Unit Planning for Instruction
BCT Division - CIT

For 2007-2008 Implementation

Preamble: Planning parameters at the Institutional level
Example:

- **$6 million recurring deficit for FY 08**
- **Recovery of deficit will occur in the general Fund 111100**
- **2% FTE growth over 2005-2006**
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Section I: Data Elements (Distribute on September 13th)

This section will be completed by Division Chair in Summer 2006 and will be distributed at fall in-service department meetings. The data will be provided to Division Chairs by IRAP.

1) Enrollment and Demand Data

- Student FTE by division (4-year history)

DeptDesc	F01-02	F02-03	F03-04	F04-05	F05-06
Computer Info Technology	671.4	576.5	434.2	389.3	423.6

- Student FTE by subject and course

Dept	Subj	F01-02	F02-03	F03-04	F04-05	F05-06
CIT	CIS	238.0	217.7	205.0	165.3	207.8
CIT	COOP				0.1	
CIT	CS	416.2	353.2	229.3	224.0	215.8
CIT Total		**654.2**	**570.8**	**434.2**	**389.3**	**423.6**

2) Capacity and Utilization Data

- Fill rate of course sections

	# of Sections			Registrations		
Dept	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
Computer Info Technology	108	107	117	2661	2524	2649

	Maximum			% Full		
Dept	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
Computer Info Technology	3298	3134	3373	80.7%	80.5%	78.5%

- Student FTE/Faculty FTE ratios

Student FTE per Faculty FTE -- Fall 2005				
Dept	DeptDesc	total faculty appointments (FTE)	total student FTE Fall 2005	Ratio of Student FTE / Faculty FTE
640	Computer Info Technology	**2.9**	**119.1**	**41.4**

3) Student Success Data

- Course completion rates

Class Completion and Success	**By Department**					10/3/06
Dept	Co-op in Host Dept / College Now Excluded	End Wk2 Total	Finish	Complete Rate	ABCP	Success Rate
640	Computer Info Technology	2568	2353	91.63%	2122	82.63%

4) Expenditures and Revenue

- Expenditures per unit (annual)

- Cost-per-FTE by subject

Cost-Per-FTE REPORT 9/18/06

Includes Grants

Dept	DeptDesc	Subj	# Fac	Sects	FTE	$	CPF*
640	Computer Info Technology	CIS	20	86	166.91	524,870	3,140
640	Computer Info Technology	CS	18	69	197.46	575,613	2,920

Includes Grants	FTE	#Sects	Direct_CPF	Total_CPF
Computer Info Technology	364.37	155	3,587	6,493

- Revenue per unit

Dept	DeptDesc	Total Tuition Revenue	Total Public Resources apportioned by student FTE	Total Student Fees and Other Revenues	Total Revenue
640	Computer Info Technology	**$ 806,609**	**$ 1,388,578**	**$ 29,301**	**$ 2,224,488**

5) Division planning parameters

- FTE target for disciplines

Dept	Subj	F05-06	Target (+4%)
CIT	CIS	207.8	216.1
CIT	CS	215.8	224.4
Total		**423.6**	**440.5**

- Expected budget to work within

Total
1,029,759.80

Section II: Program Analysis (Discussed September 13th)
This section will be compiled by Division Chair in Summer 2006 and the draft will be distributed for discussion at fall in-service department meetings. This will be finalized by November 15, 2006.

1. **What did your unit accomplish last year in relationship to your 04-05 and 05-06 planning initiatives? What were other accomplishments not related to the annual planning initiatives?**

   Curriculum

   The Computer Information Technology (CIT) Department has been actively engaged in a restructuring of the curriculum to better support student support, counseling and advisement:

   - ◊ **Career and Technical First-Year Core**
     For the past year the CIT Department now successfully has offered a common core of classes for its Networking, Programming and Computer User Support two-year programs.
   - ◊ **Simulation and Game Development AAS Degree**
     The Department is developing a new degree program in Simulation and Game Development. The degree aims to prepare students for entry-level positions in the vibrant local game development industry. Multiple career pathways are supported, and students can choose to continue by pursuing a 4-year degree in programming. Development work has largely being funded by a $49,000 Lane County Commission grant.
   - ◊ **Computer Game Programming Certificate**
     The Department developed and will also be offering a less-than-one-year (LTOY) certificate in Computer Game Programming. This certificate provides an entry-level career pathway objective for students who are starting the full two-year degree; alternatively students can use this certificate as a technical foundation for a design or business management career in the computer game industry.
   - ◊ **Network Security Certificate**
     The Department developed and will offer a career-focused less-than-one-year (LTOY) certificate. This certificate provides an advanced career pathway objective for students who are finishing their two-year Network AAS degree. It also serves as career advancement objective for computer professionals, and as an entry into a network security specialization for students who choose to continue by pursuing a 4-year degree in a computer field.
   - ◊ **GIS Grant-funded curriculum**
     The Department is one of three partners in an $800,000 grant to develop GIS curriculum; CIT's curricular role is to create a course as part of a 3-course introductory sequence and to help develop GIS modules that can be used in courses across the college.
   - ◊ **Certification workshops**
     The Department developed and offered a CCNA workshop to graduating Network majors as a capstone supplement to the degree program.

◊ **Developing online course offerings**
The Department is committed to offering learning opportunities online, whether as fully online classes, as "hybrid" classes that mix online and traditional modes of learning, and as traditional classes supplemented with online class management and use of online resources.

Instructional Support

Growth and changes in instructional support are also significant. Major areas of focus for CIT include:

◊ **Online Audio/Video Support and Delivery**
The Department is developing online video and audio support for its curriculum. On-screen content is being captured via the use of programs like Camtasia (notably in CIS101 where all computer exercises are now available as video modules); full-video capture is being developed as a prototype variation on instructional delivery (<ron's class>); audio podcast infrastructure is being developed.

◊ **Instructional Lab Development**
At a time of increasing demand on CIT students it has been critical to provide a correspondingly robust instructional lab environment for their specialized needs. Despite budget-related challenges the lab has instructional staff that know the core curriculum, and usage is significantly up.

◊ **Virtualized clients and servers**
The Department has unique and extensive server infrastructure needs – as part of a funded initiative the servers are being moved and new servers developed as "virtualized" servers – where multiple unique servers run on one physical computer. The Department is also prototyping virtualized client computers as a classroom and lab solution for needing multiple interchangeable computer configurations to support different needs, and to support varied problem sets on departmental "bench" computers for practical student experience.

◊ **Web-based Programming**
Implemented a major shift in the programming degree from object-oriented desktop development to open source web-based development, including offering two PHP courses. These shifts meet significant workplace and student demand and have been very well received, with additional interest from non-programming majors. Work completed for adding a web programming (less-than-one-year) mini-certificate to the catalog this year.

◊ **GIS Grant-funded instructional support**
In addition to its curricular role in the recent GIS grant, the Department also plays a support role in providing the technical assistance needed to set up the GIS server. (Note: this server is also virtualized to provide a more flexible server environment for the program.)

◊ **Online Learning Objective Database**
A prototype is being developed for representing course, certificate and program learning objectives available through an online web database using standard Open Source technologies.

◊ **Supplemental Instruction**
The Department has helped pioneer innovative delivery of tutorial support with its

adoption of the "Supplemental Instruction" model. This is a significant modification of established methods that was undertaken as part of the Department effort to creatively adapt to the academic impact of budget stresses.

◊ **Workshops**
A series of career advising workshops were offered to students with the support of the Advisory Committee members. This program will be continued and expanded in the coming year, and represents a commitment by the Department to explicitly connect educational pathways to a breadth of employment opportunities.

Publicity
The CIT Department has engaged in a very wide range of publicity work, including development of new printed promotional material, new web design and content, very active high school outreach and development of High School Connections programs.

Institutional Involvement
The CIT Department faculty, management and staff continue their very high level of constructive participation in institutional work, from Council participation to many other institutional workgroups.

2. What assessment activities did your unit undertake last year? In this section, please review and revise assessment plans submitted last year and identify the progress made on last year's assessment plan. Attach the revised assessment plan.

Last year's plan established a baseline of things that we do to assess and improve programs, while acknowledging that the existing approach is largely ad hoc. Activities include:

- ◊ Consultation with our industry partners through our advisory committee
- ◊ Participation in statewide meetings to help norm our efforts
- ◊ Surveying students
- ◊ Consultation with counselors, advisors and the co-op coordinator
- ◊ Maintaining program and course lead faculty with assessment responsibilities
- ◊ Tracking enrollment trends

Areas for improvement that were identified, and accomplishments achieved include:

- ◊ *Creating a systematic approach* - the department has endorsed the approach characterized by the national effort to develop the "Career Pathways" framework. Work has begun to identify ways that the Advisory Committee can be developed as a resource in developing our use of this framework.
- ◊ *Improving coordination with the catalog edit system and timelines* - through Department advocacy and leadership an institution-wide web-based system for maintaining and publishing course descriptions has been developed and implemented. A similar effort is under way for catalog programs.
- ◊ *Identifying relationship between Program Assessment and Unit Planning* - Department/Division management participated in a small Unit Planning workgroup that created this year's improved Unit Planning process with and explicit connection to Program Assessment processes.

- ◊ *Improving data gathering and analysis* - Department/Division management has been leading the effort at the institution to advocate for and develop uses of the institution's ODS system for the capture of relevant program assessment data, for modeling the data appropriately for analysis purposes and for gaining adequate access to institutional data relevant to program assessment.
- ◊ *Establishing a database for tracking and improving program outcomes* - Department/Division management has spearheaded a pilot program to represent general program descriptions and program/course outcomes in a MySql database that is accessible for both editing and viewing over dynamic web pages.

3. Based on assessment results or other evidence, what program areas (new or continuing) need attention?

The first-year common core for the Department's two-year programs was adopted as a necessary first step to address critical counseling and career path development issues for students – this effort has largely been successful. Another goal of the first-year core was to improve efficiencies in instruction and to develop and improve retention of two-year program cohorts, with the intention of strengthening the programs with relatively weaker enrollment (Programming and Computer User Support) while still supporting the stronger enrollment program (Network). This is a work in progress.

The Department is committed to a systematic approach to identifying and meeting community need in a way that generates vigorous growth. The "Career Pathways" curriculum framework is being explored as a way to provide the Department with an operational approach to be used this year to meet growth objectives.

The Department is committed to addressing student needs by offering learning opportunities in different modalities, different types and times of instruction, and organized in different ways. For example, compressing career and technical certification into one year, or degree programs into 18 mos, developing online (Camtasia) modules, creating on-demand curriculum and assessment, deeply integrating credit and non-credit instruction, etc.

Given the dynamics of the current employment market and institutional climate it's not surprising that all program areas will need attention.

The new *Simulation and Game Development* (SGD) degree program and LTOY certificate has seen vigorous responses to its initial course offerings. Next year will see the completion of a first cohort of graduates with expected continued strong interest in first-year classes forming a new cohort of program majors. A number of classes in the SGD curriculum are expected to attract strong interest in high schools through the College Now and RTEC programs within High School Connections office.

The *Network Operations* program is vibrant, though it continues to see a slight decline in the number of majors - there is however good employment demand for students with the skills that graduates in this program have. The *Computer Programming* degree program has just transitioned to an emphasis on web-based programming while maintaining its

existing strength. Targeted areas for improving both the Network and Programming degree programs include improved publicity, emphasis on job search and interview skills, augmenting the student's educational record with certifications (e.g. w/ CCNA exam), and the development of professional development service courses (e.g. courses in the Network Security Certificate curriculum).

The *Computer User Support* (CUS) degree program has seen the most extensive marketplace shift, and of late has been the most challenged in terms of numbers of graduates. There are very good employment prospects in the computer field in general, and current thinking is that the market has shifted away from the CUS traditional emphasis on application support toward an emphasis on workstation support. The department is engaged in discussions considering targeting the CUS program for curriculum changes that will re-align it with the market and restore its historical robust performance.

The *Computer Programming* (Prog.) degree program is the center of efforts to find and serve under-represented populations. The program has just accomplished a major curriculum shift toward web-based programming, and is in the first year of delivery of the new curriculum. The market for programmers is very dynamic, and there is ongoing work to match program outcomes with market demand in the context of outsourcing, globalization and very high growth for programmers with 4-yr degrees.

4. Overall, what strengths do you believe your unit demonstrated in 2005-2006?

The Department and Division have faced a wide range of organizational and resource issues with characteristic dedication, good humor and constructive resolve. The faculty and staff have maintained their focus of serving students, this despite a very broad range of challenges. Collective strength is evident by the commitment to broad and rapid changes in the curriculum in an effort to meet student need. Insight, effort and flexibility is required to meet current educational market challenges, and it is a notable strength of the Department and Division that the faculty and staff continue to provide what is required both individually and organizationally.

5. Overall, what challenges do you believe your unit faced in 2005-2006?

The institution has made significant changes and advancements in its support for online instruction. The conversion of all online/hybrid course CMS usage to Moodle was a significant practical challenge for affected faculty.

The Department faces a very real publicity challenge in letting the community know about the wide-reaching curriculum changes and offerings. Despite the rapid growth and changes already seen in the CIT Department curriculum there remain great unmet CIT educational needs in the community.

Without detailing every systemic challenge it is clear that there are many, including:

- ◊ an uncertain budget climate with additional cuts required even after repeated institutional budget and staffing cuts in past years,
- ◊ a .5 position reduction in management support,
- ◊ reduced support for lab aides,
- ◊ sharply increased demands for curriculum innovation,
- ◊ and a change in course management system for online instructional delivery.

6. What conclusions do you draw from this analysis about needed improvements or changes in 2007-2008?

The department's recent work has been enormously productive in program and curricular development. The next step is to develop stronger publicity and outreach based on this work to grow the programs.

The Department needs to develop completely new instructional modalities as described above. Additional online classes are needed, improved online and hybrid support systems, developing professional development classes to address unmet market need.

Ongoing support is required for actively developing degree programs:

- o Simulation and Game Development, a new degree program, by building career pathways (e.g. feeder pathways from popular high school College Now and RTEC classes, educational pathways to OUS degree programs, and employment pathways into the vibrant and unique local gaming industry);
- o Network Operations by continuing development of security and wireless curriculum and professional development opportunities, working with local industry representatives;
- o Computer User Support by assessing and meeting changing market needs, including those in areas of certification;
- o Computer Programming implementing recent changes and continuing growth in the popular area of web programming;

Fundamentally, the department is committed to a "systems" approach for curriculum needs assessment, development and delivery. This requires identifying both student and employer needs, aligning curriculum pathways from high school to college, aligning credit and non-credit instruction, creating multiple entry/exit points to serve student needs, and building into curricular work the data collection and analysis needed to keep it vibrant.