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Revision to
Information Systems Major
Add Web Application Development Sequence
Drop Systems Development/LAN Support Sequence
Applied Computer Science Department
Illinois State University

Executive Summary

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Drop Systems Development/LAN Support sequence

During 1980 to 1995 the world witnessed explosive growth in the usage of micro-computer based applications and locally networked micro-computer clusters. Despite the success of these local area networks (LAN) the past decade has witnessed the birth and explosive growth in usage of the World Wide Web and other internet based application solutions. Thus, the ACS department seeks to alter our program sequence to reflect and support the escalating need for Web application development knowledge, skills, and abilities. This proposed change from a LAN to Web focus was discussed with our Business and Industry Advisory Council (BIAC) and was overwhelmingly endorsed as a worthy curriculum adjustment.

ACS Faculty believe that students with a networking career objective would receive a better educational preparation from the Telecommunications major than from the LAN Support sequence. The Telecommunications program is thought to include more topics of relevance to contemporary industry networking needs. Furthermore, the Telecommunications major is the overwhelming choice of networking students as evidenced by the number of students switching from the LAN Support sequence to the Telecommunications major.

Add Web Application Development sequence

In the last few years the web/Internet has transformed the information technology industry in an unprecedented manner. Students need to be educated in this burgeoning area, and the ACS programs need to be updated in order to remain current with technology. The current ACS curriculum contains several courses that cover web related topics. In addition, the department is adding a new course, ACS 353 Web Development Technologies, as the cornerstone of this sequence. These courses are being packaged into a web sequence. It is expected that over time the current courses will evolve and new web related courses will be introduced to keep up with continuing changes in industry.

The addition of a Web Application Development Sequence is a timely revision to the educational opportunities available from the ACS department. This new sequence is expected to be a distinctive program that will be in high demand by students.   It will prepare high quality technology workers who will be in great demand by industry since there is currently a severe shortage of workers with advanced web development skills. At a recent meeting of the department's Business and Industry Advisory Council (BIAC), the proposed ACS 353 course and the new Web Application Development Sequence were discussed and members endorsed these additions as important for industry.

NEW, REVISED, OR DELETED PROGRAM COVER SHEET
2000-2001
University Curriculum Committee
Undergraduate Programs (Majors, Minors, Sequences)

DEPARTMENT ____**Applied Computer Science**_____   DATE __October 23, 2000__

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

__**X**____   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.

     See next page –   **within Information Systems Major**
                    Drop Systems Development/Lan Support Sequence
                    Add Web Application Development Sequence

C.   **Routing and action summary:**

1. _____ Department Curriculum Committee Chair	_____ Date Approved	4. _____ College Dean	_____ Date Approved
2. _____ Department Chair	_____ Date Approved	5. _____ Teacher Education Council Chair if appropriate (10 copies to the Dean of the College of Education)	_____ Date Approved
3. _____ College Committee Chair	_____ Date Approved	6. _____ University Curriculum Committee Chair (8 copies to the Undergraduate Studies)	_____ Date Approved

Submit 20 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 website posting.**
3/00

Revision to
Information Systems Major
Add Web Application Development Sequence
Drop Systems Development/LAN Support Sequence
Applied Computer Science Department
Illinois State University

Summary of the proposed action

Summary of the proposed action

- Within the Information Systems major, drop the Systems Development/LAN Support sequence and add a Web Application Development sequence.

- This new web sequence utilizes the same 5 course common core and practical experience as all the other ACS programs. The supporting requirements and requirement for a minor or 2nd major are also the same in both sequences within the Information systems degree (ie, in this new web sequence and the existing Systems Development/Analyst sequence).

- Require the new course **ACS 353 Web Development Technologies** as the cornerstone of this new web sequence. Also require ACS 378, Database Processing, since database is important for many web applications. Limit the ACS elective choice list to other ACS courses identified as web related.

- Plan to decimalize 368 so that students can only take the course when it is appropriate to their sequence. ACS 368.03 will be the topics course for the Web Application Development sequence.

Catalog Copy for Sequence being Deleted

Current Systems Development /
LAN Support Sequence Requirements
Applied Computer Science courses: (40 hrs):
  Applied Computer Science core (16 hrs):
      — ACS 160, 168, 169, 254, 261.
  Professional Practice (4 hrs):
      — ACS 191.
      — 1 of: ACS 398, 391.
  Other ACS course requirements (20 hrs):
      — ACS 272, 372, 375, 377.
      — 1 of: ACS 378, 363
      — 1 of: ACS 355, 383
Supporting requirements (30-31 hrs):
  Mathematics and Statistics (11-12 hrs):
      — MAT 120 or 145, 160.
      — 1 statistics course, e.g. MQM 100;
        ECO/GEO/POS/PSY 138; PSY 240.
  Communication and Organization (19 hrs):
      — COM 110, 223; ACC 131; ECO 105;
        MQM 220.
      — 1 of: MQM 240; ENG 249.

Catalog Copy for Sequence being Added

Web Application Development Sequence

The Web Application Development Sequence is designed to give students a background for developing information systems in a Web/Internet-based environment. This sequence provides depth in Web development techniques and supporting technologies, along with related emerging technologies.

Proposed Web Application Development Sequence Requirements

Applied Computer Science courses: (39 hrs):
  Applied Computer Science core (16 hrs):
        — ACS 160, 168, 169, 254, 261.

  Professional Practice (4 hrs):
        — ACS 191.
        — 1 of: ACS 398, 391.

  Other ACS course requirements (19 hrs):
        — ACS 272, 353, 372, 378.
        — 2 of: ACS 341, 352, 367, 368.03,
                        375 or 382.

Supporting requirements (30-31 hrs):
  Mathematics and Statistics (11-12 hrs):
        — MAT 120 or 145, 160.
        — 1 statistics course, e.g. MQM 100;
            ECO/GEO/POS/PSY 138; PSY 240.

  Communication and Organization (19 hrs):
        — COM 110, 223; ACC 131; ECO 105;
            MQM 220.
        — 1 of: COM 202, 227; ENG 249.

Explanations - Dropping Systems Development/LAN Support Sequence

Rationale for proposal

During 1980 to 1995 the world witnessed explosive growth in the usage of micro-computer based applications and locally networked micro-computer clusters. Despite the success of these local area networks (LAN) the past decade has witnessed the birth and explosive growth in usage of the World Wide Web and other internet based application solutions. Thus, the ACS department seeks to alter our program sequence to reflect and support the escalating need for Web application development knowledge, skills, and abilities. This proposed change from a LAN to Web focus was discussed with our Business and Industry Advisory Council (BIAC) and was overwhelmingly endorsed as a worthy curriculum adjustment.

ACS Faculty believe that students with a networking career objective would receive a better educational preparation from the Telecommunications major than from the LAN Support sequence. The Telecommunications program is thought to include more topics of relevance to contemporary industry networking needs. Furthermore, the Telecommunications major is the overwhelming choice of networking students as evidenced by the number of students switching from the LAN Support sequence to the Telecommunications major.

Impact of proposal

Expected impact of proposal on existing campus programs

Students who would have chosen this sequence if we continued to offer it will now choose one of the revised majors and sequences available. Students with a networking career objective are expected to be telecommunications majors, so that program will probably increase in size.

All of the courses needed to complete the LAN Support sequence will continue to be offered as part of other programs in the department. Therefore, any current student in the LAN Support sequence will be able to complete this program if they wish to.

Expected curricular changes including new courses

Delete the catalog listing for the Systems Development/LAN Support Sequence

Anticipated staffing & funding needs

There are no changes in funding needs or staffing anticipated as a result of this revision. The same number of students will be served with the revised majors and sequences available in the ACS department with the addition of the Web Application Development Sequence.

Explanations - Adding a Web Application Development Sequence

Rationale for proposal

In the last few years the web/Internet has transformed the information technology industry in an unprecedented manner. Students need to be educated in this burgeoning area, and the ACS programs need to be updated in order to remain current with technology. The current ACS curriculum contains several courses that cover web related topics. In addition, the department is adding a new course, ACS 353 Web Development Technologies, as the cornerstone of this sequence. These courses are being packaged into a web sequence. It is expected that over time the current courses will evolve and new web related courses will be introduced to keep up with continuing changes in industry.

The addition of a Web Application Development Sequence is a timely revision to the educational opportunities available from the ACS department. This new sequence is expected to be a distinctive program that will be in high demand by students. It will prepare high quality technology workers who will be in great demand by industry since there is currently a severe shortage of workers with advanced web development skills. At a recent meeting of the department's Business and Industry Advisory Council (BIAC), the proposed ACS 353 course and the new Web Application Development Sequence were discussed and members endorsed these additions as important for industry.

Impact of proposal

Expected impact of proposal on existing campus programs

With the revised majors and sequences available in the ACS department, the department expects to serve the same numbers of students as we currently serve, although the distribution of students in the three programs will probably change somewhat. The Information Systems degree is currently the largest program in the department and is expected to continue to be the largest since this new Web Application Development Sequence is expected to be in high demand by students.

Expected curricular changes including new courses

Add the catalog listing for the Web Application Development Sequence. Add the new course, ACS 353 Web Development Technologies. Decimalize 368 so that students can only take the course when it is appropriate to their sequence. ACS 368.03 will be the topics course for the Web Application Development sequence.

Anticipated staffing & funding needs

Since the LAN Support sequence is being dropped, there are no changes in funding needs or staffing anticipated as a result of this revision. The same numbers of students as the department currently serves can be served by the revised majors and sequences available in the ACS department with the current level of resources. If the number of students in the department increases in conjunction with the demand for the Web Application Development Sequence, the department will need to seek additional funding and faculty positions. Increasing the number of technology workers available is currently a high priority for the state of Illinois.