

FORM FOR REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM  
**Additional Information on CCS Forms**

1. Effective Date: Fall 2004

2. Program Competencies:

**Present**

**General Education Competencies**

Upon successful completion of this program, the graduate can:

1. Communicate effectively using standard written English.

*This will be implemented and evaluated in ENG 101, ENG 102, and CIS 105.*

2. Communicate in a clear oral and non-verbal fashion and employ active listening skills.

*This will be implemented and evaluated in a Communications course.*

3. Utilize computer technology as a tool to access and prepare information.

*This will be implemented and evaluated throughout the curriculum.*

4. Organize, analyze, and make information useful by employing mathematics.

*This will be implemented and evaluated in CIS 130, MA 109, and a Level I Programming Language.*

5. Demonstrate an awareness of one's interaction with the biological/physical environment.

*This will be implemented and evaluated in a Science course.*

6. Demonstrate an awareness of self as an individual, as a member of a multicultural society, and/or as a member of a world community.

*This will be implemented and evaluated in a Social Interaction course.*

7. Recognize the impact of decisive ideas and events in human heritage.

*This will be implemented and evaluated in a Heritage/Humanities/Foreign Language course.*

8. Develop and perform basic search strategies and access information in a variety of formats, print and non-print.

*This will be implemented and evaluated in ENG 101, ENG 102, and a Communications course.*

9. Analyze, summarize, and interpret a variety of reading materials.

*This will be implemented and evaluated throughout the curriculum.*

10. Think critically and make connections in learning across the disciplines.

*This will be implemented and evaluated throughout the curriculum.*

11. Elaborate upon knowledge to create new thoughts, processes, and/or products.

*This will be implemented and evaluated throughout the curriculum.*

12. Demonstrate an awareness of ethical considerations in making value choices.

*This will be implemented and evaluated throughout the curriculum.*

### **Core Competencies**

Upon successful completion of this program, the graduate can:

1. Use fundamental productivity software packages.

*This will be implemented and evaluated by requiring that students successfully complete hands-on assignments using various software packages while taking CIS 105 and CIS 130.*

2. Use and understand systems software, including a graphical user interface, with a working knowledge of at least one operating system.

*This will be implemented and evaluated by requiring that students successfully complete hands-on assignments using a graphical user interface and a command based operating system interface while taking CIS 105 and CIS 110.*

3. Install, use, and maintain systems software and applications software.

*This will be implemented and evaluated by requiring that students successfully complete assignments on installation, use, and maintenance of different types of software while taking CIS 110, CIS 130, and CIS 160.*

4. Analyze, design, implement and document simple applications.

*This will be implemented and evaluated by requiring that students successfully complete programming and design projects in CIS 120 and while taking a Level I Programming Language.*

5. Resolve technical questions using existing documentation.

*This will be implemented and evaluated by requiring that students successfully troubleshoot projects in CIS 110, CIS 130, CIS 160, ET 134 and a Level I Programming Language.*

6. Write end-user documentation using technical resources.

*This will be implemented and evaluated by requiring that students successfully complete programming projects while taking a Level I Programming Language.*

7. Employ basic diagnostic tools to identify and solve hardware and software problems.

*This will be implemented and evaluated by requiring that students successfully complete hands-on projects while taking CIS 110, CIS 160, and ET 134.*

8. Utilize logical, mathematical, and analytical skills to facilitate problem solving.

*This will be implemented and evaluated by requiring that students successfully implement mathematical programs while taking a Programming Language I course using skills acquired in MA 109.*

9. Understand ethical and legal issues in computing such as privacy, corporate property, copyright, and security of software, hardware, and information.

*This will be implemented and evaluated through lecture and discussion by requiring that students take and successfully complete CIS 105, CIS 130, CIS 150, and CIS 160.*

10. Understand and use network applications.

*This will be implemented and evaluated by requiring that students successfully complete hands-on projects using network applications while taking CIS 105, CIS 150, and CIS 160.*

### **Applications Option Competencies**

Upon successful completion of this option, the graduate can:

1. Evaluate, select, and customize software and hardware.

*This will be implemented and evaluated by requiring that students successfully complete hands-on projects while taking CIS 130, CIS 170, ET 134, and Applications Specialization courses.*

2. Demonstrate proficiency in the use of applications software.

*This will be implemented and evaluated by requiring that students successfully complete the requirements in approved Applications Specialization courses.*

3. Assist others in the use of microcomputer systems.

*This will be implemented and evaluated by requiring that students successfully complete hands-on projects and group projects while taking CIS 110, CIS 130, CIS 290, and Applications Specialization courses.*

4. Understand the concept of management information systems, including security of software, hardware, and information.

*This will be implemented and evaluated through lecture by requiring that students successfully complete projects in CIS 170, CIS 220, and CIS 290.*

5. Communicate with appropriate individuals (programmers, vendors, management, and users) in developing a team approach to problem solving.

*This will be implemented and evaluated by requiring that students successfully perform system analysis and design a database management project while taking CIS 220 and CIS 290.*

6. Demonstrate a fundamental knowledge of business principles and practices.

*This will be implemented by requiring that students take and successfully complete CIS 220, CIS 290, an accounting course, and a management course.*

7. Understand database techniques and data modeling.

*This will be implemented by requiring that students take and successfully complete CIS 130, CIS 170, CIS 220, and CIS 290.*

### **Computer Science Option Competencies**

Upon successful completion of this option, the graduate can:

1. Utilize fundamental programming techniques such as structured programming and object-oriented programming.

*This will be implemented and evaluated by requiring that students successfully complete programming assignments while taking CS 115 and CS 215.*

2. Use calculus skills to solve complex problems.

*This will be implemented and evaluated by requiring that students take and successfully complete MA 113, MA 114, PHY 231, and PHY 241.*

3. Understand the use of statistics and methods of developing meaningful statistical data.

*This will be implemented and evaluated by requiring that students take and successfully complete STA 291.*

4. Use software engineering skills to solve system-level computing problems.

*This will be implemented and evaluated by requiring that students successfully complete CS 216.*

### **Internet Technologies Option Competencies**

Upon successful completion of this option, the graduate can:

1. Utilize fundamental programming techniques such as structured programming and object-oriented programming to develop client-side and server-side Internet applications.

*This will be implemented and evaluated by requiring that students successfully complete programming assignments while taking the Level I and Level II Web Programming Languages and CIS 294.*

2. Understand the concept of management information systems, including security of software, hardware, and information.

*This will be implemented and evaluated through lecture by requiring that students successfully complete projects in CIS 170, CIS 220, and CIS 290.*

3. Communicate with appropriate individuals (programmers, vendors, management, and users) in developing a team approach to problem solving.

*This will be implemented and evaluated by requiring that students successfully perform system analysis and design a database management project while taking CIS 220 and CIS 290.*

4. Understand database techniques and data modeling.

*This will be implemented and evaluated by requiring that students successfully complete projects and assignments in CIS 130, CIS 170, CIS 220, and CIS 290.*

5. Develop Internet applications that interact with databases.

*This will be implemented and evaluated by requiring that students successfully complete projects and assignments in CIS 253.*

1. Create Internet applications that follow basic rules of web design.

*This will be implemented and evaluated by requiring that students successfully complete assignments and projects in either IMD 175 or IMD 180.*

### **Network Technology Option Competencies**

Upon successful completion of this option, the graduate can:

1. Understand communication protocols for computer networks.

*This will be implemented and evaluated through lectures and discussion, network implementation projects, and protocol analysis assignments by requiring that students take and successfully complete CIS 160, CIS 260, CIS 269, and Network Technology Specialization courses.*

2. Automate tasks using a scripting language.

*This will be implemented and evaluated by requiring that students successfully write programs while taking Scripting Language courses.*

3. Use a platform-specific network operating system to create and manage user accounts, share and secure resources, and establish and maintain Internet connections.

*This will be implemented by requiring that students successfully install, operate and maintain network operating systems in CIS 269 and Network Technology Specialization courses.*

4. Analyze business information needs and design network solutions to enhance productivity and competitiveness.

*This will be implemented and evaluated by requiring that students successfully design networks while taking CIS 292.*

5. Install and troubleshoot network hardware.

*This will be implemented and evaluated by requiring that students successfully complete network hardware installation and troubleshooting assignments in CIS 260.*

### **Programming Option Competencies**

Upon successful completion of this option, the graduate can:

1. Utilize fundamental programming techniques such as structured programming, visual programming, and object-oriented programming.

*This will be implemented and evaluated by requiring that students successfully complete programming assignments while taking Level I and Level II Programming Language courses.*

2. Develop software using at least two computer programming languages.

*This will be implemented and evaluated by requiring that students take and successfully complete either three Level I Programming Languages and one Level II Programming Language or two Level I Programming Languages and two Level II Programming Languages.*

3. Understand the concept of a management information system, including security of software, hardware, and information.

*This will be implemented and evaluated through lectures, projects/programs, and examinations in CIS 170, CIS 220, and CIS 290.*

4. Demonstrate a fundamental knowledge of business principles and practices.

*This will be implemented and evaluated by requiring that students take and successfully complete CIS 220, CIS 290, an Accounting course, and a Management course.*

5. Communicate with appropriate individuals (programmers, vendors, management, and users) in developing a team approach to problem solving.

*This will be implemented and evaluated by requiring that students successfully perform system analysis and design a database management project while taking CIS 220 and CIS 290.*

6. Understand database techniques and data modeling.

*This will be implemented and evaluated by requiring that students successfully complete CIS 130, CIS 170, CIS 220, and CIS 290.*

**Proposed**

No change.

3. Description for LCC Catalog:  
Present

COMPUTER INFORMATION SYSTEMS

With options in Applications, Network Technology, and Programming

**This program includes an Applications option, a Network Technology option, and a Programming option, with a core of courses common to all. The core includes a general education component central to a collegiate education and technical courses giving students an introduction to information systems, computer applications, program development, system maintenance, and networking including the Internet. In addition to core courses, students take specialty courses for their selected option.**

**The Applications option emphasizes several aspects of microcomputer system configuration, applications software, end-user documentation, and training. Students completing this option are prepared to work with microcomputer-based systems in business and industry.**

**The Network Technology option provides the concepts and skills needed to set up, maintain, and expand networked computer systems. Employment opportunities include entry level positions in installation and administration of local area networks in medium to large organizations and as computer network administrators in small businesses.**

**The Programming option provides students with an introduction to at least two programming languages with at least one of the languages studied at the intermediate level. Students completing this option are prepared for entry-level positions in computer programming.**

**The Computer Information Systems program has a selective admissions policy. In order to be considered for admission to the Computer Information Systems program, each applicant must be admitted to Lexington Community College and file a letter of intent with the Computer Information Systems Program Coordinator. For admission in the summer or fall semester classes, the letter of intent must be filed by March 1 and for the spring semester class by October 1. Exceptions to the March 1 and October 1 dates can only be granted by the President of Lexington Community College after consultation with the Computer Information Systems Program Coordinator. To be considered for admission to the program, a student must also:**

**1. Successfully complete CIS 105, CIS 110, CIS 120, and CIS 130. "Successful completion" is defined as:**

- **earning a "C" grade or better in the course,**
- **passing the exam for credit for a course, or**
- **transferring credit from an accredited institution and earning at least a 2.0 on a 4.0 scale for the course.**

**2. Complete MA 108R with a "C" grade or better, or have a math ACT score of at least 19 and have completed two years of high school algebra, or have completed the Math Placement Test with a resulting score indicating preparedness for MA 109; or successfully complete MA 109 or higher-level MA course.**

3. **Complete the orientation program for Computer Information Systems.**
4. **Attend a pre-admission conference with a CIS advisor.**

**See Guidelines for Admission to the Computer Information Systems Program, page 62, or consult an academic advisor for more details. For more information, visit the Computer Information Systems program Web site at [www.uky.edu/LCC/CIS](http://www.uky.edu/LCC/CIS).**

### **Proposed**

No change. See CIS Program Name Change Proposal for final catalog description.

4. Summary of How the Proposed Changes Will Result in Changes in the Level or Source of Funding:

**No change in Funding levels is expected.**