

## **Bus/CIT 2008-09 Initiative: Pathways: Realign Parts of CIT Core**

### **Summary:**

Update and modify CIS102 and CIS225 curriculum to accommodate the special needs of the Network program.

### **Description:**

CIS 102 Problem Solving with Computers, and CIS 225 Computer End-User Support, were courses used by several CIT degree programs in the past, but the CIT department has recently discontinued the Computer User Support program and is turning the Programming degree into a career pathway certificate. Hence, these two courses are only required for the networking degree. Student learning will be enhanced if these courses are changed to accommodate the special needs of the networking curriculum. Increased knowledge then should result in increased employability for our students.

This initiative proposes that analysis be done on the existing course content for all the networking degree courses in order to identify the most critical information gaps within the degree relating to the basic framework of problem solving (CIS 102) and end-user support (CIS 225). Then to modify the course materials (labs, exams, handouts, lecture notes) for these two courses to accommodate the results of the analysis. An effort will be made to bring in the latest developments of the industry, for example, Web 2.0 technologies, where possible. The objective is to provide as much appropriate training for people interested in becoming hireable as network administrators and technicians on contemporary computer networks as is possible within a two-year degree.

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### **Strategic Direction**

- Achieve and sustain fiscal stability.
- Build organizational capacity and systems to support student success and effective operations.
- Commit to a culture of assessment of programs, services and learning.
- Position Lane as a vital community partner by empowering a learning workforce in a changing economy.

### **Learning Plan Goals**

- Create innovative, flexible and collaborative programs that are responsive to current and emerging needs of students and employers.
- Enhance student transitions at all levels.
- Support connected learning through inter-disciplinary and collaborative learning strategies.

## Student Affairs Plan Goals

- Commit to a culture of routinely assessing programs, services, and learning to encourage continuous quality improvement.
- Create innovative, flexible, and collaborative programs that are responsive to the needs of students and employers and facilitate a smooth transition from college to the workplace.
- Strengthen relationships with high schools, transfer institutions, community partners, and employers to enhance the student's preparation for and success in college, career, civic engagement, and community involvement.

## College Council Priorities

- 1.b. Enrollment Management: Recruitment and Retention
  - 1.c. Enrollment Management: Workforce Development
  - 1.e. Enrollment Management: Increase Credit Enrollment Level
  - 4.1 Responding to unit plans/council plans: Innovation
  - 4.2 Responding to unit plans/council plans: Curriculum Development
  - 5.2 Instructional Redesign: Leveraging Technology
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## Questions and Answers

*How is the initiative linked to the Unit Plans most recently submitted?*

1. *How does it continue the achievement of those goals?*
2. *If this is a continuation of an initiative started last year, make sure that relationship is clear.*

*How is this initiative linked to the efficiencies and productivities plans you had last year?*

1. *How does it continue the achievement of these plans?*
2. *If this is a continuation of an efficiency or productivity plan started last year, make sure that relationship is clear.*

The alignment and redesign of the CIT curriculum has been the focus of CIT planning all along, starting with the implementation of the CIT Core Curriculum as a separately credentialed certificate aimed at providing an essential foundation to many career choices.

The target of this initiative is to improve both general problem-solving skills as well as the skills needed to effectively provide user support. The CIT Advisory committee has provided clear guidance that these two areas are critical for students entering the field.

The overarching strategy is to solve the difficult design tension between the pathway goals of providing students with a foundation in a credentialed "chunk" versus focused preparation for a demanding Network AAS degree.

*Describe the resources needed:*

### **Curriculum Development**

- 140 hours of curriculum development to update and 2 existing classes (CIS102 and CIS225)

### ***Funding:* Curriculum Development**

*What specific measurable program outcomes do you expect to achieve with this initiative? The outcomes should be specific enough to be measurable. Also, outline the method that will be used to determine the results.*

This initiative will result in:

- improved employability for students who exit with the 1-year CIT Core Pathways CAS certificate
- improved employability for graduates of the Network AAS certificate
- better preparation for real-world coop job experiences through improved quality and focus of user support skills
- better retention and success rates through improved quality and focus of problem-solving skills

These outcomes are all directly reflected in data available for programs and certificates at Lane.

*Department Priority:*

11

*Unit Resources:*

The department provides the needed infrastructure for this curriculum - servers and server support - through ICP funds. The support for this Pathways certificate comes from having a full-time faculty member lead for this effort. The curriculum will be supported visibly in a wiki as a means for facilitating conversations and alignment within the related Pathway community, from high schools up to four-year institutions.

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### **Carl Perkins Funding Request**

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## Curriculum Development Funding Request

### *1. List the following information*

- *Course Numbers (titles if not currently offered)*
- *Instructor Name(s) who will work on the curriculum development*
- *Whether each of the courses is in, or has been through, the curriculum approval process*

#### **CIS102** Problem Solving with Computers

Gary Bricher

Current offering

#### **CIS225** Computer End-User Support

Gary Bricher

Current offering

### *2. List each course number (or title) and the materials to be created for each class*

- *Instructional goals, objectives, syllabi and outlines*
- *Lab instruction packets*
- *Practice, quiz, presentation &/or demonstration materials*
- *Other (specify)*

CIS102

CIS225

Analyze and modify the course materials (labs, exams, handouts, lecture notes) to better support the Networking Program AAS, and to better support the CIT Core as a Pathways certificate leading to multiple career choices.

### *3. List each course number (or title) and give your timeline for beginning and completing each course curriculum development.*

#### **CIS102**

Begin 7/08 and end 9/08

#### **CIS225**

Begin 7/08 and end 9/08

### *4. What are up to 3 departmental instructional goals that are met through the development of curriculum in each class?*

CIS102  
CIS225

Both CIS102 and CIS225 play a pivotal role in the CIT first year curriculum. CIS102 cultivates general computer science problem solving skills, and CIS225 cultivates general user support skill that are so critical to entry-level positions in particular.

1. The CIT first-year "core" is designed as a Pathways ("CAS") Certificate to provide students with a meaningful "chunk" of education that might lead to employment. Both CIS102 and CIS225 need to be re-analyzed in this context and made to reflect feedback that has been received from both the Advisory committee and the larger employment community.

2. Both of these classes play a central role in the Networking AAS degree. With the suspension of the Computer User Support program there is the opportunity and need to re-analyze the design of both CIS102 and CIS225 to more closely align them with the Networking degree.

*5. List each course number (or title) and give the value of the development of curriculum in each course to other faculty members.*

CIS102  
CIS225

Because CIS101 (problem solving) and CIS225 (user support) skills are foundational in all areas of computer science, these courses raise the level of interaction with the students in all subsequent classes, allowing more meaningful problem sets based on problem solving skills learned in CIS102, and also allowing better classroom interactions as budding computer professionals, having acquired the user support material covered in CIS225.

*6. List each course number (or title) and say how many students will be served by the development of curriculum in each class.*

CIS102  
CIS225

These courses serve approximately 125 students annually.

*7. List each course number (or title) and give the specific benefits to students that you expect from the development of curriculum in each class.*

CIS102  
CIS225

These courses help create computer professionals. They introduce the needed skills and style of thinking required of computer professionals. They also ground the student in user interactions and together provide arguably the most critical skill set needed for entry-level employment in the computer field.

*8. List each course number (or title) and give the specific benefits for diversity that you expect from the development of curriculum in each class.*

CIS102  
CIS225

Because of the particular emphasis on rational problem solving and working in a social context, these classes help students successfully work with diverse populations. The CIT dept student population is diverse, including under-represented females in computer fields. Computers also provide employment for a very diverse population. Simply providing quality education to the CIT student population serves diversity.

*9. List each course number (or title) and give the specific benefits to sustainability that you expect from the development of curriculum in each class.*

CIS102  
CIS225

Sustainability is served by efficient program design. These classes are part of the CIT core, designed to create a common block of initial studies for a wide range of computer career choices and so provide capacity and efficiency solutions for the dept.

These classes also serve sustainability from the perspective of student need, by providing foundational skills that are essential in a wide range of entry-level positions, and increasing the likelihood that students will be able to gain interim employment while they are continuing their education.

*10. List each course number (or title) and give the specific effects on distributed learning that you expect from the development of curriculum in each class.*

CIS102  
CIS225

CIT is one of the leaders at Lane in developing curriculum online, in making curriculum available in varying formats (e.g. video delivery and not just text-based), and in using innovative tools to distribute curriculum (e.g. using a wiki). These courses when re-aligned and developed will contribute to that base of online curriculum.

*Hours requested for Curriculum Development funding:*

*Please enter the amount of one of the following:*

- 100 hours maximum for new development.
- 70 hours maximum for course revision
- 50 hours for 3-4 credit conversion
- other (use if multiple courses addressed in one initiative)

***Do not enter any characters other than numbers and a decimal.***

*How many hours are you requesting? If there are multiple courses addressed in the initiative, please list each course number (or title) and give the number of hours requested for each course.*

140

*Can this initiative be partially funded?*

Yes

*Partially funded curriculum development HOURS requested:*

70

*Explanation of effect of partial funding:*

The goals outlined for the CIT core as represented by the problem-solving skills in CIS102 and the user support skills in CIS225 could be partially accomplished.

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**Technology Fee Funding Request**