
- **Virtual Heroes Inc.**, Research Triangle Park

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State of North Carolina
China Office
Shanghai Centre, Suite 631 A
East Tower Shanghai Centre
No. 1376 Nan Yu West Road
Shanghai, 200040
China
86 21 6279 7037
A Sampling of Companies that Thrive in North Carolina:

- Apple, Maiden
- AVL Technologies, Asheville
- Celestica, Durham
- Cisco, Research Triangle Park
- CommScope, Hickory, Claremont, Newton and Statesville
- Corning Incorporated, Concord, Durham, Hickory, Midland, Wilmington and Winston-Salem
- Cree, Research Triangle Park, Morrisville, Durham
- Credit Suisse, Research Triangle Park
- Dacentec, Lenoir
- Disney Entertainment, Kings Mountain
- Facebook, Forest City
- Fidelity Investments, Research Triangle Park
- Flextronics, Asheville, Charlotte, Creedmoor and Durham
- Google, Lenoir
- HCL, Cary
- IBM, Research Triangle Park
- Infocrossing, a Wipro Company, Kings Mountain
- Lenovo, Morrisville
- Microsoft, Charlotte
- NetApp, Research Triangle Park
- Red Hat, Centennial Campus at NC State University in Raleigh
- RFMD, Greensboro and Charlotte
- SAS, Cary
- Tyco International, Greensboro, Winston-Salem and Raleigh

Get Location Data
Use our Economic Development Intelligence System (EDIS) to search property details and map out locations in addition to getting drive-time and distance reports related to demographic information such as workforce, population and businesses.

ThriveNC.com/LocationTools
IT Academy - U.S. State Agreements

- **Utah**: High schools and Higher Education statewide (148)
- **Florida**: High schools and middle schools statewide (214)
- **Georgia**: Every high school across the state (465)
- **Alabama**: High schools in every local education agency in the state (132)
- **Arkansas**: Every high school and workforce agencies (343)
- **Louisiana**: High schools statewide (256)
- **Hawaii**: Libraries statewide - first in the world (52)
- **Virginia**: High school across the Commonwealth (250)
- **North Carolina**: Every high school across the state (628)
- **Washington**: High school statewide ITA and certifications (703)
1. Sign contract, purchase order, register schools
2. Planning Meeting
3. Teacher Early Adopter Identification & Training
4. Professional Development
5. Educator Trainings
6. Educators & Students Certifying
## State of Iowa

### Technology and STEM Jobs Ranking Information

#### Top 25 Best Jobs in America
(based on growth, pay and quality of life)

1. Biomedical Engineer
2. Petroleum Engineer
3. Software Architect
4. Clinical Research Associate
5. Database Administrator
6. Market Research Analyst
7. Market Research Analyst
8. Software Developer

#### Top 12 Paying U.S. Jobs

2. Petroleum Engineer: $265,000
4. Petroleum Geologist (scientist): $247,000
6. Actuary: $208,000
7. Software Architect: $162,000
12. IT Security Consultant: $156,000

#### Top New Jobs in America
(including 10-year job growth)

1. Video Game Designer: 32.4%
2. Medical Devices Clinical Engineer: 61.7%
3. IT Data Scientist: 18.7%
4. Wind Turbine Mechanical Engineer: 8.8%

#### Top Fastest-Growing U.S. Jobs
(Including 10-year job growth)

8. Cost Engineer: 36.4%
9. Clinical Research Associate: 36.4%

#### Top 3 STEM Jobs in Iowa²
(percentage of STEM jobs forecasted through 2018)

1. Computer Occupations: 52%
2. Engineers & Engineering Technicians: 24%
3. Life & Physical Science Occupations: 15%

#### Microsoft Jobs in Iowa³

- Number of jobs requiring Microsoft skills: 1,761
- Number of jobs requiring Microsoft skills paying $50,000-$250,000 per year: 700
- Number of jobs requiring Microsoft Office related skills: 942

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² SOURCE: [http://cew.georgetown.edu/STEM/](http://cew.georgetown.edu/STEM/), January 2013

Memorandum

From: Microsoft Corporation
To: Governor Terry Branstad
Date: January 20, 2013
Subject: How Microsoft IT Academy can help increase focus on science, technology, engineering and math and support higher achievement and better career opportunities for Iowa students.

Mission and Goals
The Iowa Governor’s STEM Advisory Council has identified targeted areas supporting the goals listed in the Executive Order 74. These priorities address the most pressing challenges facing STEM education in Iowa and include: Student Interest and Achievement; Technology Enhanced Instruction for Global Learning; STEM Teacher Recruitment and Preparation; STEM Learner Readiness for Post-Secondary Education and Career; Stem Education Policy; Public Awareness of the Importance of STEM Education for the Economy and Society; Public/Private Partnerships and Mapping STEM Education to Economic Development; and STEM for All – the Highly-Abled, Under-Represented, and Nontraditional. Microsoft IT Academy can help the Iowa Governor’s STEM Advisory Council address these priorities, and support the State in the expressed goal of building the best schools in the nation.

National STEM, Skills Development and Talent Outlook

- In today’s economy, 1 out of 2 jobs requires information technology (IT) skills. In less than 10 years, this number will increase to 3 out of every 4 jobs requiring IT skills. (IDC, 2011)
- The unemployment rate of workers in computer-related occupations today is 3.4%, compared to the national unemployment rate for all occupations which is approximately 8.1% (U.S. Bureau of Labor Statistics).
- According to a report by Georgetown University, the national projection is for 2.4 million job openings in science, technology, engineering and math (STEM) through 2018. In most states, computer occupations are the largest of the STEM occupations (Georgetown University).
- A recent study predicts that between 2010 and 2020, the American economy will annually produce more than 120,000 additional computing jobs that will require at least a bachelor’s degree. But the country’s higher education system is currently producing only 40,000 bachelor’s degrees in computer science nationally. (Integrated Postsecondary Education Data System from the U.S. Department of Education’s National Center for Education Statistics (NCES). Available at https://webcaspar.nsf.gov)

1 Source: http://www.iowastem.gov/targeted_priorities, January 20, 2013
Iowa STEM, Skills Development and Talent Outlook

The following predictions are from the Georgetown University Report entitled, “Help Wanted: Projections of Jobs and Education Requirements Through 2018”.³

- Between 2008 and 2018, new jobs in Iowa requiring postsecondary education and training will grow by 101,000.
- Between 2008 and 2018, Iowa will create over 527,100 job vacancies both from new jobs and from job openings due to retirement. 319,000 of these job vacancies will be for those with postsecondary credentials.
- 62% of all jobs in Iowa (1.1 million jobs) will require some postsecondary training beyond high school in 2018.
- Iowa ranks 24th (nationally) in postsecondary education intensity for 2018.

The following predictions are from the Georgetown University report entitled, “STEM State Level Analysis”.⁴

- Iowa will demand a total of 67,330 STEM jobs by 2018, up from 57,830 in 2008.
- 91% of those jobs will require postsecondary education and training by 2018.
- STEM jobs will be 4 percent of all jobs in Iowa in 2018. This represents a 16 percent increase in STEM jobs.
- 52 percent of STEM jobs in Iowa will be in computer occupations by 2018.

### Occupational Distribution of STEM Jobs through 2018 in Iowa

<table>
<thead>
<tr>
<th></th>
<th>Computer Occupations*</th>
<th>Engineers &amp; Engineering Technicians</th>
<th>Life &amp; Physical Science Occupations</th>
<th>Architects, Surveyors &amp; Technicians</th>
<th>Mathematical Science Occupations</th>
<th>Total**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of jobs</td>
<td>34,930</td>
<td>16,110</td>
<td>10,130</td>
<td>4,320</td>
<td>1,840</td>
<td>67,330</td>
</tr>
<tr>
<td>% of all STEM jobs</td>
<td>52%</td>
<td>24%</td>
<td>15%</td>
<td>6%</td>
<td>3%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Computer Technicians, Programmers and Scientists
** Totals may differ slightly due to rounding

The Microsoft IT Academy and Certification Story for Iowa

IT Academy includes the following industry-recognized and globally-relevant resources to inspire today’s students to prepare for the jobs of today – and tomorrow. Prepared students can help Iowa meet the demands of the 1,700 available jobs today⁵ along with the forecasted (between 2008-2018) 527,100 job vacancies tomorrow (for those qualified individuals with postsecondary credentials, including STEM talent).

³ Source: [http://cew.georgetown.edu/publications/reports/](http://cew.georgetown.edu/publications/reports/)
⁴ Source: [http://cew.georgetown.edu/stem/](http://cew.georgetown.edu/stem/)
⁵ Source: [www.indeed.com](http://www.indeed.com)
• **Certification:** According to the 2010 Microsoft Certified Professional (MCP) Program Satisfaction Study, 91 percent of hiring managers consider employee certification as a criterion for hiring. The certification resources in IT Academy help prepare all students to meet the needs of hiring managers locally, nationally and globally. Students, teachers, administrators and staff members can use IT Academy training to become certified in a wide variety of IT areas, including Microsoft Office as well as advanced technical topics including programming, network administration, web development, database development, and the increasingly relevant cloud technical certifications.

• **Curriculum:** The Microsoft IT Academy Program offers a comprehensive technology curriculum to help students learn the IT skills they’ll need to become competitive locally, nationally or globally - including a robust digital curriculum platform to support ‘equality of access’ amongst all Iowa students (and schools). This includes a comprehensive program that includes access to software licenses, Web-based E-Learning and official Microsoft course materials. Topics range from computer basics to high-level programming, along with information and communications technology management. Through the training, students get hands-on experience with the latest Microsoft software and hundreds of E-Learning courses.

• **STEM Software and Technical Resources:** Iowa member schools will have access to Dreamspark Standard, which will provide students and teachers with access to Microsoft’s key developer tools and platforms for learning and research purposes. Additionally, STEM (Science, Technology, Engineering, and Mathematics) departments will receive access to customized Dreamspark benefits. Through Dreamspark, all Iowa students will have access to professional-level developer and designer tools so that students can chase their dreams and create the next big breakthrough in technology - or just get a head start on their career.

**Statewide Microsoft IT Academy Promotes Certification**
One ‘best practice’ is the State of North Carolina which in just three year of partnering with Microsoft to make IT Academy available statewide has experienced unprecedented growth in student certifications.

<table>
<thead>
<tr>
<th></th>
<th>Pre-IT Academy (Aug 2009-June 2010)</th>
<th>1st Year of IT Academy (August 2010-June 2011)</th>
<th>2nd Year of IT Academy (August 2011-June 2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of total</td>
<td>21</td>
<td>8,794</td>
<td>43,630</td>
</tr>
<tr>
<td>Microsoft Office Specialist (MOS) Certifications*</td>
<td>16</td>
<td>8,065</td>
<td>42,563</td>
</tr>
<tr>
<td>Number of student MOS certifications</td>
<td>16</td>
<td>8,065</td>
<td>42,563</td>
</tr>
<tr>
<td>Number of teacher MOS certifications</td>
<td>5</td>
<td>729</td>
<td>1,148</td>
</tr>
</tbody>
</table>

Statewide Certifications Impacts Student Performance

Another 'best practice' comes out of Florida, and the Florida Career and Professional Education Act (CAPE) Program. Students in CAPE programs attaining certification experience better performance.

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Non-CAPE Academy Students</th>
<th>CAPE Academy Students (without Certifications)</th>
<th>CAPE Academy Students (with Certifications)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average GPA</td>
<td>2.53</td>
<td>2.6</td>
<td>3.03</td>
</tr>
<tr>
<td>Dropout Rate</td>
<td>2.4%</td>
<td>1.4%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Graduating 12th Graders</td>
<td>66.5%</td>
<td>76.7%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Iowa Statewide IT Academy Investment Summary

For a nominal additional investment of approximately $1.1 million (per biennium) to the Iowa education budget Iowa’s estimated 350 public high schools (and the Iowa Department of Education) will receive access to the tools and resource in IT Academy for the benefit of all students, teachers, administrators and staff members.

<table>
<thead>
<tr>
<th>Microsoft IT Academy Program</th>
<th>Annual Membership Cost—Standard IT Academy Program</th>
<th>Annual Membership Cost—Customized Iowa Solution</th>
<th>Annual Cost* for Iowa (351**) Solution</th>
<th>Total 2013-2015 Biennium Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Retail Price</td>
<td>$1,750 per high school</td>
<td>$1,584 per high school</td>
<td>$555,984 per year</td>
<td>$1,11,968 per biennium</td>
</tr>
</tbody>
</table>

* This pricing excludes any applicable taxes. The final price is determined between the State of Iowa and the Microsoft LAR/Reseller.

**Includes 350 high schools and a single membership for the Iowa Department of Education. Number of high schools based on NCES data and should be verified by the State.

Conclusion

Microsoft IT Academy will deliver approximately $52,229 worth of Microsoft content (including certification, curriculum, STEM software and technical content) to Iowa high schools, based on Microsoft academic pricing. For an annual investment of approximately $555,984 (per year) the State of Iowa will receive approximately $18.3 million worth of Microsoft content for Iowa’s estimated 350 high schools (and the Iowa Department of Education). The resources in IT Academy can support the Iowa Governor’s STEM Advisory Council in addressing some of the most pressing challenges facing STEM education statewide, while at the same time helping Iowa achieve the goal of building the best schools in the nation. The Microsoft team looks forward to further exploring how IT Academy can become a meaningful part of the STEM and 21st century skills readiness solution for the students and citizens of Iowa.

January 20, 2013
For additional information, visit the Microsoft IT Academy website at:

http://www.microsoft.com/en-us/itacademy/default.aspx,