



Session A13

**PROGRAM EVALUATION USING
MICROSOFT'S MTA CERTIFICATION**



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LinkedIn Group - [Microsoft Technology Associate](#)

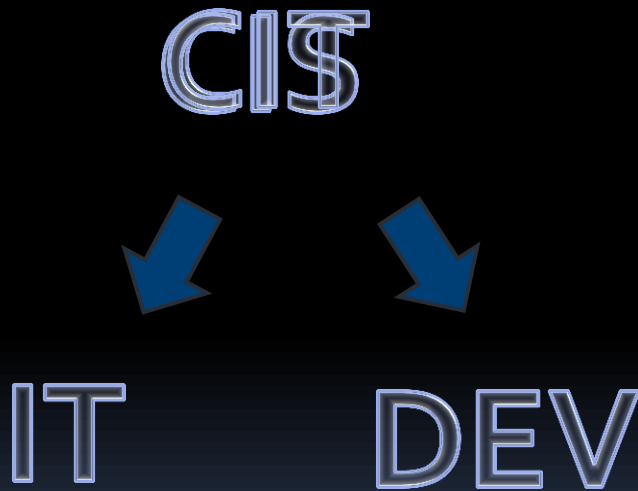


Our Topics...

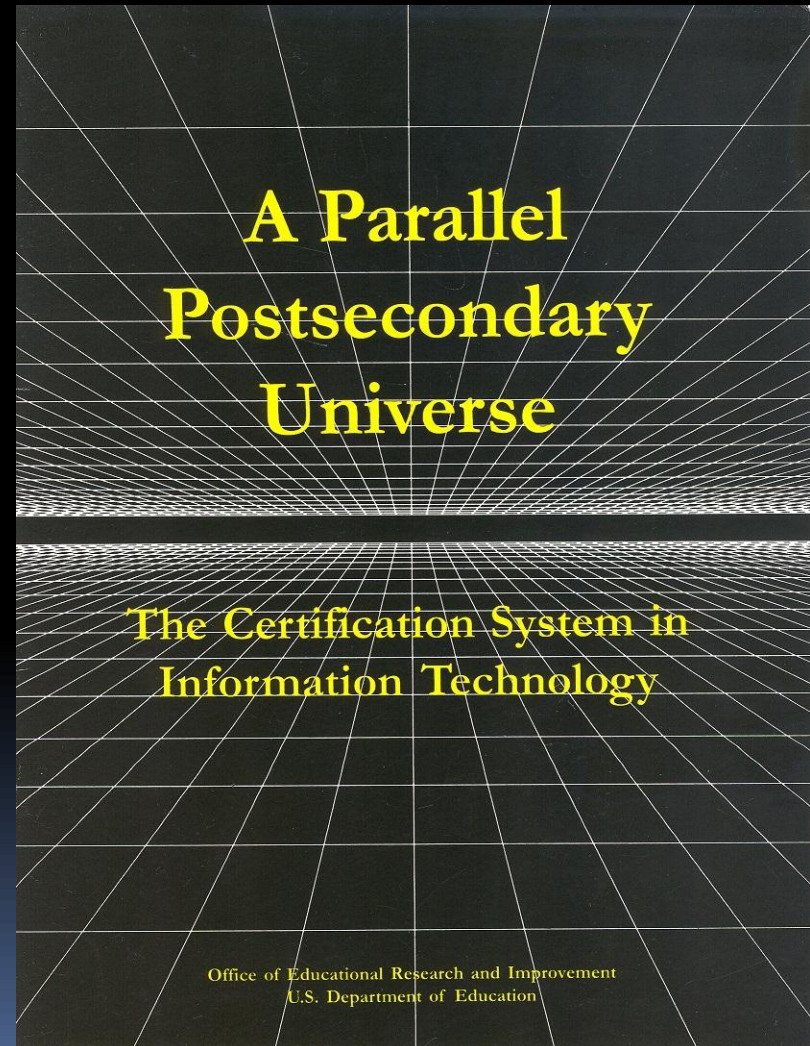
- IT Certification – Why?
- Program of Study - CIT Developer Program
- Discuss Third-Party Assessment and Articulation
- Overview of MTA Certification
- Integration of MTA – Program Review
- Getting Started with MTA

Industry Certification in IT

- Report Published in 2000
- NMC Transition



IT = CIT Infrastructure (networking)
DEV = Software Developer



Industry Certification – Why?

- International Credential for Students
- Employers Value Certification
 - From Keynote Session \$37K vs \$31K
 - Standardized Outcomes
 - Applies Versioning to Knowledge
- Provides Perkins “Indicators of Performance and Accountability”
- Simplifies Articulation
- Increased Completion Rates
- Δ Facilitates Program Review




IT - Infrastructure Program

- Integrated Certifications
- CompTIA
 - A+
 - Net+
 - Security+
- Microsoft – MCTS
- Cisco - CCNA

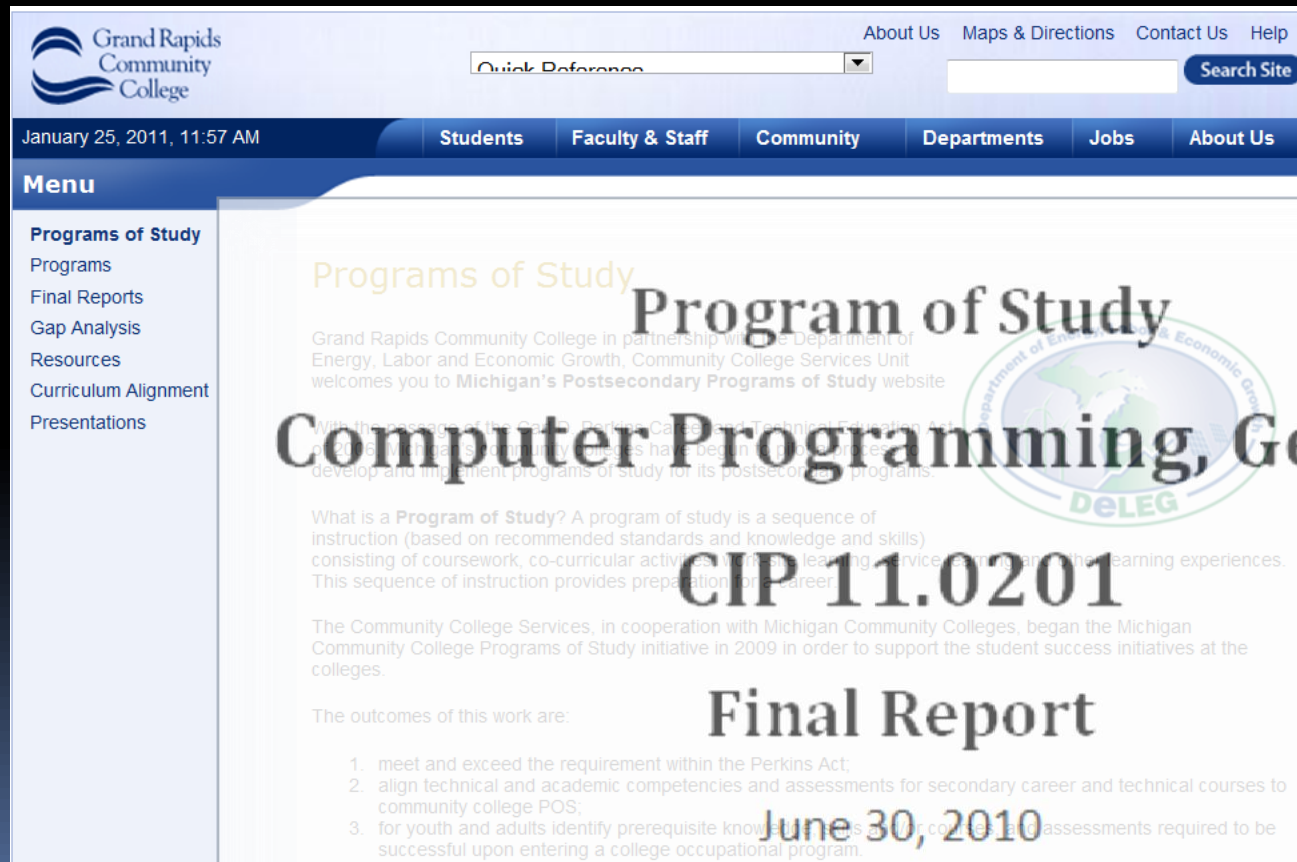


Developer Program

- Job Titles - programmer, software engineer, developer
 - Job Outlook – Recent NACE Top 10 List
 - #2 - Web Developer
 - #5 – Computer Software Engineer
 - Bureau of Labor Statistics
 - Largest Growth
 - Fastest Growth
 - Mobile Phone Apps!
- 

Program of Study Grant Project

- www.grcc.edu/programsofstudy



The screenshot shows the Grand Rapids Community College website. The header includes the college logo, navigation links (About Us, Maps & Directions, Contact Us, Help), a search bar, and a date stamp (January 25, 2011, 11:57 AM). A menu on the left lists various resources. The main content area features a large title 'Program of Study' and a sub-header 'Computer Programming, General'. Below this, there is a section for 'CIP 11.0201' and a 'Final Report' dated 'June 30, 2010'. A circular logo for the Michigan Department of Energy, Labor and Economic Growth (DELEG) is also visible.

Grand Rapids Community College

Quick Reference

Search Site

January 25, 2011, 11:57 AM

Students Faculty & Staff Community Departments Jobs About Us

Menu

- Programs of Study
- Programs
- Final Reports
- Gap Analysis
- Resources
- Curriculum Alignment
- Presentations

Programs of Study

Program of Study

Grand Rapids Community College in partnership with the Department of Energy, Labor and Economic Growth, Community College Services Unit welcomes you to Michigan's Postsecondary Programs of Study website

Computer Programming, General

With the passage of the Career, Pathways, and Technical Education Act of 2006, Michigan's community colleges have begun to develop and implement programs of study for its postsecondary programs.

What is a **Program of Study**? A program of study is a sequence of instruction (based on recommended standards and knowledge and skills) consisting of coursework, co-curricular activities, work-based learning experiences, and service-learning experiences. This sequence of instruction provides preparation for career.

CIP 11.0201

The Community College Services, in cooperation with Michigan Community Colleges, began the Michigan Community College Programs of Study initiative in 2009 in order to support the student success initiatives at the colleges.

Final Report

The outcomes of this work are:

1. meet and exceed the requirement within the Perkins Act;
2. align technical and academic competencies and assessments for secondary career and technical courses to community college POS;
3. for youth and adults identify prerequisite knowledge, skills, and assessments required to be successful upon entering a college occupational program.

June 30, 2010

POS - Gaps Identified

- No Secondary Programs
- Math Prerequisite
- Industry Certification?

Program of Study
Computer Programming, General
CIP 11.0201
Final Report
June 30, 2010

A Post-Secondary Program?

OVERVIEW

| INFORMATION TECHNOLOGY SKILL CLUSTER TITLES AND TAXONOMY OF EDUCATIONAL ATTAINMENT AND PROGRESSION | | | | | | |
|--|------------------------------------|-------------|--------------------|---------------------------|---------------|----------------|
| Cluster Title | Representative Occupation Titles | High School | 1-Year Certificate | 2-Year Certificate/Degree | 4-Year Degree | Graduate Level |
| Network Design and Administration | Network Technician | ✓ | ✓ | ✓ | | |
| | Network Engineer | | | | ✓ | ✓ |
| | Network Operations Analyst | | | ✓ | ✓ | ✓ |
| | Data Communications Analyst | | ✓ | ✓ | ✓ | ✓ |
| | Network Architect | | | | ✓ | ✓ |
| Programming/Software Engineering | Software Engineer | | | | ✓ | ✓ |
| | Software Tester | | | ✓ | ✓ | |
| | Software Applications Specialist | | | ✓ | ✓ | |
| | SW Development Engineer | | | | ✓ | ✓ |
| | Programmer/Analyst | | | ✓ | ✓ | ✓ |
| | Software QA Specialist | | | ✓ | ✓ | |
| Technical Support | Technical Support Representative | | ✓ | ✓ | | |
| | Customer Service Representative | | ✓ | ✓ | ✓ | |
| | Help Desk Technician | ✓ | ✓ | ✓ | | |
| | PC Support Specialist | ✓ | ✓ | ✓ | | |
| | Sales Support Technician | | ✓ | ✓ | ✓ | |
| | Maintenance Technician | ✓ | ✓ | ✓ | | |
| Technical Writing | Technical Writer | | | | ✓ | ✓ |
| | Document Specialist | ✓ | ✓ | ✓ | | |
| | Electronic Publications Specialist | | ✓ | ✓ | | |
| | Technical Publications Manager | | | | ✓ | ✓ |
| Web Development and Administration | Web Page Developer | ✓ | ✓ | ✓ | ✓ | |
| | Web Site Developer | | | ✓ | ✓ | ✓ |
| | Webmaster | | | | ✓ | |
| | Web Architect | | | | ✓ | ✓ |
| | Web Administrator | | | ✓ | ✓ | |
| | Web Designer | | | | ✓ | ✓ |

Software Fundamentals w/ Alice

The screenshot displays the Alice 2.2 software interface. The main window title is "Alice (2.2 09/10/2010) C:\Program Files (x86)\Alice\Alice 2.2\Required\exampleWorlds\snowLove.a2w". The interface includes a menu bar (File, Edit, Tools, Help), a toolbar with Play, Undo, and Redo buttons, and a 3D view window showing two snowmen on a yellow hill under a blue sky with a palm tree. The left sidebar contains a "World" panel with a tree view of objects: Camera, sunLight, island, Snowwoman, and Snowman. Below this is the "World's details" panel with tabs for properties, methods, and functions. The "methods" tab is active, showing a list of methods such as movie, fadeIn, raiseEyeBrows, heyBaby, shelsCoy, extendArms, funnyTurnAnimation, funnyWalk, melt, sigh, hisReaction, and fadeOut, each with an "edit" button. The right sidebar features an "Events" panel with a "create new event" button and two event triggers: "When [mouse] is clicked on anything, do World.movie" and "When the world starts, do Camera.Screen set isShowing to true duration = 0 seconds more...". A text box below the events panel explains: "Events: Events run Methods when certain things happen (like when the mouse is clicked on an Object or when a certain key is pressed)". At the bottom, the "World.movie" panel shows a sequence of actions: "World.fadeOut", "Camera.Screen set isShowing to false more...", "World.fadeIn", "Wait 0.5 seconds", "Snowman.Head point at Snowwoman.Head more...", "Wait 0.3 seconds", and "Snowwoman.Head point at Snowman.Head more...". The bottom of the interface has a control bar with buttons for "Do in order", "Do together", "If/Else", "Loop", "While", "For all in order", "For all together", "Wait", "print", and a help icon.

Math Requirements

MATH CONCEPTS AND TOOLS MOST OFTEN CITED AS SUPPORTING IT SKILL CLUSTERS

| | Database Development and Administration | Digital Media | Enterprise Systems Analysis and Integration | Network Design and Administration | Programming/Software Engineering | Technical Support | Technical Writing | Web Development and Administration |
|--------------------------------------|---|---------------|---|-----------------------------------|----------------------------------|-------------------|-------------------|------------------------------------|
| Arithmetic Concepts and Tools | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Measurement | | | | ✓ | | ✓ | | |
| Algebraic Concepts and Tools | ✓ | | ✓ | ✓ | ✓ | ✓ | | |
| Computation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Estimation and Cost/Benefit Analysis | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Geometric Concepts and Tools | | ✓ | | | | | | |
| Graphing | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Relational Algebra | ✓ | | | | ✓ | | | |
| Statistical Analysis | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Trigonometric Concepts and Tools | | ✓ | | | | | | |
| Logic | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Note: The concepts of math and science set forth in these tables reflect a summary of topics that support IT skill cluster areas. This data provides a generalized link between IT skill clusters and math/science topics. It is not intended to be prescriptive with regard to content depth, or to imply particular instructional modes.



Industry Certification?

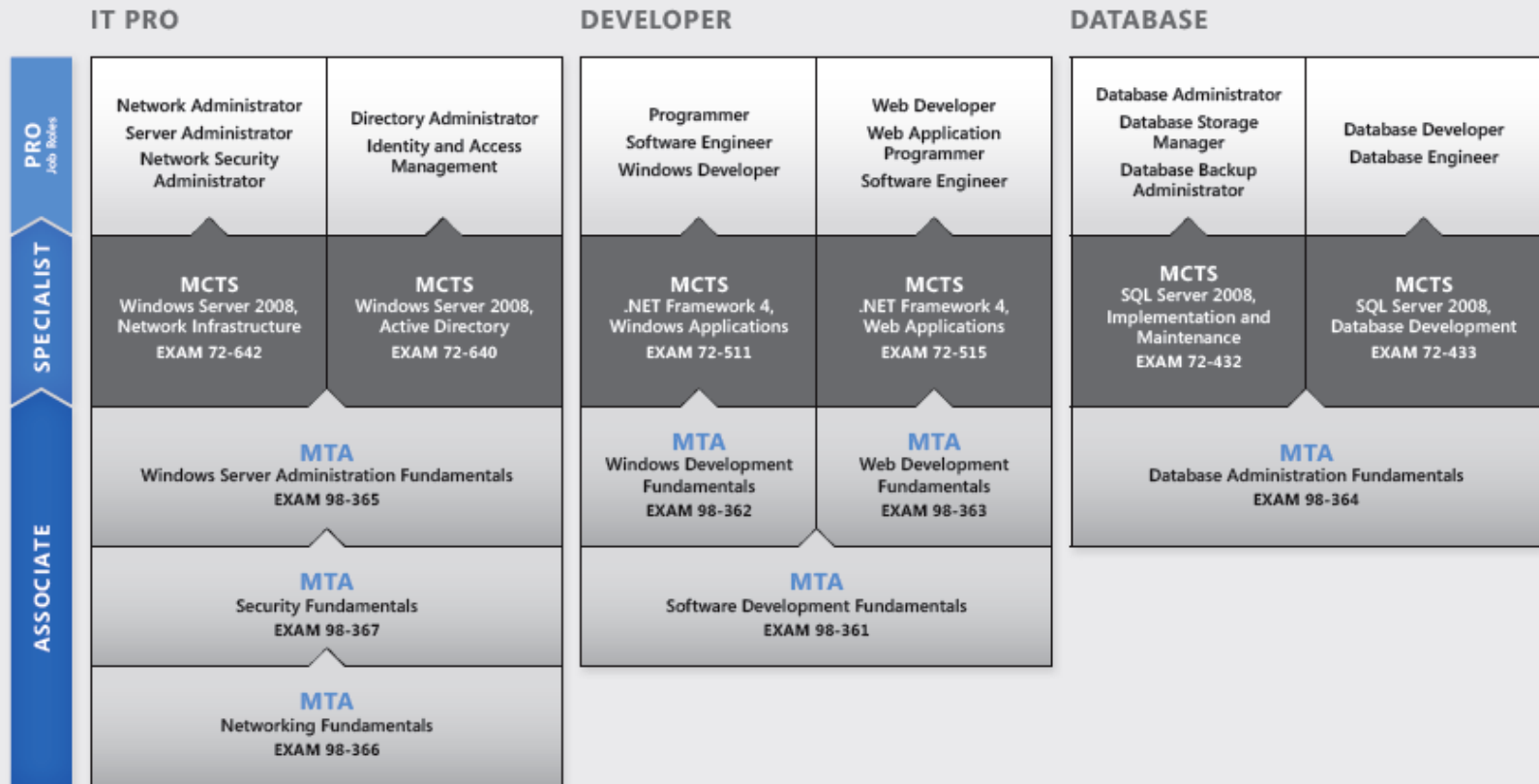
- Standardized on Microsoft .NET
- Certification?
- Microsoft Certified Technology Specialist?

**Good programmers
are good architects.
Syntax and class libraries
are less important.”**



Microsoft Technology Associate Certification Paths

MTA is the recommended first step in the Microsoft IT Certification Program, and does not require pre-requisite exams. MCTS exams do not require MTA certification. *One MTA exam = One certification.*



For more information about Learning Resources, visit <http://www.microsoft.com/learning/mta>

IT Pro – Objective Domain

98-366 - Networking Fundamentals

- Understanding Network Infrastructures
- Understanding Network Hardware
- Understanding Protocols and Services

98-367 - Security Fundamentals

- Understanding Security Layers
- Understanding Operating System Security
- Understanding Network Security
- Understanding Security Software

98-365 - Windows Server Administration Fundamentals

- Understanding Server Installation
- Understanding Server Roles
- Understanding Active Directory
- Understanding Storage
- Understanding Server Performance Management
- Understanding Server Maintenance

CompTIA Comparison Matrix

| | | CompTIA Network + / MTA 98-367 Comparison Matrix | | | | | | | |
|---|--|--|--------------------------------|------------------------|------------------------------|---------------------------|-----------------------|--------------------|--------------------------------|
| | | MTA 98-367 Security Fundamentals | | | | | | | |
| | | 1.4 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 3.1 |
| X = Areas Where MTA Objectives Apply | | Understand Wireless security | Understand user authentication | Understand permissions | Understand password policies | Understand audit policies | Understand encryption | Understand malware | Understand dedicated firewalls |
| CompTIA Security+ Objectives (SY0-201) | | | | | | | | | |
| 1.0 | System Security (21%) | | | | | | | | |
| 1.1 | Differentiate among various systems security threats. | | | | | | | X | |
| 1.2 | Explain the security risks pertaining to system hardware and peripherals. | | | | | | | | |
| 1.3 | Implement OS hardening practices and procedures to achieve workstation and server security. | | | | | | | | |
| 1.4 | Carry out the appropriate procedures to establish application security. | | | | | | | X | |
| 1.5 | Implement security applications. | | | | | | | | X |
| 1.6 | Explain the purpose and application of virtualization technology. | | | | | | | | |
| 2.0 | Network Infrastructure (20%) | | | | | | | | |
| 2.1 | Differentiate between the different ports & protocols, their respective threats and mitigation techniques. | | | | | | | | |
| 2.2 | Distinguish between network design elements and components. | | | | | | | | |
| 2.3 | Determine the appropriate use of network security tools to facilitate network security. | | | | | | | | X |
| 2.4 | Apply the appropriate network tools to facilitate network security. | | | | | | | | X |
| 2.5 | Explain the vulnerabilities and mitigations associated with network devices. | | X | | | | | | |
| 2.6 | Explain the vulnerabilities and mitigations associated with various transmission media. | | | | | | | | |
| 2.7 | Explain the vulnerabilities and implement mitigations associated with wireless networking. | X | | | | | | | |

CompTIA Comparison Summary

“Although the MTA exams objectives are not as comprehensive as the CompTIA objectives, I do see a benefit. The MTA certification exam will be a good “readiness” tool. If they are unable to pass this exam, then it’s doubtful they will pass the CompTIA exam. It can also be used as a “litmus” test to see if Networking Technology is the right program for the student.”

- Scott Goethals, NMC CIT Program Coordinator

MTA Dev/Data Objectives

98-361 - Software Development Fundamentals

- **Understanding Core Programming**
- **Understanding Object-Oriented Programming**
- **Understanding General Software Development**
- **Understanding Web Applications**
- **Understanding Desktop Applications**
- **Understanding Databases**

MTA Dev/Data Objectives


98-362 - Windows Development Fundamentals

- **Understanding Windows Programming Basics**
- **Creating Windows Forms Applications**
- **Creating Windows Services Applications**
- **Accessing Data in a Windows Forms Application**
- **Deploying a Windows Application**



MTA Dev/Data Objectives


98-363- Web Development Fundamentals

- **Programming Web Applications**
 - **Working with Data and Services**
 - **Troubleshooting and Debugging Web Applications**
 - **Working with Client-Side Scripting**
 - **Configuring and Deploying Web Applications**
- 



MTA Dev/Data Objectives

98-364 - Database Administration
Fundamentals

- **Understanding Core Database Concepts**
 - **Creating Database Objects**
 - **Manipulating Data**
 - **Understanding Data Storage**
 - **Administering a Database**
- 

Industry Certification – Why?

- International Credential for Students
- Employers Value Certification
 - Standardized Outcomes
 - Applies Versioning to Knowledge
- Provides Perkins “Indicators of Performance and Accountability”
- Increased Completion Rates
- **Δ Program Review**

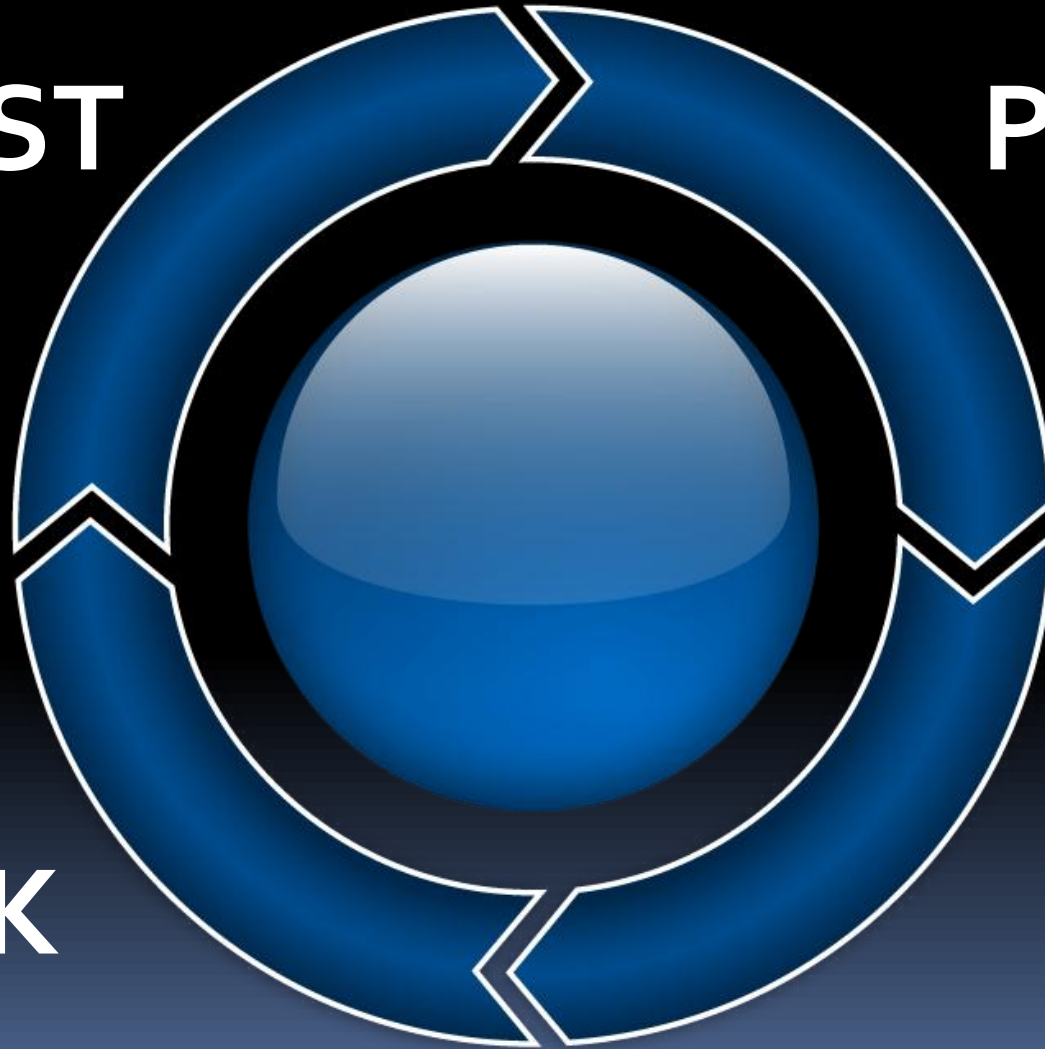
PDCA Quality Cycle

ADJUST

PLAN

CHECK

DO




Plan and Do

| CIT Developer – Program Sequence – 2 years/4 semesters (CIP code 11.02.01 – Computer Programming, General) | | | | | | |
|--|--|--|--|---|--|--|
| Prerequisites | | Fall Semester | Spring Semester | Summer | Fall Semester | Spring Semester |
| Programming | | CIT110 Prog Logic & Design 3 cr | CIT195 .NET Application Programming 3 cr <i>MTA 98-361</i> | | CIT255 .NET OOP 3 cr | CIT275 .NET Solutions Development 3 cr <i>MTA 98-362</i> |
| Web | | CIT180 XHTML Programming 2 cr | CIT190 JavaScript Programming 2 cr | | | CIT218 Web Applications using ASP.NET 3 cr <i>MTA 98-363</i> |
| Data | CIT128 Excel 1 2 cr | CIT170 Intro to DB Management 3 cr | CIT185 XML Programming 2 cr | | CIT248 SQL Server Database 3 cr <i>MTA 98-364</i> | CIT280 System Analysis & Design 3 cr |
| Other IT | CIT122A Comp & Internet Basics 1 cr | BUS101 Intro to Business 3 cr BUS 150 Interpersonal Relations 2 cr | CIT213 Networking Technologies 4 cr | | CIT233 Project Management 3 cr CIT 215 Windows Server 3 cr | CIT290 Internship 3 cr |
| Gen Ed. | ENG99 6 cr MTH23 4 cr | MTH111 4 cr | ENG111 4 cr | PHL 105 OR PHL 202 3 cr ECO201 3 cr | ENG112 4 cr | PHY105 Physics 4 cr |



Select Preview - Pilot

- Exam 98-364 required for all CIT248 – SQL Server students
 - Existing course work
 - Certiport group created
 - Exams completed and aggregated data reported
- 

Check and Adjust

View Exam Group Results

EXAM GROUP REPORT

Name CIT248 1101
Description
Exam Group ID 1181020
Pass 15(88.24 %)
Fail 2(11.76 %)

Exam View Student View

Show Skillset Breakdown

Microsoft

Technology
Associate

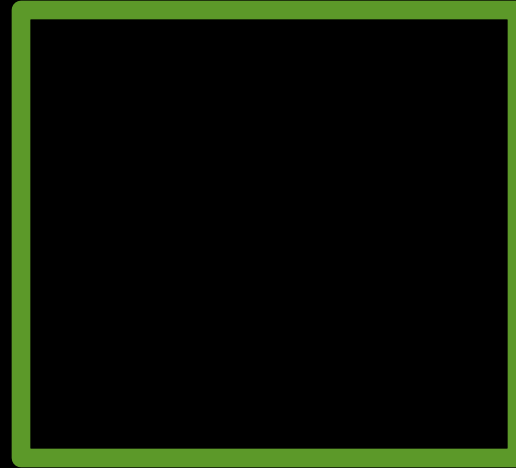
| Product Name | Cut Score | Average Score | Pass | Fail |
|--|-----------|---------------|------|------|
| Microsoft Technology Associate Exam 98-364: Database Administration Fundamentals (v3355) | 70 | 78 | 15 | 2 |

| Skill Group | % Correct |
|--------------------------------------|-----------|
| Understanding Core Database Concepts | 73 |
| Creating Database Objects | 82 |
| Manipulating Data | 90 |
| Understanding Data Storage | 71 |
| Administering a Database | 72 |

Done

Impact and Results

- How big is the box?





Impact and Results

- How big is the box?
- What is required content for a beginning programmer?
- Certifications provide clearly defined outcomes
- Internationally recognized

Impact and Results

- Content Externally Validated
- IT Industry Sets the Standard
- Much of the Content is Vendor Neutral



Impact and Results

- Changing Instructor Roles



Impact and Results

- Introduction to Certification
- Microsoft Transcript



MTA - How To...

Certiport | Home - Certify to Succeed - Windows Internet Explorer

http://www.certiport.com/portal/DesktopDefault.aspx

File Edit View Favorites Tools Help

Certiport | Home - Certify to Succeed

CERTIPORT Achieve • Distinguish • Advance

Support Register Forgot Password

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CERTIFICATION QUICKLINKS

For enhanced accessibility, click here to view the entire site in HTML.

Certiport offers individuals current and relevant digital skills and credentials for the competitive global workforce. These solutions include the official Microsoft® Office certification programs, the Adobe® Certified Associate certification program, the *iCritical Thinking*™ Certification powered by ETS, the CompTIA Strata™ IT Fundamentals and the Certiport Internet and Computing Core Certification (IC3®), delivered by more than 10,000 Certiport Centers worldwide. For more

Certiport Testing Center

The screenshot shows the Certiport website in a Windows Internet Explorer browser. The address bar displays the URL: http://www.certiport.com/portal/DesktopDefault.aspx?page=common/pagelibrary/Become_a_Center.htm. The page title is "Certiport | Home - Certify to Succeed - Windows Internet Explorer".

The main content area is titled "Getting Started" and features a video tutorial link: "Ready to get started? Click here to view the 'Getting Started' video tutorial." Below this, it states: "Follow these six steps to begin offering Certiport certifications at your organization:"

The six steps are:

- STEP 1: VERIFY** - Ensure your computers meet the technical and environmental requirements.
- STEP 2: REGISTER** - Create an account with Certiport.
- STEP 3: PURCHASE EXAMS** - Make an exam purchase.
- STEP 4: INSTALL** - Equip your computers with the right testing software.
- STEP 5: MANAGE YOUR ACCOUNT** - Manage associations, inventory, reporting and more.
- STEP 6: ADMINISTER EXAMS** - Start offering certification exams to test candidates.

On the right side of the page, there are two sections:

- CERTIPOINT CENTER LINKS**: Includes a "BETA OPPORTUNITY" button and links for "Getting Started with NTA", "Webinar Training", and "Welcome to Certiport (Organization Administrators)". A "Register Now" button is also present.
- TRAINING VIDEOS**: Includes links for "Getting Started", "Welcome to Certiport (US Organization Administrators)", "Exam Administration", "Install", "Exam Vouchers, Inventory, and Licenses", "Manage Associations", "Run Reports for Exam Results & Exam Groups", and "Print Certificates & Score Reports".

The Windows taskbar at the bottom shows the Start button, the Certiport website icon, a Microsoft Word document named "2.docx", and the system tray with the time "5:50 AM" and "80%" zoom level.

MTA Certification Cost

| Country | Local Currency | Site License | ITA Site License | Voucher | ITA Voucher |
|---------|----------------|--------------|------------------|----------|-------------|
| USA | Dollar | \$ 3,000 | \$ 2,550 | \$ 47.00 | \$ 40.00 |

* Five Free Vouchers – Provide contact information to Keith

Microsoft IT Academy

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- Certification Roadmap
- Success Stories
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- Contact Us ▶
- Member Sign-In

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▶ APPLY NOW



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Microsoft • IT Academy Curriculum Mapping to Standards

Alignment of Academic and Vocational Standards with Microsoft IT Academy

Future Systems Engineer

The banner features a woman in a green top wearing a graduation cap while working at a computer, and another woman in a purple top holding a folder in a library setting. Navigation arrows are visible at the bottom right.

Micro-soft IT A-cad-e-my \mi-(,)krō-soft I-T ə-'ka-də-mē\ n. A subscription-based membership program designed for academic institutions. It offers comprehensive IT training, resources, and Microsoft certification opportunities to enhance employability and encourage life-long learning.

ADMINISTRATORS

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EDUCATORS

Get all the resources you need to support students at every level, and ensure your own professional development.



STUDENTS

Explore what Microsoft IT Academies have to offer and find academies near you.



Microsoft Technology Associate (MTA)



Help demonstrate your knowledge of technology fundamentals by earning a Microsoft Technology Associate (MTA) certification. Earning the MTA certification can help you stand out when you submit college and internship applications by helping to prove your commitment and understanding of a variety of entry-level technology concepts.

| | |
|-----------|--|
| Level: | Knowledge and basic understanding of key technology concepts |
| Audience: | Students, technology educators, and entry-level IT staff of accredited academic institutions |
| Type: | Microsoft Certification |

Overview

Certification

FAQ

Overview

The Microsoft Technology Associate (MTA) certification helps schools teach and validate fundamental technology knowledge, provides students with a foundation for their careers, and helps them gain the confidence they need to succeed in advanced studies. Help your institution stand out with an innovative technology curriculum while offering students an opportunity to earn a Microsoft Certification right in the classroom.

Are you a student who wants to earn an MTA certification? Refer to the exam preparation guides for Learning Plans and other valuable resources to help you prepare for a successful MTA exam.

MTA exams are only available at academic institutions that have purchased an MTA Campus License or MTA vouchers. Contact your school administrator to find out if your school is an approved MTA testing center.

If your school is not already an MTA testing center, a faculty member or administrator can contact a Certiport sales consultant to learn how to obtain an MTA Campus License.

- [Contact a Certiport consultant](#) (Certiport.com)

MTA candidate profile

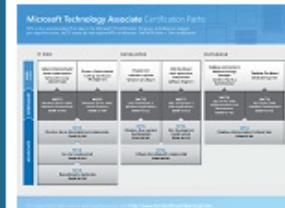
MTA candidates are able to understand and explain fundamental concepts of the topic on which they are being tested. Typically, hands-on hardware or technology experience is recommended, but not always required.

- [See exam preparation guides for exam-specific requirements](#)

MTA campus license

The MTA Campus License includes 1,000 exams per year, which your institution can deliver to registered students, faculty, and staff. Exams can be administered anywhere on campus, without classroom or desktop restrictions, when it is convenient for you. MTA exams are based on high-demand industry career tracks and designed by Microsoft Learning experts and professional educators. Each exam includes a companion MTA certification exam review kit designed to supplement the courseware already in use by educators. MTA content can be easily imported and integrated into your existing curriculum.

Microsoft Technology Associate Certification Path



Microsoft Technology Associate Certification Path Roadmap

- [Download XPS file \(436 KB\)](#)
- [Download PDF file \(597 KB\)](#)

News and Special Offers

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Getting Started with Certification

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- [View the Getting Started with Certification FAQ](#)
- [Browse through all certifications](#)

Chart Your Career

- [Visit the Professional Career Portal](#)
- [Visit the Student Career Portal](#)



Microsoft partners:
Discover your opportunities

Certification


To earn an MTA certification, you must pass only one of the following exams. However, we recommend that you review the MTA Exam Certification Paths chart (later in this section) and consider earning a Microsoft Certified Technology Specialist (MCTS) certification to help you further your career in the IT industry. Earning more than one certification helps show potential employers and college admissions offices that you have a variety of technology skills and are committed to a wide set of abilities.

- [Find out more about MCTS certifications](#)

| Certification | Exam number |
|--------------------------------------|---|
| Developer exams | |
| Software Development Fundamentals | Exam 98-361 <ul style="list-style-type: none">▪ Preparation guide▪ Learning Plan |
| Windows Development Fundamentals | Exam 98-362 <ul style="list-style-type: none">▪ Preparation guide▪ Learning Plan |
| Web Development Fundamentals | Exam 98-363 <ul style="list-style-type: none">▪ Preparation guide▪ Learning Plan |
| Database Administration Fundamentals | Exam 98-364 <ul style="list-style-type: none">▪ Preparation guide▪ Learning Plan |



Wrap up – NMC Strategic Directions

- NMC will establish national and international competencies in select areas connected to the regional economy and assets.
 - NMC will ensure that learners are prepared for success in a global society and economy.
 - NMC will transcribe most learning to establish credentials of value.
- 

NMC Learning Model

- What are the cultural factors that support learning? (**Culture**)
- What is it we expect all students to know and be able to do and what are the dispositions (attitudes, traits, virtues) they will develop? (**Curriculum**)
- How will students (and we) know that they've learned these things? (**Assessment**)
- What instructional practices work? (**Instruction**)
- What are we prepared to do for students who need more? (**Intervention**)



Questions?

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