NEW OPTIONS

Internet Technologies

University of Kentucky

Format for Initiation of a New Option to an Approved Degree Program

Submitted by:

Lexington Community College

Computer Information Systems
Program

Internet Technologies
Program Option

Fall 2004
Proposed Starting Date

Community College President: Dr. James Kerley

_____
Signature

_____
Date

Signatures of Approval:

Department Chair: _____ **Date:** _____

Dean of the College: _____ **Date:** _____

Date of Notice to the Faculty: _____

***Undergraduate Council:** _____ **Date:** _____

***University Studies:** _____ **Date:** _____

***Academic Council for the Med. Ctr:** _____ **Date:** _____

***Senate Council:** _____ **Date:** _____

ACTION OTHER THAN APPROVAL: _____

_____

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I. MISSION, INFLUENCE, ORGANIZATION

1.01 Consistency With Mission

State the relevance of this program to the institution's mission and to its long-range instructional plan.

The mission of The University of Kentucky Lexington Community College is to provide open access to quality education for our diverse and growing community. As an independently accredited community college, Lexington Community College offers

- associate degree programs focused on career-oriented technical curricula and transferable prebaccalaureate curricula,
- programs and services supporting academic success,
- lifelong learning opportunities,
- economic and workforce development,
- an inclusive, student-centered environment,
- and a commitment to community service.

The faculty reaffirmed this mission in November, 2001.

The proposed Internet Technologies Option for the Computer Information Systems Program is consistent with the mission of Lexington Community College by offering an "associate degree program focused on career-oriented technical curricula and transferable prebaccalaureate curricula" designed to produce students prepared for immediate employment in web development fields.

The option satisfies Lexington Community College's Strategic Plan, Goal 3: Scholarship to "strengthen the commitment to excellence through access, equity, and diversity" by creating an course of study "to ensure the needs of Lexington Community College students…are effectively addressed."

1.02 Internal/External Influences

a. Briefly describe any identified institutional, local, and regional needs to which the proposed program would be responsive (do not include manpower need data).

The rapid growth of online services such as e-commerce has increased the demand for professionals able to design and program the code necessary to support these services. This option creates a course of study designed to train students in designing, programming, and maintaining Internet services.

b. Describe any unusual or special faculty/student needs to which the program would be responsive.

unusual or special needs other than the need for an organized series of courses aimed at Internet development.

c. Describe any exceptional circumstances that favor the development of this program. For example, special facilities, grants, patrons, etc.

y Information Technology Center is providing general support for the IT programs at LCC. In the past, KITCenter has supported professional development and travel for faculty pursuing training in Internet development. KITCenter also offers training workshops for faculty in a variety of topic areas.

1.03 Relationship to University Organizational Structure

Describe the organizational placement of the program within the institution's organizational structure.

The new Internet Technologies Option for the Computer Information Systems program will be located in the Behavioral Science and Information Systems Technology Division. This division also contains the Information Management and Design and Early Childhood Education programs, the Accounting, Economics, Family Studies and Psychology academic areas, and Student Development and Counseling.

II. PROGRAM DESCRIPTION

2.01 Curriculum

a. Describe the curriculum of the proposed program and indicate the semester by semester sequence of courses taken by a typical student to complete the program. Identify the instructor for each departmental course.

b. Designate with an asterisk those courses required.

The Internet Technologies Option of the Computer Information Systems Program prepares students to design, program, and maintain Internet-based services. With an emphasis on client and server programming, this option prepares students for positions developing and maintaining interactive web sites.

PROPOSED CURRICULUM

In order to complete the Associate in Applied Science degree in Computer Information Systems, a student must complete all core courses as well as all courses in either the Applications Option, the Internet Technologies Option, the Network Technology Option, or the Programming Option.

Core

General Education

ENG101	**Writing I***	**3**
ENG102	**Writing II***	**3**
MA109	**College Algebra***	**3**
	Oral Communication Course*	**3**
	Heritage/Humanities/Foreign Language Course*	**3**
	Science Course*	**3-4**

Premajor Requirements

CIS105	**Introduction to Computing***	**3**
CIS110	**Operating Systems Concepts***	**3**
CIS120	**Program Design***	**3**
CIS130	**Microcomputer Applications***	**3**

Major Requirements

CIS150	**Internet Technologies***	**3**
CIS160	**Data Communications and Networking***	**4**
ET134	**Computer Hardware Maintenance***	**3**
	Approved Level I Programming Language*	**3**
	Approved Technical Course(s)*	**3**

Subtotal 49-50

Applications Option

CIS170	**Introduction to Database Design***	**3**
CIS220	**Systems Analysis and Design***	**3**
CIS290	**Information Systems Design and Implementation***	**3**
	Approved Applications Specialization*	**9**
	Approved Management Course*	**3**
	Approved Accounting Course*	**3**

Subtotal 24

Internet Technologies Option

IMD175	**Web Usability Design***	**3**
	OR	
IMD180	**Intermediate Web Design***	**(3)**
CIS253	**Data Driven Web Pages***	**3**

	Approved Level I Web Programming Language*	**3**
	Approved Level II Web Programming Language* 3	
CIS170	**Database Design***	**3**
CIS220	**Systems Analysis and Design***	**3**
CIS290	**Information Systems Design and Implementation* 3**	
CIS294	**Seminar in Web Technologies***	**3**
	Subtotal	24

Note: Students pursuing the Internet Technologies Option must take CIS171 and either CIS140 or CIS149.

Network Technology Option

CIS260	**Network Hardware Installation and Troubleshooting* 3**	
CIS269	**Internet Protocols***	**3**
CIS292	**Designing Network Solutions***	**3**
	Approved Level I Network Technology Specialization*	**6**
	Approved Level I or II Network Technology Specialization*	**6**
	Approved Scripting Language Course*	**3**
Subtotal		**24**

Programming Option

CIS170	**Introduction to Database Design***	**3**
CIS220	**Systems Analysis and Design***	**3**
CIS290	Information Systems Design and Implementation* 3	
	Approved Level I Programming Language*	**3**
	Approved Level II Programming Language*	**3-4**
	Approved Level I or II Programming Language*	**3-4**
	Approved Management Course*	**3**
	Approved Accounting Course*	**3**
	Subtotal	24-25
	Total	72-75

Course Choice Lists

Approved Accounting Courses*

ACC201 Financial Accounting I 3
ACC202 Managerial Uses of Accounting Information 3

Approved Management Courses*

BE200 Small Business Management 3
BE283 Principles of Management 3
BE287 Supervisory Management 3
BE291 Retail Management 3
QT101 Quality Management Principles 3

Approved Applications Specializations*

Productivity Software Specialization
IMD235 Advanced Word Processing 3
AND
CIS234 Advanced Spreadsheet Applications 3
AND
CIS236 Advanced Database Applications 3

Database Developer Specialization
CIS171 SQL I 3
AND
CIS271 SQL II 3
AND
CIS236 Advanced Database Applications 3

Approved Level I Network Technology Specializations*

Windows 2000 Specialization
CIS211 Microsoft Windows Client Operating Systems: (Topic) 3
AND
CIS212 Microsoft Windows Server Operating Systems: (Topic) 3

Unix Specialization
CIS217 Unix Administration 3
AND
CIS218 Advanced Unix Administration 3

CISCO Specialization
CIS281 Routing and Switching 3
AND
CIS282 Advanced Routing and Switching 3
Note: Students pursuing the Cisco Specialization should also take CIS283, Wide Area Network Management and Design in order to complete their Cisco Certified Network Administrator (CCNA) preparation.

Approved Level II Network Technology Specializations*

Advanced Microsoft Windows Specialization

CIS 261	**Microsoft Windows Directory Services Administration 3**	
AND		
CIS 262	**Microsoft Windows Network Infrastructure**	**3**

Approved Level I Programming Languages*

CIS140	**JavaScript I: JavaScript and the Web**	**3**
CIS143	**COBOL I**	**3**
CIS145	**Perl I: Perl Fundamentals**	**3**
CIS148	**Visual Basic I**	**3**
CIS149	**Java I: Java Fundamentals**	**3**
CIS171	**SQL I**	**3**
CS115	**Introduction to Computer Programming**	**3**

Approved Level II Programming Languages*

CIS243	**COBOL II**	**3**
CIS245	**Perl II: Perl and the Web**	**3**
CIS248	**Visual Basic II**	**3**
CIS249	**Java II: Java and the Web**	**3**
CIS271	**SQL II**	**3**
CS215	**Introduction to Program Design, Abstraction, and Problem Solving**	**4**
CS216	**Introduction to Software Engineering**	**3**

Approved Level I Web Programming Languages*

CIS148	**Visual Basic I**	**3**
CIS149	**Java I: Java Fundamentals**	**3**
CIS171	**SQL I**	**3**

Approved Level II Web Programming Languages*

CIS248	**Visual Basic II**	**3**
CIS249	**Java II: Java and the Web**	**3**
CIS271	**SQL II**	**3**

Approved Scripting Languages*

CIS140	**JavaScript I: JavaScript and the Web**	**3**
CIS145	**Perl I: Perl Fundamentals**	**3**

Technical Courses*

ACH100	**Construction Documents I**	**3**
ACH185	**Computer-Aided Drafting I**	**3**

CAD100	**Introduction to Computer-Aided Design**	**3**
COE199	**Cooperative Education: CIS**	**1-8**
ET112	**Digital Logic Circuits**	**4**
ET256	**Microprocessor Fundamentals**	**4**
GIS120	**Introduction to Geographic Information Systems**	**3**
IMD126	**Introduction to Desktop Publishing**	**3**
IMD226	**Advanced Desktop Publishing**	**3**
	Additional CIS Course(s) (EXCEPT CIS103)	**1-3**
	Additional CS Course(s) (EXCEPT CS100 and CS101)	**3-4**
	Approved Accounting Courses	**3**

*** Or other courses approved by Computer Information Systems Program Coordinator**

Note:

- **Students may not use one course to fulfill multiple requirements.**
- **Students may choose CIS280 or COE199 for a maximum of 3 credit hours.**

CURRICULUM OUTLINE

An asterisk indicates a required course.

First Year – Summer Session:

CIS105	**Introduction to Computing***	**3**	**Williamson**
	Social Interaction Course*	**3**	
	Subtotal	**6**	

First Year – Fall Semester:

CIS110	**Operating Systems Concepts***	**3**	**Halcomb**
CIS120	**Program Design***	**3**	**Swanson**
CIS130	**Microcomputer Applications***	**3**	**Holt**
ENG101	**Writing I***	**3**	
MA109	**College Algebra***	**3**	
	Oral Communications Course*	**3**	
Subtotal		18	

First Year – Spring Semester:

CIS150	**Internet Technologies***	**3**	**Sadat**
CIS160	**Data Communications and Networking***	**3**	**Rose**
CIS170	**Introduction to Database Design***	**3**	**Swanson**
ENG102	**Writing II***	**3**	
ET134	**Computer Hardware Maintenance***	**3**	
	Approved Level I Programming Language*	**3**	**varies**
Subtotal		18	

Second Year – Fall Semester:

CIS220	**Systems Analysis and Design***	**3**	**Jones**
CIS253	**Data Driven Web Pages***	**3**	**Papanicolaou**
IMD175	**Web Usability Design***	**3**	**Hunt**
	OR		
IMD180	**Intermediate Web Design**	**(3)**	**Human**

	Science Course*	**3**	
	Approved Level I Web Programming Language*	**3**	**varies**
Subtotal		15	

Second Year – Spring Semester:

CIS290	**Information Systems Design and Implementation***	**3**	**Jones**
CIS294	**Seminar in Web Technologies***	**3**	**King**
	Approved Level II Web Programming Language*	**3**	**varies**
	Heritage/Humanities/Foreign Language Course*	**3**	
	Approved Technical Course*	**3-4**	**varies**
Subtotal		15-16	
Total		72-73	

2.02 Didactic/Clinical Relationship

a. If a clinical/experiential component is part of the curriculum, discuss the objectives of this component and how the didactic and clinical/experiential components are integrated into the overall curriculum.

There is no clinical/experiential component of this curriculum. Students may pursue cooperative education or internship credit which is currently part of the Computer Information Systems program. Placement locations are plentiful in the Bluegrass region.

b. List and discuss the nature and appropriateness of clinical sites used for the program. Supply letters of commitment by the provider of each clinical site specifying the number of students that can be accommodated and identifying other programs that also use the facilities. State the number of clinical hours per credit hour for each clinical course.

The option will not utilize clinical sites.

c. What is the student-faculty FTE ratio for the didactic component and the student-faculty headcount ratio for the clinical/laboratory component of the program?

Student-faculty ratios in current CIS courses range from 12:1 to 25:1 with most courses at 20:1.

d. Discuss the nature, location, and availability of experiential/co-op/practicum opportunities required by the program.

There are no required experiential/co-op/practicum components of this program. Optional cooperative education can be sought at one of a number of businesses in the region. Recent cooperative education placement locations have been Kentucky Educational Television, Lexmark International, Appalachian Regional Healthcare, Plangraphics, Fayette County Detention Center, University of Kentucky Agriculture Department Data Center, University of Kentucky ResNet, Nicholasville Planning Commission, Fayette County Schools, and Isaac Commercial Properties.

2.03 Accreditation/Certification

Are there recommended curricula and/or other program standards available from an accrediting body, certifying agency, or professional society? If so, identify the source and compare your program with the recommendations and/or standards.

The Guidelines for Associate Degree Programs to Support Computing in a Networked Environment, produced by the Association for Computer Machinery Two-Year College Education Committee in March 2000, describe content areas, topics and objectives that should be covered in a two-year associates degree program in Internet/Web Services. The requirements summary is below.

This program provides depth and breadth in areas related to installing, configuring, designing, and managing Internet and Web-based resources. The program prepares students for jobs such as Web Manager, Web Site Developer, Web Page Designer and Internet Support Specialist. Table 5 details the recommended technical component for this program.

Table 5 - Technical Component for Internet/Web Services

CONTENT AREA	SELECTED TOPICS	SELECTED OBJECTIVES
Computing within the Organizational Environment	A. Requirements analysis B. Hardware and software evaluation C. Disaster prevention and recovery D. Ethics and legal issues within the computing environment E. Time and project management F. Employee rights and responsibilities G. Job opportunities and career paths H. Customer service and end-user support	All All All All All All All 1-4
Documentation and Technical References	All	All
Computer Hardware	A. Data Representation B. Hardware platforms C. Hardware components D. Installation and maintenance	All 1-2 All 1-8
Computer Software	A. Systems software B. Applications software C. Software installation and configuration D. Programming E. Trends and emerging technologies	1-8 1-5 1-10 All All
Troubleshooting	A. Diagnostic Tools B. Troubleshooting strategies and techniques C. Systems troubleshooting D. Peripherals troubleshooting E. Network troubleshooting	All All 1-2 1-2 1-3
Networking Fundamentals	A. Understanding the networked environment B. Current models and standards C. LAN topologies D. LAN protocols and standards	All All All
Network Hardware	A. Server requirements B. Client requirements C. Transmission media D. Connectivity hardware E. Network storage devices and other peripherals F. Installation and configuration	All All All All 1 1-3
Network Operating Systems Software	A. Server software B. Client software C. Installing and configuring specialized	1-7 All

CONTENT AREA	SELECTED TOPICS	SELECTED OBJECTIVES
Internet Structure and Organization	All	All
Navigating the Internet	All	All
Web Authoring	All	All
Web Multimedia	All	All
Web Interactivity	All	All
Web Site Creation and Management	All	All
Internet Servers	All	All

All content areas listed are covered at some point within the curriculum described in 2.01.

2.04 Admission Criteria/Standards/Procedures

a. List and describe any program admission or transfer criteria, standards, or procedures which are more specific than your published institution-wide admission or transfer criteria, standards, or procedures.

Lexington Community College accepts all Kentucky residents who are high school graduates or GED recipients.

The college subscribes to an open admissions policy whereby anyone capable of doing college-level work is provided the opportunity to attend college without meeting restrictive admissions criteria (although students subject to mandatory placement will be required to make up their academic deficiencies in accordance with University of Kentucky Senate Rules). To assist students in realizing their full academic potential, the college maintains an extensive program of developmental courses and laboratories in reading, study skills, English and mathematics.

Enrollment in the Computer Information Systems program may be limited because of available laboratory facilities, faculty and financial resources at the community college. Admission to the Computer Information Systems Program is open to all qualified students regardless of economic or social status, and without discrimination on the basis of race, color, sex, marital status, beliefs, age, national origin, sexual orientation or mental or physical disability. In addition to the other qualifications, the college will, in compliance with University regulations and in the manner and to the extent permitted by law, endeavor to recruit students who add to the diversity of the student population in the Computer Information Systems Program.

Selection of students for the Computer Information Systems Program will be made by the President of the College or the

President's designee after considering the recommendations of an Admissions Committee which is to be appointed for this purpose.

In order to be considered for admission to the program, a student must:

1. **Successfully complete the pre-major course requirements (CIS105, CIS110, CIS120, and CIS130). "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. **Meet the prerequisite for the required math course (MA 109) or successfully complete the required math course or a higher level math course.**

Preference may be given to applicants who have demonstrated exceptional ability in CIS105, CIS110, CIS120, and CIS130. Preference will be given to Kentucky residents.

The program will follow the institution's regularly published admission and transfer procedures.

b. ***State any provisions you may have for advanced placement.***

Lexington Community College has in place advertised procedures by which students may receive credit by special examination, CLEP examinations, Tech-Prep articulation agreements, the Advanced Placement Program, and service-related experience. Procedures are also in place to waive requirements for students who have already passed industry standard certification exams.

2.05 Objectives/Evaluation Scheme

a. ***Discuss the program objectives and the evaluation scheme planned for the program.***

The Internet Technologies Option of the Computer Information Systems Program prepares students to design, program, and maintain Internet-based services. With an emphasis on client and server programming, this option prepares students for positions developing and maintaining interactive web sites.

Lexington Community College routinely evaluates all elements of the Computer Information Systems program to ensure it reaches its stated objectives. These evaluations include the following:

1. Review of program to ensure that the curriculum is consistent with business and industry needs.
2. **Review by program advisory committee to ascertain relevance of curriculum to business and industry.**

3. **Review of program by college's administration to ensure proper funding and staffing levels.**
4. **Review of program by graduates using both the exit survey and the Alumni Survey.**
5. **Review of program by annual employer evaluation of graduates.**

In addition to these scheduled evaluations, the college reviews all facets of its operation during the Commission on Colleges/Southern Association of Colleges and Schools reaffirmation of accreditation process which occurs every ten years and the Fifth Year Unit Review performed at five year intervals between these.

b. If the program is designed to prepare a student for a particular occupation, describe the competencies the student will have upon completion of the program and how these will be evaluated.

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.

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.

6. 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.

Student achievement of program competencies will be measured by multiple evaluation methods including:

- **successful completion of identified activities in specific courses within the curriculum**
- **responses on the "Alumni Survey" indicating percentage of students who are employed in jobs "specifically related" or "somewhat related" to their major**
- **responses on the "Employer Follow-Up Surveys" indicating satisfaction with graduates' preparation, performance, and command of technical principles**

2.06 **Advisory Committee**

If an advisory committee had been used in the development of the proposal, identify committee members and their affiliations and describe the committee's role in developing and overseeing the program.

Local input and suggestions for developing an internet technologies option came from Lexington Community College's Computer Information Systems Program Advisory Committee, composed of:

Dr. Anthony Baxter – University of Kentucky, Computer Science Department
Mr. Charles Clark – Ashland, Inc.
Mr. Pat Greer – Computer Professionals, Inc.
Ms. Mechealle Hanks – Lexington Herald Leader Co.
Mr. Paul Johnson – CIS Graduate
Mr. Russ King – ACS Government Systems

Mr. Lindsay Morris – Gresham Enterprise Storage
Ms. Shannan Taylor – IBM Global Services
Mr. Robert Swartzertruber – Lexmark, Inc.

2.07 Plans for Articulation/Transfer Cooperation

a. Describe how this program will articulate with related programs in the institution and in the state.

There are currently no articulation agreements in place between the Computer Information Systems program and other institutions, although agreements with Murray State University, Morehead State University, and Eastern Kentucky University are being discussed.

b. Describe the extent to which student transfer has been explored and coordinated with other institutions.

Traditionally semester credit courses within the University of Kentucky System have transferred to other post-secondary institutions within the state on a one-to-one basis. Although no official agreement exists with this option, the Kentucky Community and Technical College System has been included in the development process, and there is potential for transfer into their Information Technology Option.

III. SUPPORTIVE DATA

3.01 Manpower Requirements

COMPLETE SECTION 3.01 ONLY IF THE PROPOSED PROGRAM WILL PREPARE GRADUATES FOR A SPECIFIC OCCUPATION OR PROFESSION.

a. Is this program designed to prepare students primarily for the local, state, regional, or national market?

The curriculum in this program is designed to prepare the graduate for comprehensive employment needs (local, state, regional and national markets).

b. What are the general employment prospects for graduates of the proposed program? What are the specific prospects in the market identified in 3.01a? Explain your response by:
1) national, state, and/or local manpower demand and supply projections,
2) the experience of similar programs, and/or
3) other data.

Current workforce assessments and projection data indicate that a need for computer professionals exists at national, state and local levels. Nationally, jobs in the Information Services area are expected to grow by over 600,000 topping 4 million in 2012.

According to the Bureau of Labor Statistics:

The 10 industries with the fastest wage and salary employment growth, 2002-12
(Numbers in thousands of jobs)

Industry	Employment		Change		Annual growth rate (percent)
	2002	2012	Number	Percent	
Software publishers	256.0	429.7	173.7	67.9	5.3
Management, scientific, and technical consulting services	731.8	1,137.4	405.6	55.4	4.5
Community care facilities for the elderly and residential care facilities, n.e.c.	695.3	1,077.6	382.3	55.0	4.5
Computer systems design and related services	1,162.7	1,797.7	635.0	54.6	4.5
Employment services	3,248.8	5,012.3	1,763.5	54.3	4.4
Individual, family, community, and vocational rehabilitation services	1,269.3	1,866.6	597.3	47.1	3.9
Ambulatory health care services except offices of health practitioners	1,443.6	2,113.4	669.8	46.4	3.9
Water, sewage, and other systems	48.5	71.0	22.5	46.4	3.9
Internet services, data processing, and other information services	528.8	773.1	244.3	46.2	3.9
Child day care services	734.2	1,050.3	316.1	43.1	3.6

NOTE: n.e.c. = not elsewhere classified.

The 10 fastest growing occupations, 2002-12
(Numbers in thousands of jobs)

Occupation	Employment		Change		Most significant source of education
	2002	2012	Number	Percent	post-secondary or training(1)

Medical assistants	365	579	215	59	Moderate-term on-the-job training
Network systems and data communications analysts	186	292	106	57	Bachelor's degree
Physician assistants	63	94	31	49	Bachelor's degree
Social and human service Assistants	305	454	149	49	Moderate-term on-the-job training
Home health aides	580	859	279	48	Short-term on-the-job training
Medical records and health information technicians	147	216	69	47	Associate degree
Physical therapist aides	37	54	17	46	Short-term on-the-job training
Computer software engineers, applications	394	573	179	46	Bachelor's degree
Computer software engineers, systems software	281	409	128	45	Bachelor's degree
Physical therapist assistants	50	73	22	45	Associate degree

According to the publication "Kentucky Occupational Outlook to 2010", by the Kentucky Workforce Development Cabinet, the occupations in the Top 50 Kentucky occupations requiring an associates degree or higher are:

Top 50 Kentucky Occupations
Patricia Dobbins

Ranked by Total Annual Openings due to growth and Replacements

Occupation Title	% Change 2000-2010	Avg. Annual Openings	2001 Avg. Hourly Wage
<u>Associate's Degree or Higher</u>			
Registered Nurses	30.6	1,035	20.29
Computer Support Specialists	98.4	613	15.93
General and Operations Managers	14.2	505	29.00
Computer Software Engineers, Applications	95.1	335	29.89
Teachers, Primary, Secondary, & Adult, All Other	16.2	228	n/a
Computer Systems Analysts	47.2	210	28.27
Network and Computer Systems Administrators	74.5	176	22.42

In a survey conducted by LCC's Computer Information Systems department, respondents indicated a vast need for employees with computer training and a desire by some for students who had received a bachelor's degree.

3.02 **Similar Programs in Kentucky**

a. ***Identify similar programs available elsewhere in the state. Please provide a five-year enrollment and degrees conferred history for each of these programs.***

The Kentucky Community and Technical College System currently has a Web Development and Administration Option within its IT program. The program has a strong web programming component, but also contains courses in Web Page Design and Server Administration. At Lexington Community College, most web page design courses are within the IMD program. Server Administration courses are part of the CIS Networking Option.

Enrollment data is not available at this time.

b. ***Do you consider this proposed program unnecessarily duplicative of any of these existing programs? Please provide the rationale for your response.***

No. This option will fit with LCC's existing CIS program and primarily serve students from Central Kentucky.

c. ***Describe how your proposed program may affect enrollment in similar programs within the state.***

It will have no adverse affect on other programs.

d. ***Have you examined the possibility of collaborative and/or sharing of resources with similar programs within the state? What were the results of your examination?***

Collaborative efforts exist with the Kentucky Community and Technical College System to offer the courses state-wide using the latest distance learning technologies including Interactive TV, CD-ROM, asynchronous and World Wide Web based delivery.

3.03 **Comparative Programs in Other States**

a. ***Identify those benchmark institutions which have comparable (similar) programs and indicate major similarities and differences.***

The Community College of Baltimore County has an Internet and Multimedia Technology area with AAS programs in Multimedia Technology, Internet Technology, and Simulation and Digital

Entertainment. The Internet Technology program is described as enabling "students to produce dynamic Web sites with animation and interactivity." The required courses are:

- **Information Seeking Through the Internet**
- **Two Dimensional Design**
- **Multimedia Authoring OR Computer Graphics**
- **Internet Programming OR JavaScript**
- **Basic Programming OR Computer Science I**
- **Intro to C/C++ Programming**
- **Visual Basic Programming**
- **Java Programming**
- **Intro to Web Publishing**
- **Digital Imaging**

In their 12 hours of electives they offer courses such as:

- **Multimedia Algorithms**
- **Linux/UNIX**
- **Comprehensive Databases**
- **Introduction to Networks**
- **Oracle**
- **Technical Writing**
- **Database Programming**

Just as with the KCTCS Web Development and Administration Option, this curriculum covers a wider range of topics than the CIS proposal. Design courses remain with the IMD program at LCC. Administration courses are within the CIS Networking Option.

b. For the institutions identified above, give the enrollments and degrees conferred within comparable program(s) for each of the last five years.

No data is currently available.

3.04 Student Demand

a. Project the full-time headcount enrollment, the part-time headcount enrollment, and the full-time equivalent enrollment of day students in the proposed program for the fall semester of each of the first five years.

Year	Full Time Headcount	Part Time Headcount	FTE
Fall 2004	**5**	**10**	**10**
Fall 2005	**5**	**10**	**10**

Fall 2006	**10**	**10**	**15**
Fall 2007	**10**	**10**	**15**
Fall 2008	**15**	**10**	**20**

b. ***Repeat a. for evening students, if applicable.***

Year	Full Time Headcount	Part Time Headcount	FTE
Fall 2004	**5**	**10**	**10**
Fall 2005	**5**	**10**	**10**
Fall 2006	**5**	**15**	**13**
Fall 2007	**5**	**15**	**13**
Fall 2008	**15**	**15**	**18**

c. ***Repeat a. for weekend students, if applicable.***

N/A

d. ***Show how the above projections were determined.***

The above projections are based upon Fall 2003 numbers of students enrolled in current options.

e. ***Estimate the number of students projected above who will be drawn from existing programs within the institution and the net increase in institutional enrollment in the fifth year of the program as a result of the program.***

No students are expected to be drawn from existing programs.

f. ***Project the number of graduates from the day program during each of the first five years.***

2005 – 2
2006 – 4
2007 – 6
2008 – 8
2009 - 10

g. ***Repeat f. above for the evening programs, if applicable.***

2005 – 0
2006 – 2
2007 – 2
2008 – 4
2009 - 4

h. ***Repeat f. above for the weekend program, if applicable.***

N/A

3.05 Evaluation Results of Related Programs

a. If the proposed program relates to or articulates with an existing program within the institution, describe the process and results of the most recent evaluation of this related program which may provide a base of support for the proposed program.

The Computer Information Systems department at Lexington Community College underwent a program evaluation in the spring of 2000. Program evaluations are developed by compiling data taken from student evaluations, graduate evaluations, and employer evaluations, interviews with faculty and advisory committee members, and current and past student success, retention, and attrition records.

At the time of the program evaluation, the CIS department had just begun a major series of revisions. The program's successful Network Technology Option, projected to have 30 students at this point, has roughly 125 majors. The spring 2000 program review listed the strengths of the CIS program:

- **its popularity (39% growth from Spring 1999 to Spring 2000),**
- **the number of new faculty lines (new lines added each year from 1997-1999),**
- **the new teaching facilities (the NetLab and AT 203),**
- **interactive television classes, and**
- **expansion of program (network technology option, Cisco Networking Academy)**

b. For programs which prepare students for a specific occupation or profession, please present a summary of student follow-up data for graduates of related programs. A suggested format guide is provided in Form 1.

See Form 1.

3.06 Anticipated Issues/Trends

Describe current issues and anticipated trends which provide a base of support for the proposed program.

There is no doubt that the demand for information technology workers will continue to grow in the coming years. Along with this growth comes a need for IT workers at all education levels. This option is intended to help meet the need of the industry by developing students with the skills to create the Internet applications needed by any organization developing and maintaining a web site.

IV. RESOURCES

4.01 **Resources Required**

a. Facilities

1) Describe the facilities to be used for this program. If existing facilities are available, will they be temporary or permanent? If new facilities are required, describe renovation or construction plans. Include a statement of review by the facilities management or other facilities administrators indicating concurrence with the above description.

Computerized classrooms exist in rooms 203, 213, and 215 of the Academic/Technical Building. These are the primary instruction areas currently used by the department. A networking lab (NetLab) has been established in room 119 of the Oswald Building where lecture, hands-on instruction, and self-paced lab work will take place. An interactive television (ITV) classroom has been established in room 109 of the Moloney Building. All of these facilities are now permanent. Additional facilities will be needed in the next two years to support anticipated growth. Computer classrooms at LCC-South have been designated for the CIS program.

2) Describe off-campus facilities (space, equipment, etc.) necessary for the program if applicable.

Using off-campus facilities is not anticipated for this program.

b. Library

1) Provide a statement by the librarian concerning the availability of current and proposed library resources.

See attachment.

2) Compare holdings to standards/recommendations of national accrediting agencies, the Association of College and Research Libraries, and/or any other recognized measure of adequacy.

See attachment.

c. Faculty

1) Submit by means of curriculum vitae (see Form 4) the qualifications of current ranked faculty members and adjunct faculty who will launch the program. Indicate the percentage of time each will devote to the proposed program.

See attachments.

2) ***Describe where and how non-ranked faculty (e.g., teaching assistants, preceptors) will be utilized. Indicate the percentage of time each will devote to the proposed program.***

No non-ranked faculty will be used for this program.

3) ***If additional faculty will be required immediately or in the next five years, indicate the number and submit specific qualifications for each new faculty member. Discuss recruitment potential.***

No additional faculty are anticipated.

4.02 **Expenditures**

Present all anticipated program expenditures for the next four years on FORM 2. Use FORM 2A to provide a rationale for the expenditure data.

4.03 **Source of Revenues**

a. ***Using FORM 3, specify the amount of revenues for the program from each source.***

b. ***If applicable, provide evidence of institutional intent to maintain the program as described herein when grant or other outside funds are terminated.***

Not applicable.

FORM 1

STUDENT DATA SUMMARY

	1999-2000*	2000-2001*	2001-2002*	2002-2003*
Students Admitted				
Students Graduated	**53**	**76**	**67**	**86**
Employed in Field of Related Occupation:				
a. in Kentucky	**2**	**3**	**1**	**10**
b. out of Kentucky		**1**		**3**
Employed in Non-Related Field**:**				**1**
Armed Forces				**1**
Pursuing Further Education			**3**	**3**
Unemployed				
Unknown	**51**	**72**	**63**	**68**

*** Please report the last four years using student headcount.**
Data should reflect employment status one year after graduation.

FORM 2

Departmental Expenditures for the Program (Academic Year)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4
I. Personnel				
1. Full-time ranked faculty (FTRF)				
a. Number of FTEF* **	**2**	**2**	**2**	**2**
b. Average salary	**42,087.00**	**43,349.00**	**44,650.00**	**45,989.00**
c. Fringes per average salary	**11,784.00**	**12,138.00**	**12,502.00**	**12.877.00**
Cost of FTEF: a x (b+c)	**$107,742.00**	**$110,975.00**	**$114,304.00**	**$117,733.00**
2. Part-time faculty (PTF)				
a. course credit hours taught by PTF	**18**	**18**	**18**	**18**
b. Average PTF salary per credit hour	**700.00**	**700.00**	**700.00**	**700.00**
c. Average PTF fringes per credit hour	**0.00**	**0.00**	**0.00**	**0.00**
Cost of PTF: a x (b+c)	**$12,600.00**	**$12,600.00**	**$12,600.00**	**$12,600.00**
3. Teaching assistants (TA)				
a. Course credit/contact hours taught by TA	**0**	**0**	**0**	**0**
b. average TA salary per hour	**0.00**	**0.00**	**0.00**	**0.00**
c. Average TA fringes per hour	**0.00**	**0.00**	**0.00**	**0.00**
Cost of TA: a x (b+c)	**0.00**	**0.00**	**0.00**	**.000**
4. External instructional assistants (EIA) (Preceptors, etc.)				
a.Student contact hours	**0**	**0**	**0**	**0**
a. Average EIA fee				
Cost of EIA	**0.00**	**0.00**	**0.00**	**0.00**
5. Other (specify)*				
Categories %				
(e.g., secy.) full-time rate				

Cost of other	**0.00**	**0.00**	**0.00**	**0.00**
Total Personnel Costs	**$120,342.00**	**$123,575.00**	**$126,904.00**	**$130,333.00**

II. Operating costs*

1. Supplies	**875.00**	**875.00**	**875.00**	**875.00**
2. Travel	**0**	**0**	**0**	**0**
3. Library**				
Department Budget				
a. Journals	**0**	**0**	**0**	**0**
b. Books	**0**	**0**	**0**	**0**
c. other (specify)	**0**	**0**	**0**	**0**
Central library budget				
a. journals	**50.00**	**50.00**	**50.00**	**50.00**
b. books	**300.00**	**300.00**	**300.00**	**300.00**
c. other (specify)	**150.00**	**150.00**	**150.00**	**150.00**
4. Student support (assistantships, fellow-ships, tuition waiver)	**0**	**0**	**0**	**0**
5. Equipment**				
a. instructional	**0**	**0**	**0**	**0**
b. research	**0**	**0**	**0**	**0**
c. other	**0**	**0**	**0**	**0**
6. Off-campus facilities	**0**	**0**	**0**	**0**
7. Accreditation	**0**	**0**	**0**	**0**
8. Other (specify)	**0**	**0**	**0**	**0**
Total operating costs	**$1,375.00**	**$1,375.00**	**$1,375.00**	**$1,375.00**

III. Capital Costs*

1. Facilities				
a. new construction	**0**	**0**	**0**	**0**
b. renovation	**0**	**0**	**0**	**0**
c. furnishings	**0**	**0**	**0**	**0**
2. Other (specify)	**0**	**0**	**0**	**0**
Total Capital Costs	**0**	**0**	**0**	**0**
Total Expenditures	**$121,717.00**	**$124,950.00**	**$128,279.00**	**$131,708.00**

***If the department will operate programs other than the proposed program, use the ratio of the projected student credit hours generated within the department by the program to the student credit hours generated by the department to allocate costs to the proposed program when it is otherwise difficult or impossible to allocate the programs' responsibility for the cost. If such a ratio is used, enter its value here 1/4, and identify items to which it is applied with an asterisk.** (Ratio has been applied to ALL items.)

****Insert here the annual portion of the departmental budget set aside for this item of the program. Extraordinary or special purchases beyond the regular or continuing line item should be recorded in III.2.**

*****Show how FTEF is calculated on FORM 2A.**

FORM 2A

BUDGET JUSTIFICATION

A rationale should be provided for all costs recorded on FORM 2. If explanation of an expenditure is contained elsewhere in the proposal, it is necessary only to record on this form the section in which it appears.

All figures are based on ratio of ¼ of the overall operating cost for the program.

The number of FTEF is ¼ of 11 faculty members in the department.

The average salary is based on 2003-2004 salaries with a 3% increase each year theirafter.

Course credit hours taught by PTF is ¼ of the Spring 2004 total, 72.

Average PTF salary per credit hour is $700.

Under operating costs, $875 is ¼ of the 2003-2004 CIS department budget.

The Central Library Budget of $500 is ¼ of the projected yearly expenditure on computer-related books and journals by the Lexington Community College Learning Resource Center.

FORM 3

AMOUNT AND SOURCES OF REVENUE

	YEAR 1	YEAR 2	YEAR 3	YEAR 4
1. Regular state appropriation and tuition and fees				
a. new money				
b. internal reallocation*	**$121,717.00**	**$124,950.00**	**$128,279.00**	**$131,708.00**
2. Institutional allocation from restricted endowment				
3. Institutional allocation from unrestricted endowment				
4. Gifts				
5. Extraordinary state appropriation				
6. Grants or contracts**				
a. private sector				
b. local government				
c. state				
d. federal				
e. other				
7. Capitation				
8. Capital				
9. Other (specify)				
TOTAL REVENUES	**$121,717.00**	**$124,950.00**	**$128,279.00**	**$131,708.00**

***If revenue will be provided through reallocation within the university, explain in detail how this will be done.**

Funding for personnel will be established through the creation of additional faculty lines.

****Name funding source and specify funding period.**

February 23, 2004

Dear Dr. Kerley:

The Lexington Community College Learning Resources Center will provide adequate support and information resources, print and non-print, for the four new Computer Information Systems options: Computer Science, Internet Technologies, GIS and Computer Security.

The Center currently maintains a basic book, periodical and non-print collection for existing computer information systems courses. We will add new materials as identified by the faculty. Students will have access to LCC and University of Kentucky databases, both bibliographic and full-text as well as Kentucky Virtual Library databases. Many of the needed resources may already be available full-text online. We will also supplement faculty and student needs through interlibrary loans.

We look forward to working with CIS faculty to develop holdings to support these new options.

Sincerely,

Charles James

Acting Director, Learning Resources

James Reid Kolasa
Professor
Computer Information Systems
Lexington Community College
University of Kentucky
Lexington, KY 40506
jkolasa@uky.edu
(859) 257-4872x4013

Education:

1994 – present		**Computer Science**	**University of Kentucky**
		15 Additional Graduate-Level Credit Hours	
1994 – 1995		**American Sign Language**	**Lexington Community College**
		6 Credit Hours	
1986 -1994	**M.S.**	**Computer Science**	**University of Kentucky**
1982 - 1986	**B.S**	**Computer Science**	**Transylvania University**

Title of Master's Thesis: The Pyramidal Structure and Improving the Speed of PROLOG Programs, graduate advisor: Dr. Jerzy W Jaromczyk, University of Kentucky

Professional Experience:

2000 – 2001	Lexington Community College	CIS Assistant Program Coordinator
1998 – 2000	Lexington Community College	CIS Program Coordinator
1989 – present	**Lexington Community College**	**CIS Faculty**
1987 – 1989	**University of Kentucky**	**Teaching Assistant**
1983 – 1986	**Transylvania University**	**Student Programmer**

Honors/Awards:

2001	**Exceptional Contribution Faculty Award**
2000	**Exceptional Contribution Faculty Award**
1999	**Exceptional Contribution Faculty Award**
1998	**Exceptional Contribution Faculty Award**
1998	**Master Gardener Association 50 Hour Community Service Award**
1994	**Lexington Children's Museum 60 Hour Community Service Award**

Professional Organizations

- **Member, Association for Computer Machinery**
- **Member and Newsletter Editor, Fayette County Master Gardener Association**
- **Member, Central Kentucky Computer Society**

Grant Activities

- Principle Investigator, National Science Foundation, Advanced Technology – Centers of Excellence grant, "Collaborative Project: Kentucky Information Technology Center", Co-PI/PD – Lillie Crowley, Lexington Community College, Co-PI – James Kerley, President, Lexington Community College, Co-PD – Thomas Papanicolaou, Lexington Community College, $2,000,000, matched with $2,000,000, awarded 2001
- Principle Faculty Member, Lexington Community College Faculty/Staff Development Grant, "CIS Tutoring Activity for Students with Disabilities", $1000, awarded 2000
- Associate, National Science Foundation – Advanced Technology Education grant, "A Network Administration Program for Kentucky", PI – Lillie Crowley, Lexington Community College, $850,000, awarded 1999
- Co-PI, National Science Foundation - Computer Science, Engineering and Mathematics grant, "UK/LCC CSEM Undergraduate Scholarship Program", PI/PD - Phillip J. Kraemer, University of Kentucky, Co-PIs - Lillie Crowley, Lexington Community College, Dr. Bruce Walcott and Dr. Carl Eberhart, University of Kentucky, $270,000, awarded 2000.

Certifications

- **SkillDrill Java 2 Programming Certification, November, 2001**
- **Cisco Certified Academy Instructor, August, 2001**
- **Cisco Certified Network Associate, June, 2001**
- **Registered Cabling Installation Apprentice, BICSI Certification, September, 2000**
- **Microsoft Certified System Engineer, June 2000**
- **Microsoft Certified Professional, July 1999**

Professional Development Activities

- **Completed Cisco Semesters 2, 3, and 4 Instructor Training, Spring/Summer, 2001**
- **Attended UK Network Research Center Colloquium Series, Fall, 2000**
- **Completed 40 hours of training for BICSI Apprentice Certification, Fall, 2000**
- **Studied for Microsoft Certified System Engineer exams (6), Spring/Summer 2000**
- **Attended Course Technology National Conference, Orlando, Florida, March, 2000**
- **Completed CS585, Intermediate Topics in Computer Science, Translation and File Transmission, Spring 1999**
- **Attended ITV and UK Distance Learning training, December, 1998**
- **Presented "Web Publishing" at Faculty/Staff Development Day, August, 1998**
- **Attended Top Class Demonstration, November, 1998**
- **Completed CS585 Intermediate Topics in Computer Science: Algorithms – Theory and Practice, Spring, 1998**
- **Attended Course Technology National Conference, Orlando Florida, April, 1998**

Committee Service

University Committees

2001 – present – UK/LCC/KCTCS KITCenter Grant Advisory Committee
2000 – present – UK/LCC CSEMS Grant Advisory Committee
1998 – present – Academic Council of Lexington Community College

System Committees (either KCTCS or UKCCS)

2001 – present – KCTCS Information Technology Steering Committee
1998 – 2000 – KCTCS CIS Ad Hoc Committee
1998 – 2000 – KCTCS NIS Ad Hoc Committee
1998 – 2000 – KCTCS NIS Advisory Committee

College Committees

2001 – present – CIS Admissions Committee
2001 – present - President's Advisory Committee on the New Building
1999 – Office Systems Faculty Search Committee
1999 – Academic Dean Search Committee
1999 – Distance Learning Task Force
1998, 1999 – CIS Faculty Search Committee
1998 – Geographic Information Systems Curriculum Development Committee
1998 – present – CIS Advisory Committee
1998 - 2000 – SACS Educational Support Committee
1998 – Student Retention & Success Committee - Secretary
1998 – LCC Admissions Committee

Division Committees

1998 – present – BSIST Program Development Committee, chair in 1998-99
1998 – BSIST CE/CS Committee

Community Service

- **Gardener at Master Gardener Demonstration Garden, UK/LFUCG Arboretum, 1997 – present, ~40 hours each year**
- **Newsletter Editor, Master Gardener Newsletter, 1998 – 2001, ~55 hours each year**
- **Science Olympiad Scorekeeper, Spring 1998, 1999, 2000, 2001, 2002**

College Leadership

- **2000 – 2001 – Computer Information Systems Assistant Coordinator**
- **1998 – 2000 - Computer Information Systems Program Coordinator**