NEW, REVISED, OR DELETED PROGRAM COVER SHEET
2006-2007
University Curriculum Committee
Undergraduate Programs (Majors, Minors, Sequences)

DEPARTMENT/SCHOOL School of Information Technology   DATE April 01, 2007

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A.   **Proposed Action:** (more than one item may be checked if a revision).

_____	New Major	CIPS CODE _____ (obtain from Planning, Policy Studies and Info Systems)
_____	New Minor	CIPS CODE _____ (obtain from Planning, Policy Studies and Info Systems)
___X___	New Sequence	
_____	Change in requirements for major	
_____	Change in requirements for minor	
_____	Change in requirements for sequence	
_____	Other program revisions	
_____	More than 50% of courses in this program are distance education.	
_____	Program deletion	

B.   **Summary of proposed action** (see Part A), including title and exact *Undergraduate Catalog* copy for a new or altered program. (See *Catalog* and Program Checklist for format and examples.) Provide a summary of the revisions in addition to the exact current *Catalog* copy.

    Addition of a new "Integration of Enterprise Systems" sequence for the B.S. in Information Systems major.

C.   **Routing and action summary:**

1. _____ _____ Department/School Curriculum Committee Chair Date Approved		4. _____ _____ College Dean Date Approved	
2. _____ _____ Department Chair/School Director Date Approved		5. _____ _____ Teacher Education Council Chair if appropriate Date Approved (10 copies to the Dean of the College of Education)	
3. _____ _____ College Committee Chair Date Approved		6. _____ _____ University Curriculum Committee Chair Date Approved (8 copies to UCC Secretary, Moulton 108A)	

Submit 8 copies of **NEW** Undergraduate proposals to University Curriculum Committee
Submit 8 copies of **REVISED** Undergraduate proposals to University Curriculum Committee
All new and deleted programs (majors, minors, sequences) are routed by the U.C.C. to the Academic Senate. **The Senate rules mandate electronic submission (in MS Word or HTML format) of all materials for Web site posting.**
3/05

1. **Institution:** Illinois State University
2. **Responsible School:** School of Information Technology
3. **Program Title:** B. S. in Information Systems, Integration of Enterprise Systems Sequence
4. **CIPS Code:** 15.1212
5. **Proposed Data of Initiation:** Fall 2008
6. **Current and Proposed Catalog Copy**
    (Changes noted in boldface)

Current Catalog Copy	Proposed Catalog Copy
MAJOR IN INFORMATION SYSTEMS	
The Information Systems (IS) Major is designed to prepare professionals in Information Systems including such areas as systems analysis and design and software engineering. This degree focuses on the use of computer technology and information management methods to solve business problems. This requires an understanding of both the organizational context of the problem and the technologies, methodologies, and tools typically utilized. There are three sequences within this program: the Systems Development/ Analyst Sequence, the Web Application Development Sequence, and the Information Assurance and Security Sequence. The Analyst sequence provides breadth and depth in analysis and design techniques preparing students to work in a variety of information technology environments, while the Web sequence emphasizes the development of Web/Internet-based business information systems. The Information Assurance and Security sequence is designed to give students the knowledge and tools necessary for protecting information and information systems. The Information Systems program is accredited by the Computing Accreditation Commission (CAC) of the Accreditation Board for Engineering and Technology (ABET).	The Information Systems (IS) Major is designed to prepare professionals in Information Systems including such areas as systems analysis and design and software engineering. This degree focuses on the use of computer technology and information management methods to solve business problems. This requires an understanding of both the organizational context of the problem and the technologies, methodologies, and tools typically utilized. There are **four** sequences within this program: the Systems Development/Analyst Sequence, the Web Application Development Sequence, the Information Assurance and Security Sequence, **and the Integration of Enterprise Systems Sequence**. The Analyst sequence provides breadth and depth in analysis and design techniques preparing students to work in a variety of information technology environments, while the Web sequence emphasizes the development of Web/Internet-based business information systems. The Information Assurance and Security sequence is designed to give students the knowledge and tools necessary for protecting information and information systems. **The Integration of Enterprise Systems sequence is designed for students who wish to pursue both technical and practical skill in large-scale, multi-platform enterprise computing systems.** The Information Systems program is accredited by the Computing Accreditation Commission (CAC) of the Accreditation Board for Engineering and Technology (ABET).
	Integration of Enterprise Systems Sequence:
	The Integration of Enterprise Systems Sequence is designed for students who are interested in the areas of software development, project management, and application integration using large enterprise computing systems. This sequence provides in-depth knowledge on how to integrate business applications on a large enterprise computing system.

Integration of Enterprise Systems Sequence:

	Information Technology courses: (45 – 46 hours):
	Information Technology core (10 hrs): — **ITK 160, 177, 261.**

	Professional Practice (7 hours):
	— **ITK 191.**
	— **1 of 2 options**
	   — **6 hours of ITK 398, or**
	   — **3 hours of ITK 391 and 3 hours of ITK 398.**

	Other ITK course requirements (28 – 29 hours): — **ITK 178, 225, 330, 331, 332, 378, 392.** — **1 of: ITK 272, 363.** — **1 of ITK 352, 363, 365, 367, 368, 372, 384 (if not used to satisfy other requirements).**
	Supporting requirements (33 hours):
	Mathematics and Statistics (11 hours): — **MAT 120 or 145, 160.** — **1 of: MQM 100;** **ECO/GEO/POL/PSY 138**
	Communication and Organization (22 hours): — **COM 223; ECO 105; ACC 131; MQM 220;** — **1 of: COM 202, 227; ENG 249.** — **2 of: ACC 132, FIL 240; MKT 230; ECO 225 or 239 or 245.**

Description of the program

1. The Integration of Enterprise Systems (IES) sequence focuses on the implementation and development of integrated large-scale computing systems for enterprise businesses. There are two major areas in the study of enterprise computing systems, one is the study of the infrastructure of the systems and the other is the study of integration of the systems. The IES sequence concentrates on integration aspects such as application development, enterprise business integration and decision making, enterprise system administration, and the system development life cycle. The fundamental courses of this area for students to take are similar to the basic courses taken by all students majoring in Information Systems, thus there are significant basic course overlaps between the other sequences and the IES sequence. After students complete the basic courses, they will continue taking the IES specific courses (described below) and further concentrate on the system integration part of the large scale enterprise computing systems.

2. Four new IES specific courses are proposed for the sequence. They are:
   a. ITK 330 – Introduction to Enterprise Computing Systems;
   b. ITK 331 – Operating, Data Communications, Networking, and Security of Enterprise Systems;

c. ITK 332 – Advanced Enterprise Computing Systems;
d. ITK 392 – Enterprise System Integration and Application Development.

Rationale

The study of the local and national IT business indicates that the current mainframe system programmers and system administrators are reaching retirement age and the demand for personnel to replace these employees will be high. In addition, a study of global computing markets shows that mainframe use continues to rise. From both economic (such as power consumption, floor footage, and system maintenance) and business integration (centralized computing and storage system with distributed recovery strategy) points of view, the number of integrated large-scale enterprise computing systems will continue to grow in both major corporations and in small to medium businesses. The school has had many meetings with both local and regional companies, e.g., State Farm, Caterpillar, John Deere, Anheuser-Busch, Allstate, and others. All of these companies have encouraged ITK to offer enterprise systems computing education and have indicated they will support such a program and hire its graduates. IBM has also offered support in terms of educational opportunities for faculty, equipment, and support in student recruiting and placement. The establishment of an Integration of Enterprise Systems sequence in the Information Systems degree program will place ISU in a leading edge position in both education and research related to large-scale integrated multi-platform computing systems.

Consequences of Proposed Changes

1. Expected impact of proposal on existing campus programs:

    No impact on existing campus programs.

2. Expected curricular changes:

    The Integration of Enterprise Systems sequence will utilize a major portion of the courses offered by three existing ITK programs. To achieve the objective of learning about large-scale multi-platform enterprise computing systems, four new courses are added to the sequence. They are:
    a. ITK 330 – Introduction to Enterprise Computing Systems;
    b. ITK 331 – Operating, Data Communications, Networking, and Security of Enterprise Systems;
    c. ITK 332 – Advanced Enterprise Computing Systems;
    d. ITK 392 – Enterprise System Integration and Application Development.

    Students are required to complete all four courses before graduation. The remaining major requirement courses are currently offered by the ITK on a regular basis.

3. Library resources:

    Since this sequence is within the scope of the existing ITK Information System program, no additional library material should be required.

4. Staffing arrangements:

    This sequence will start teaching the ITK 330 course (joint course with the Computer Science, ECE sequence) each semester for the first year, one to two courses (joint courses with the Computer Science, ECE sequence) per semester in the second year, and up to three courses (two joint courses with the Computer Science, ECE sequence) per semester in subsequent years. ITK recruited a faculty member for these sequences in fall semester 2007, with no anticipated need for additional faculty in the next four to five years.

5. Funding needs:

    We are using an academic partition (LPAR) on the university's IBM mainframe for all the course work. IBM is donating all of the software and some of the hardware as well as equipment installation and upgrade support, so we have no equipment needs. IBM also provides free faculty and staff training through their Academic Initiative program, and offers additional training in specific areas which can be completed on-line. IBM has provided a z890 mainframe system in the summer of 2007 for ITK to conduct both education and research.