



For more information contact:
Hazard Community
and Technical College
One Community College Drive
Hazard, KY 41701

Program Coordinator: David Frazier
Phone: 606-487-3412 or Fax: 606-436-3631
Email: David.Frazier@kctcs.edu

All applicants meeting the appropriate academic requirement and technical standards shall be considered equally for admission to a community college or any academic program thereof regardless of race, color, religion, sex, marital status, national origin, age or handicap.

Students may be required to have a criminal background check and/or drug screening done in order to enter the health care facilities for clinical. Students are responsible for the cost. Based on the results the facility has the right

How to Apply

The Admission office needs the following:

1. A completed application
2. Official high school or GED transcripts.

ACT scores OR official copy of college transcripts if you have attended college.

Once an application is received, a placement test is required (Compass). To contact the admissions office, call 606-487-3064.



KCTCS is an equal opportunity institution.

Revised 07/14/08



Information Technology Program



Associate Degree In Applied Science

Hazard Community and Technical College AAS Degree—Information Technology

DATABASE ADMINISTRATION OPTION

IT 147 SQL Programming	3
IT 235 Data-Driven Web Design	3
IT 270 Database Systems – Implementation & Management	3
Intermediate Level Programming Language	3
Select Oracle or Microsoft Track (listed below)	12
Subtotal	24-25
Total Credits	70-73

DATABASE ADMINISTRATION OPTION—ORACLE TRACK [ENHANCED]

IT 272 Oracle Database Fundamentals I	3
IT 274 Oracle Database Fundamentals II	2
IT 276 Oracle Network Administration	2
IT 278 Oracle Database Performance Tuning	3
NIS 213 Administering Microsoft Windows Server OR	3
NIS 230 UNIX Administration	(3)
Oracle Track	13

DATABASE ADMINISTRATION OPTION MICROSOFT TRACK [ENHANCED]

NIS 246 Microsoft SQL Server Administration	3
NIS 247 Microsoft SQL Server Implementation	3
NIS 248 Microsoft SQL Server Data Warehousing	3
NIS 213 Administering Microsoft Windows Server	3
Microsoft Track	12

CONTACT ADMISSIONS FOR CURRENT INFORMATION

General *Information*

The Information Technology Program offers an Associate in Applied Science degree and certificates in Information Technology Fundamentals, Computer Programming, Network Administration, Database Administration, Electronic Commerce, Information Security, Web Development, and Information System Support. This curriculum is supported by a solid foundation of core courses that focus on problem-solving and communication skills for Information Technology professionals involved in computer network environments.

Students entering this program will need to have basic computer skills such as would be obtained through CIS 100 (Introduction to Computers) or equivalent.

The **Computer Programming Option/Certificate** provides students with an introduction to programming languages with at least one of the languages studied at the intermediate level. Students will have the opportunity to study one language in depth or develop a breadth of knowledge in several languages. Students completing this option are prepared for the entry-level computer programmer positions.

The **Computer Support Specialist Option/Certificate** will provide an in-depth knowledge of application software, current Microsoft Windows client operating systems and user support skills. Upon completion of the option/certificate, the graduate will be qualified to take industry designed and recognized certification examinations. Employment opportunities include entry-level positions supporting applications, operating systems, and end users.

The **Database Administration Option/Certificate** is intended for students wishing to upgrade or acquire new vocational skills in the fields of database administration, database design, and programming with database management systems. The course of study includes a foundation in business information systems, database theory and design, a procedural programming language, and a database language. A capstone course utilizes a special project, encompassing all of the areas, suitable for job experience and a job portfolio. Upon completion of the option/certificate, the graduate will be qualified to take industry designed and recognized certification examinations. Employment opportunities include entry-level positions to develop, implement, manage and maintain database systems.

The **Electronic Commerce Option/Certificate** provides training in designing, deploying, and managing an Internet e-commerce site. This option will prepare students for careers as web page designers, web masters, or web site managers of a web-based business. A capstone class in web site implementation will encompass all facets of the program of study, and will provide experience and a job portfolio.

The **GIS Essentials Certificate** is designed to develop support in the GIS field and provide students with practical GIS skills and a solid foundation for geographical manipulation. Students will gain experience through developing and implementing GIS applications. Students entering this certificate program will need to have basic computer skills and basic program logic skills such as would be obtained through CIS 100 (Introduction to Computers), CIS 120 (Program Design and Development) and CIS 130 (Microcomputer Applications) or equivalent.

Information Security Option/Certificate—A program of study designed to provide a solid background in information security. Fundamentals of information security, offensive techniques, defensive techniques, and security topics such as operating system security, network security design, or other security topics are covered. This option will prepare students for entry-level positions in the areas of network security, auditing and penetration testing, firewall configuration, and computer crime investigation.

The **Network Administration Option/Certificate** provides the concepts and skills needed to design, set-up, maintain and expand networked systems. The curriculum provides specific training in Novell, Cisco, and/or Microsoft network systems. Upon completion of the option/certificate, the graduate will be qualified to take industry designed and recognized certification examinations. Employment opportunities include entry-level positions in installation and administration of local and wide area networks in medium to large businesses and organizations, and computer network administration positions in small businesses.

The **Web Development and Administration Option/Certificate** will provide training in designing, deploying, and managing a web site from both a hardware and software perspective. This option will prepare students for careers as web site developers, webmasters, and web administrators. A capstone class in web site implementation will encompass all facets of the program of study, and will provide experience and a job portfolio.

Hazard Community and Technical College AAS Degree—Information Technology

NETWORK ADMINISTRATION OPTION

Microsoft Networking Certification Track:

NIS 211 Administering Microsoft Windows Professional: Topic	3
NIS 213 Administering Microsoft Windows Server: Topic	3
NIS 214 Supporting Windows 2000 Network Infrastructure	3
NIS 216 Implementing and Administering Microsoft Windows 2000 Directory Services	3

Technical Electives for MCSE Track:

NIS 242 Designing a Windows Directory Services Infrastructure Topic	(3)
NIS 244 Designing a Windows Networking Services Infrastructure Topic	(3)
NIS 245 Designing a Secure Windows Network Topic:	(3)

Technical Electives if student is not interested in MCSE Track:

Subtotal	9
Total Credits	21
	67-69

Cisco Networking Associate Track:

IT 122 Cisco Internetworking II	4
IT 220 Cisco Internetworking III	4
IT 222 Cisco Internetworking IV	4
NIS 213 Administering Microsoft Windows Service Topic: OR NIS 230 UNIX Administration	3
Technical Electives *	(3)
Subtotal	6
Total Credits	21
	67-69

WEB DEVELOPMENT AND ADMINISTRATION OPTION

Required:

CIS 248 Visual Basic II-Desktop Applications OR CIS 249 Java Programming II	3
NIS 150 Introduction to Perl Scripting OR NIS 152 Javascript	(3)
NIS 275 Internet Servers Administration	3
IT 130 Web Sight Design and Production# OR IT Web Page Development132 #	3
IT 230 Advanced Web Page Development	(3)
IT 235 Data-driven Web Design	3
IT 295 Web Development & Administration Practicum: Site Implementation	3
Technical Elective	3
Subtotal	3
Total Credits	24
	70-72

#Must take IT 130 or IT 132 which ever course was not taken in the technical core.

Hazard Community and Technical College AAS Degree—Information Technology

COMPUTER PROGRAMMING OPTION

CIS 220 Systems Analysis and Design	3
COE 199 Cooperative Education OR	3
CIS 280 Internship	(3)
ACC 201 Financial Accounting I	3
Programming Languages (must include at least 6 credit hours above the beginning level)	12
Management Course (choose from courses	3
Subtotal	24
Total Credits	70-72

*Must take either IT 130 or IT 132 which ever course was not taken in the Technical core

COMPUTER SUPPORT SPECIALIST OPTION

CIS 230 Advanced Microcomputer Applications OR	3
OST 225 Introduction to Desktop Publishing	(3)
IT 237 Help Desk Service Skills and Tools	3
IT 210 Operating Systems Support	3
IT 215 Application Support	3
CIS 280 Internship OR	3
COE 199 Cooperative Education	(3)
Technical Electives	6
Subtotal	21
Total Credits	67-71

ELECTRONIC COMMERCE OPTION

B&E 100 Introduction to Business and Economics OR	1
BA 160 Introduction to Business	(3)
BA 282 Principles of Marketing	3
ACC 201 Financial Accounting I	3
BA/CIS 151 Introduction to Electronic Commerce	3
IT 130 Web Graphics and Multimedia OR	3
IT 132 Web Page Development*	(3)
IT 230 Advanced Web Page Design	3
IT 235 Data-Driven Web Design	3
IT 291 E-Commerce Practicum: Site Implementation	3
Subtotal	22-24
Total Credits	68-72

*Must take either IT 130 or IT 132 which ever course was not taken in the Technical core

Hazard Community and Technical College

The Associate of Applied Science Degree in Information Technology Guidelines

In order to receive this degree you must do the following:

Complete general education components (22-23 credit hours minimum in specified areas – Mathematics, Natural Sciences, Social/Behavioral Sciences, Humanities/ Fine Arts, Writing/Accessing Information)

Complete computer literacy upon entrance to the program.

Complete 24-25 credit hours of technical course work (Computer Applications, Networking, Programming, Web Development, and other).

Verify residency requirements – at least 25% of the approved curriculum credits (15 – 19 credit hours) must be completed at the institution granting the degree (degree total 67-72 credit hours) in one of the six options.

Develop learner degree completion plan.

Technical courses to be utilized in this degree will be taken from the list of approved technical courses at Hazard Community and Technical College.

There are various certificate options available ranging from 9-33 credit hours [A+, CISCO, MCSA, Web Developer, Information Security, and many more].

*A Listing of General Education Requirements may be found in KCTCS catalog.

Hazard Community and Technical College Information Technology Program Quick Reference

Degree Options	Hours
Computer Programming	70-74
Computer Support Specialist	67-71
Database Administration	67-71
Electronic Commerce	68-75
Networking Administration	70-74
Web Development and Administration	71-75

Certificates	Hours
IT Fundamentals	24-27
A+	9-10
Computer Programming	30
Computer Support Specialist	30-31
Database Administrator - Oracle Basic	21
Database Administrator - Oracle Enhanced	12
Microsoft Networking MCSE Track	24
Microsoft Networking MCSA Track	15-16
Electronic Commerce	26-28
GIS Essentials	15
Web Administrator	24
Web Site Developer	34

Hazard Community and Technical College AAS Degree—Information Technology

GRADUATION REQUIREMENTS

GENERAL EDUCATION

ENG 101 Writing I	3
ENG 102 Writing II	3
MT 150 College Algebra	3
PHY 152 Introduction to Physics AND	3
PH 162 Introduction to Physics Laboratory II OR	1
[PH 171 Applied Physics] OR	(4)
[PH 217 Applied Industrial Physics]	(5)
Communication Course	3
Behavioral/Social Science Course	3
Heritage/Humanities Course	3
Subtotal	22-23

TECHNICAL CORE

CIS 120 Program Design and Development	3
CIS 130 Microcomputer Applications OR	3
[ET 107 Computer Applications for Technicians]	(4)
ET 232 Software Maintenance OR	3
[CIS 110 Operating Systems Concepts]	(3)
ET 234 Hardware Maintenance	3
NIS 160 Networking Core Technologies OR	3
[IT 120 Cisco Internetworking I] OR	(3)
[IT 124 Nortel Internetworking Fundamentals]	(3)
IT 170 Introduction to Database Design	3
IT 130 Web Graphics and Multimedia OR	3
[IT 132 Web Page Development] OR	(3)*
[CIS/BA 152 Introduction to Web page Design] AND	(1)
[CIS/BA 153 Intermediate Web page Design]	(2)
Beginning Level Programming Language	3
Subtotal	24-25

Beginning Level Programming Language Courses:

CIS 143 COBOL Programming	3
CIS 148 Visual BASIC I	3
CIS 149 Java Programming I	3
CIS 155 Introduction to C/C++ Programming .	3
CS 115 Introduction to Computer Programming .	3
IT 147 SQL Programming	3
NIS 150 Introduction to Perl Scripting*	3
NIS 152 Javascript*	3

*Suggested for Electronic Commerce option

CONTACT ADMISSIONS FOR CURRENT INFORMATION