COMPUTER INFORMATION SYSTEMS

Five Year
INSTITUTIONAL REVIEW

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Institutional Effectiveness Review

The purpose of the review is to:

Each academic program is reviewed every five years. The purpose of this review is to evaluate the CIS department to assure ongoing development and improvement. The major focus range of the review is the department's effectiveness in the terms of curriculum, faculty and community.

The process will involve the following steps:

The process will involve studying and analyzing the past and present teaching methods, curriculum changes and development to benefit student success. The steps involve many questions including: What tools are needed for current students and what changes will need to be foreseen to update the future classes? Also what assessment methods are used to make changes to improve the delivery of the material? Also what changes can be made to motivate and inspire student involvement and class discussion both in the traditional class and online? These findings are provided in this report.

Time frames/timeline for the review will be:

The timeline for this review will be from the current school year 2009 through 2014.

Purpose of the program and how it relates to college mission, values, vision

The purpose of how the program relates to the mission, values and vision is the focus of the of the CIS program. The department seeks to encompass a student-centered community college which meets the diverse needs of students and the community. The department has thrived to develop an environment that challenges students, looks for new teaching techniques and curriculum and strives to be at the forefront of change for the workplace. The program promotes intellectual, social and personal growth through a variety of techniques detailed in this report. Having strong technical programs and departments is key to the mission of Jefferson College and the Mission statement. The Mission statement encourages that learning is made possible by the discovery, and direct application of knowledge, diverse learning experiences and the interaction among faculty, staff and students. In both undergraduate and graduate education, the college encourages intellectual growth, preparation for the world of work, involved in lifelong learning in order to pursue excellence in chosen field of expertise.

Present Status

Learning/Service from   Institutional Effectiveness Review

The Present status for this review could not be completed because the former 2004 review did not supply any information or goals in order to build upon.

Present Status

Learning/Service and Action from _2004_____ Institutional Effectiveness Review:
<p style="text-align:center">(previous review date)</p>

Students will:

Learning/Service Goal	Assessment Measurement/ Action	Person(s) to Implement	Timeframe	Resource Implications	Use of results
Goal 1					
Goal 2					
Goal 3					
Goal 4					

Innovative Changes (In last five years)

To summarize the innovations incorporated into the department procedures, methods and approach:

- Using a network student file structure and Web-CT to have students submit assignments and tests. The benefit is that now the student and instructor have a permanent record of the work and can be shared if desired by the instructor.
- Updating and replacing nine classes to keep current with employment trends and workplace requirements.
- Reworked Program – Graphics/Web developer; emphasis on graphic design skills
- Plan for student transfer to a 4 year institution for advanced degrees.
- Related job opportunities such as Publishing, Education, and general Printing industry need to be addressed as employment opportunities.
- New Program introduced – Computer Support option; opened in the fall 2007; A+ Network Certification
- ATS program – reintroduced in the fall 2006 (improves numbers in upper classes)

- Successfully offering and managing CIS133 (several hundred students per year), including several on-line sections
- Photoshop competition
- Website to display student projects
- In-class Recruiting

Faculty Qualifications and Professional Development:

Full time faculty from the department have a minimum of six years teaching experience and keep current on employment trends and new classes to be incorporated into program. Most instructors have practical work experience in the field and are current on newly developed skills. Instructors have participated in the Educational conferences and Textbook conferences to keep current on educational ideas and philosophies. Some instructors have also published text books for use in the classroom for the current classes.

Faculty Data:

Full time instructors: Three (masters degree)
Adjunct instructors: Fifteen (minimum Bachelors degree)

Many of the former full time instructors have chosen to stay on as adjunct instructors to help benefit the teaching load and needs.

Student Satisfaction and Feedback:

Student feedback forms have shown a positive response to the instructors' approaches, material and assessment. The general results have shown that the use of instructor's methods have given a positive feedback to students' motivation and participation in the traditional and online discussion. In addition, the result also indicated a pattern of the students' participation in the online discussion. It is a recommendation in this review that a department specific overview of the degree plan be used to better navigate student success and improvements to the department.

Student Success:

Students have shown an increase in employment success and transfer to four year intuitions then from the previous review. The department studies student success and practices promoting student success in six areas: successful course completion; certificate and degree awards; persistence of students to subsequent semesters; transfer to a baccalaureate degree; and basic skills improvement based on student needs. At the core of student success is the need to first of all teach students how to be successful in their area of expertise.

Curriculum (Scope, Currency, Changes)

The Information Technology segment of the workforce is in a constant state of change. According to industry professionals, technology has a half life of five years, and the pace with which it becomes obsolete is increasing.

The curriculum change for the Web development degree intent was to transfer the emphasis of the skills from a programming emphasis to new graphics development skills used in the web development, publishing and printing industry today. These new skills are also beneficial to many academic areas for Jefferson College including the Art, Education and Graphics Development. The skills are mastered by the study and practice of the latest current software available.

The CIS Department at Jefferson College has reacted to the many changes in the IT industry by consistently updating, implementing and/or deleting programs to meet area workforce needs.

- AS/400 program opened in 1996
- AS/400 program closed in 2003
- CISCO Networking introduced in the fall 2004
- CISCO Networking program closed in 2007
- Computer Support option opened in the fall 2007 with A+ Network Certification
- Latest versions of software consistently offered throughout the program

In late April 2007, CIS faculty members were given a document noting declining enrollment in the program over the last five years. Analysis of events in that time period concluded that CIS enrollment was affected by the following factors:

1. Classes no longer offered through the CIS department because of industry changes; however, included in "Eight-Year Trend" program averages:

CIS124	Basic Programming (2005)
CIS126/227	COBOL Programming I and II (2002)
CIS128	Beginning RPG Programming (2002)
CIS132	Intermediate RPG Programming (2003)
CIS140	Introduction to the AS/400 (2002)
CIS143	AS/400 Computer Operations (2002)
CIS230	Advanced RPG Programming (2003)
CIS238	Spreadsheet Techniques (2003)
CIS244	AS/400 Data Management (2003)
CIS245	RPG ILE Programming (2003)
CIS246	Control Language Programming AS/400 (2003)
CIS274	Systems Development and Design (2006)
CIS276	Computer Operations (2006)
CIS289	Applications in Java Programming (2005)

2. Internal and external events:

- IT bubble in the US economy (peaked in 2000)
- Networking program had a drop in students from its peak in 2000
- AS/400 program closed in 2003 due to a significant drop in hiring (Enterprise Rent-A-Car)
- CISCO Networking introduced in the fall 2004; program closed in 2007
- ATS (high school) program stopped, for 1 year, during 2005-2006

Cisco Training Program:

Beginning in 2004, it was decided to revamp the then current networking program to parallel the industry leading Cisco training program. Two faculty members undertook the training and testing required becoming Cisco certified instructors. One faculty member (Don Laplante) completed the requirements. Limited marketing was given to this program and with the trend by industry to implement massive off shoring of computer support, this program was closed in the Spring 2007. The following classes are no longer offered:

CIS171	Introduction to Networking
CIS240	Network Switch Configuration
CIS250	Wide Area Networks
CIS251	Networking NT/Novell
CIS261	Advanced Concepts in Networking
CIS265	Network Troubleshooting Concepts

Efforts to increase enrollment:

- Reworked Program – Graphics/Web developer; emphasis on graphic design skills
- Plan for student transfer to a 4 year institution for advanced degrees.
- Related job opportunities such as Publishing, Education, and general Printing industry need to be addressed as employment opportunities.
- New Program introduced – Computer Support option; opened in the fall 2007; A+ Network Certification
- ATS program – reintroduced in the fall 2006 (improves numbers in upper classes)
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New Programs and Courses

Graphics/Web Development:
In 2006, the Web Development program was expanded to include Web development and Graphics Design. The following new classes were introduced:

CIS135   Introduction to PhotoShop CS
CIS255   Portfolio Development
CIS160   Web Development Tools – Dreamweaver/GoLive
CIS210   Flash
CIS225   Fireworks
CIS235   Advanced Photoshop CS and Illustrator
CIS287   Advanced Web Development

Computer Support Option:
In 2007, the new computer support option was introduced to provide students with the opportunity to achieve A+ Network certification.

CIS147   Networking I
CIS243   A+ Computer Software
CIS247   Networking II
CIS262   Client/Server Management
CIS275   Linux O/S
CIS282   Networking/Support Projects
CIS290   Certification Preparation.

Advisory Committee Recommendations/Potential Future Courses from 2007:

- VPN and Remote Technology
- Intro to Photography for Business and the Web
- Technical Writing (CIS related; not a general course)
- ASP and AJAX for Web development (Incorporate into Advanced Web)
- Customer Service fundamentals

Also, in the fall of 2008 a new class Writing for Technology was added to the degree plan replacing the Fireworks graphics class.

On-line Courses

The following classes have been added for student online instruction

Course No.	Course Title	Credit Hours	Developer	Date of First Offering
CIS133	Microsoft Applications	3	Walker	Spring 05
CIS153	Introduction to Visual Basic	3	McNair	Fall 06
CIS129	Programming Logic	3	LaPlante	Fall 06

| CIS285 | E-Commerce | 3 | Logan | Spring 08 |
| CIS125 | Intro to Data Processing | 3 | Logan | Fall 08 |

Graphics/Web Developer

Current Degree plan for

First semester (Fall)		Hours	Pre-Req	Co-Req
CIS129	Programming Logic	3		
CIS133	Microcomputer Software Applications	3		
CIS153	Introduction to Visual BASIC Programming	3		
CIS135	Introduction to PhotoShop	3	CIS133	CIS133
ENG101	English Composition I	3		
	Total Hours	15		
Second Semester (Spring)				
CIS157	Introduction to Java Programming	3		CIS129
CIS236	Oracle, SQL, and Database Design	3		
CIS145	Writing for Technology	3	CIS133, CIS135 ENG101	CIS133, CIS135
CIS160	Web Development Tools/DreamWeaver	3	CIS135	
BUS101	Introduction to Business	3		
HST103 or PSC102	U.S. History I to Reconstruction U.S. & Missouri Gov. and Constitutions	3		
	Total Hours	18		
Third Semester (Fall)				
CIS235	Advanced PhotoShop/Illustrator	3	CIS135	CIS235
CIS283	Advanced Visual BASIC Programming	3	CIS153	
CIS285	e-Commerce Concepts	3	CIS281	CIS281
	Mathematics/Science	3		
	Social Science	3		
	Total Hours	15		
Fourth Semester (Spring)				
CIS287	Advanced Web Development	3	CIS236 CIS160	CIS236 CIS160
CIS210	Flash	3		
CIS255	Web/Graphics Portfolio Development	3	CIS135, 210	
	Humanities/Communication	3		
	Mathematics/Science	3		
	Total Hours	15		

A.A.S. – Information Technology: Computer Support Option

A.A.S. – Information Technology: Computer Support Option, a new degree plan was added in the 2005 school year. The plan included the following new courses. The plan was brought about to replace the CISCO networking plan which was discontinued in the 2007 school year. The plan was devised and taken through Academic Affairs by Chris Degeare and Dan Smith.

Courses cover Computer Hardware, Software, Programming and Networking. Students will obtain A+ and Network+ certifications. The A+ and Networking courses content corresponds directly with the respective exam objectives.

First Semester		Hours	Pre-requisite	Co-requisite
CIS133	Microcomputer Software Applications	3		
CIS129	Programming Logic	3		
CIS147	Networking I	3		
ENG101	English Composition I	3		
BUS101	Introduction to Business	3		
	Total Hours	15		

Second Semester		Hours	Pre-requisite	Co-requisite
ETT246	A+ Computer Hardware	3		
CIS243	A+ Computer Software	3		
CIS153	Introduction to Visual BASIC	3	CIS129 or	CIS129
CIS247	Networking II	3	Networking I	
HST103 or	U.S. History I to Reconstruction	3		
PSC102	U.S. & Missouri Governments & Constitutions			
	Total Hours	15		

Third Semester		Hours	Pre-requisite	Co-requisite
CIS236	Oracle, SQL & Database Design	3		
CIS283	Advanced Visual BASIC	3	CIS153	
CIS262	Client/Server Management	3	Networking I	
	Mathematics/Science	3		
	Social Science	3		
	Total Hours	15		

Fourth Semester		Hours	Pre-requisite	Co-requisite
CIS275	Linux OS	3	A+ Software	
ETT235	Cabling and Equipment Installation	3		
CIS282	Networking/Support Projects	3	Semesters 1-3	
CIS290	Certification Preparation	3	Networking I Networking II A+ Hardware A+ Software	
	Humanities/Communication	3		
	Mathematics/Science	3		
	Total Hours	18		

Program Total Hours   63

C.T. Certificate – Information Technology: Computer Support Option

Courses cover Computer Hardware, Software, Programming and Networking. Students will obtain A+ and Network+ certifications. The A+ and Networking courses content corresponds directly with the respective exam objectives.

First Semester		Hours	Pre-requisite	Co-requisite
CIS133	Microcomputer Software Applications	3		
CIS147	Networking I	3		
ETT246	A+ Computer Hardware	3		
	Total Hours	9		

Second Semester		Hours	Pre-requisite	Co-requisite
CIS243	A+ Computer Software	3		
CIS262	Client/Server Management	3	Networking I	
CIS247	Networking II	3	Networking I	
CIS290	Certification Preparation	3		Networking I Networking II A+ Hardware A+ Software
	Total Hours	12		

Program Total Hours   21

Curriculum Issues

The evolution of the market and skill set needed for students will need to be addressed by semester to make sure the current skills are updated with the correct software. It is important that instructors keep current on the skills and market needs. Instructors need resource time to prepare for these changes and make the best presentation of these real life skills in class. In order for the student to understand the application to the real world practice it is important that the instructor provide the examples not only from the text book but how it is applicable to a work environment.

It will be important to continue to develop CIS Certificate programs of 15 – 30 hours for students already with a degree, presently working or those wishing to develop only the skills from the graphics and programming classes.

In order to address declining enrollment in classes, many changes have taken place in the CIS department in the last two years. The Web develop degree has changed its name from Web Developer to Graphics/Web Developer and many classes have been eliminated and updated for demand. New classes added include Introduction to Photoshop, Advanced Photoshop, Illustrator, Flash, Fireworks, DreamWeaver, and Web/Graphics Portfolio Development. The desire was to take the emphasis off Programming and place it in Graphic design skills.

It has been the recommendation of the department for many years that students graduating should be given the opportunity to advance their education through several Universities. Other recommendations include classes such as Technical writing, (this should be CIS related and not a general technical class), VPN and Remote Technology, ASP and AJAX for web development, and Customer Service fundamentals. Some of these classes were recommended by the last advisory committee in fall 2007.

Summary (SWOT)

Strengths	Weaknesses
The CIS has highly qualified and dedicated full time faculty who teach and work for the best interest of the department. The faculty instruct, advise students and work towards student retention, keep current on degree plan new curriculum and advances, serve on numerous committees and work for community involvement on the College image appearance.	The ability of current full time instructors to perform all varied specialized skills and tasks associated with degrees.
Opportunities	Threats
The need to continuously seek and update the skills needed to be successful in the current marketplace. Finding the correct skill set and niche for our current and future students should always be foremost	Our class offerings should be based on current skills needed and not focused on what the students want. For the students to make decisions about their direction implies they are the current developers and

in our new curriculum approach. The current advisory committee is a tool used to update our approach.	managers of the new course offerings. It is important to give a wider variety of classes to choose from with the full time instructors being the managers and taking responsibility for their special individual expertise. Instructors cannot be experts in all areas of CIS classes instructed.

Discipline Status

_____ Satisfactory

_____ Requires Immediate Attention

_____Unsatisfactory

_____   _____
Dean   Date