THE FACULTY SENATE
December 15, 1999

MEMORANDUM

TO: President Ray M. Bowen
SUBJECT: Approval of Undergraduate Curriculum Items

At its regular meeting on December 13, 1999, the Faculty Senate approved the following curriculum items from the University Curriculum Committee and submits them for your approval. Attached is a copy of the material sent to our Senators regarding these items.

New Courses: BIOL 214, ENTC 425, GEOG 406, INFO 210, INFO 321, INFO 322, INFO 420, INFO 422, INFO 432, INFO 437. (FS.17.70)

Course changes: AERO 304, AERO 401, AERO 402, ENTC 380, ENTC 383, ENTC 463, HORT 207 to HORT 308, INFO 207 to INFO 209, INFO 316, INFO 318, INFO 320 to INFO 329, INFO 332, INFO 421, INFO 428 to INFO 328, INFO 436 to INFO 336, INFO 461 to INFO 361, PHYS 408, SPED 212 to SPED 302, SPED 310 to SEFB 310, SPED 311 to SEFB 311, SPED 312 to SEFB 312, SPED 320 to SEFB 320, SPED 425 to SEFB 425, SPED 426 to SEFB 426, SPED 471 to SEFB 471. (FS.17.71)

Thank you for your time and consideration. Please inform me of your action on these recommendations.

[Signature]
Thomas E. Wehrly
Speaker, 1999-2000

Attachment

cc: Dr. Ronald G. Douglas, Executive Vice President & Provost
    Dr. Janis P. Stout, Dean of Faculties & Associate Provost
    Dr. R. Bruce Simpson, Chair, University Curriculum Committee
    Ms. Linda F. Lacey, Director of Academic Support Services

Approved:

[Signature]
Ray M. Bowen, President

Date: 1/7/2000
The University Curriculum Committee recommends approval of the following:

1. **New Courses**

   **BIOL 214. Genes, Ecology and Evolution. (3-0). Credit 3.** A genetically-based introduction to the study of ecology and evolution; emphasis on the interactions of organisms with each other and with their environment. Prerequisites: BIOL 113/123 and 114/124.

   **ENTC 425. Local-and-Metropolitan-Area Networks. (3-2). Credit 4.** Design, operation, application and management LANs and MANs; topologies, cabling systems, protocols, bridges, routers, hubs, switches, security; media and transport systems; Internet and TCP/IP topics including the protocol stack, router operation and addressing issues. Prerequisites: ENTC 215; junior classification.

   **GEOG 406. Geographic Perspectives on Contemporary Urban Issues. (3-0). Credit 3.** Contemporary readings on spatial patterns and processes in urban environments; sprawl; human-environment interaction; housing; development and growth; concept of place; scale; power and policy. Prerequisite: GEOG 204 or 306 or equivalent.

   **INFO 210. Fundamentals of Information Systems. (3-0). Credit 3.** Introduction to information systems concepts; study of information systems in the functional areas of business; overview of hardware, software and popular operating systems; study of problem solving tools; human factors. Prerequisite: For business majors.

   **INFO 321. Business Object Oriented Programming with C++. (3-0). Credit 3.** Introduction of abstract data types, inheritance, object identity, polymorphism as they relate to building business objects and business classes; use of C++ programming language depicting the object orientation concepts; use of class and standard template (STL) libraries for business object construction. Prerequisites: INFO 316 or 318; junior classification in business.

   **INFO 322. Business Object Oriented Programming with Java. (3-0). Credit 3.** Introduction of abstract data types, inheritance, object identity, polymorphism as they relate to building business objects and business classes; use of Java programming language depicting the object orientation concepts; use of class libraries and Java packages for business object construction. Prerequisites: INFO 316 or 318; junior classification in business.

   **INFO 420. Web-Enabled Applications. (3-0). Credit 3.** Distributed business applications using the web; advanced discussions of the concepts of Internet, Intranet, Extranet; different methods to web-enabled application; active web applications; cutting edge web site design; legacy to web integration; use of web-oriented languages. Prerequisites: INFO 328, 334 and senior classification in business.

   **INFO 422. Complex Business Application Design. (3-0). Credit 3.** Business application development alternatives; COM and CORBA object models; use of Visual Basic; use of ActiveX controls, ActiveX Servers and ActiveX Documents. Prerequisites: INFO 321 or 322; senior classification in business.
INFO 432. Software Quality and Measurement in Information Systems. (3-0). Credit 3. Software quality and software measurement for business enterprise; software metrics; implementation of metrics based information systems project; zero-defect programming for business software projects; software quality standards such as ISO and Capability Maturity Models for an enterprise. Prerequisites: INFO 329 and senior classification in business.

INFO 437. Knowledge Management. (3-0). Credit 3. Organizational and cognitive issues of problem formulation; decision making and knowledge management in multiple application domains; formulation and decision making in groups; group dynamics; managing group and individual knowledge; a survey of tools needed to support formulation, decision making and knowledge management; planning and analysis in organizational settings. Prerequisites: INFO 329 and 303 or equivalents and senior classification in business or approval of instructor.

2. Changes in Courses

AERO 304. Structural Analysis I.

Credit hours
from: (3-0). Credit 3.
to: (4-0). Credit 4.

Prerequisites
from: AERO 320, CVEN 205 or ENGR 212, 214; MATH 308.
to: AERO 320; ENGR 213, 214; MATH 308.

AERO 401. Aerospace Vehicle Design I.

Credit hours
from: (1-3). Credit 2.
to: (2-3). Credit 3.

AERO 402. Aerospace Vehicle Design II.

Credit hours
from: (1-6). Credit 3.
to: (0-6). Credit 2.

Course title
from: Numerical Control and Computer-Aided Manufacturing.
to: Computer-Aided Manufacturing.


Course title
from: Computer-Aided Manufacturing.
to: Manufacturing Information Systems.

Course Description
from: Advanced computer-aided manufacturing; emphasis on computer software to improve productivity in manufacturing; CAD applications in manufacturing, graphics based numerical control programming, group technology, computer-aided process planning; manufacturing, resource planning and process simulation.
to: Use of information technology for manufacturing enterprise applications, including computer-integrated manufacturing, database, computer networking, web-technology and enterprise resource planning.

Prerequisites
from: ENTC 380.
to: ENTC 380 and CPSC 206 or approval of instructor.

ENTC 463. Mechanical Design Applications II.

Credit hours
from: (3-2). Credit 4.
to: (3-0). Credit 3.

Prerequisites
from: ENTC 363; ENDG 407.
to: ENTC 361 and 363.

HORT 308. Landscape Plant Materials.

Course number
from: HORT 207.
to: HORT 308.
INFO 207. **Business Information Systems Concepts.**

Course number
from: INFO 207.
to: INFO 209.

Course description
from: Introduction to the use of computers as a data processing and problem-solving tool for business; fundamental concepts of information technology and theory; opportunities to use existing application software to solve various business information systems oriented problems.

to: Introduction to the use of computers in data and document management and as a problem-solving tool for business; fundamental concepts of information technology and theory; opportunities to use existing application software to solve various business information systems oriented problems. May not be used to satisfy degree requirements for business majors.

Prerequisites
from: none.
to: For students other than business and agribusiness majors.

INFO 316. **Business Programming.**

Course title
from: Business Programming.
to: Business Programming with COBOL.

Course description
from: Basic concepts and features of electronic business data processing; constructing software solutions to problems using structured programming language COBOL; case problems analyzed and programmed in the functional fields of business.

to: Basic concepts and features of business data processing; constructing software solutions to problems using programming language COBOL; exposure to file structures like sequential, ISAM, VSAM and others; programmed in the functional fields of business.

Prerequisites
from: INFO 209 or approval of instructor, junior classification.
to: INFO 210 or approval of instructor and junior classification in business.

Course title
from: Programming for Business Data Structures.
to: Business Programming with C.

Course description
from: Concepts and techniques of constructing business-oriented computer programs for the
development and use of file and data structures using a structured programming language;
various business problems will be analyzed and programmed using structured techniques.
to: Concepts and techniques of constructing business-oriented computer programs for the
development and use of file and data structures using C; various business problems analyzed
and programmed using structured techniques.

Prerequisites
from: none.
to: INFO 210 or approval of instructor and junior classification in business.


Course number
from: INFO 320.
to: INFO 329.

Course description
from: Techniques and methods currently used in system analysis and design; survey of tools used
to support systems development; use of functional problems as basis for conducting system
studies.
to: Techniques and methods currently used in system analysis and design; use of automated
tools to support systems development.

Prerequisites
from: none.
to: INFO 328 and junior classification in business.

Course title
to: Business Systems Operating Environment.

Course description
from: Business information systems problem solving in a small computing systems environment.
to: An understanding of how modern operating systems and related computer hardware work in the business environment including theory and business applications.

Prerequisites
from: none.
to: INFO 210 and junior classification in business.


Course title
from: Advanced Systems Analysis and Design.
to: Large-Scale Information Systems Project.

Course description
from: Advanced topics in the programming of business systems; emphasis on project management and team-oriented approaches to system problem solving; exposure to file structures, program control languages and library techniques.
to: Design and implementation of large-scale business application projects needing database management system and networks; multi-language and/or multi-platform environments; very large legacy system upgrade and maintenance; platform migration.

Prerequisites
from: none.
to: INFO 329 and 334 and senior classification in business.

Course number
from: INFO 428.
to: INFO 328.

Course description
from: Philosophy, use and application of Data Base Management Systems (DBMS) in the solution of business problems.
to: Data base design; use and application of Data Base Management Systems (DBMS) in the solution of business problems; data base programming.

Prerequisites
from: none.
to: INFO 316 and 318 and junior classification in business.


Course number
from: INFO 436.
to: INFO 336.

Course description
from: Application of quantitative decision-making techniques to management decision problems; planning, analysis and control of operating systems in organizational settings.
to: Application of quantitative decision-making techniques to management decision problems; focus on model development, solution and implementation of results.

Prerequisites
from: INFO 303 or equivalent and senior classification.
to: INFO 364 or concurrent enrollment.


Course number
from: INFO 461.
to: INFO 361.

PHYS 408.  Thermodynamics and Statistical Mechanics.

Prerequisites
from: MATH 308; PHYS 222 or 309.
to: PHYS 221, 412; MATH 311 or equivalent.

SPED 212. Overview of Exceptional Children.

Course number
from: SPED 212.
to: SPED 302.

Course title
from: Overview of Exceptional Children.
to: Instructional Design for Students with Disabilities.

Course description
from: Information relating to assessment techniques, intervention strategies, administrative practices and various philosophies of treatment of children and youth with disabilities.
to: Familiarizes pre-service teachers with methods for designing and implementing instruction for students with mild to moderated disabilities; designing and managing environments and materials.

Prerequisites
to: INST 210; junior classification.


Course prefix
from: SPED 310.
to: SEFB 310.

Course title
from: Characteristics of Children with Learning Disabilities and Behavior Disorders.
to: Instructional Strategies for Students with Disabilities.

Credit hours
from: (3-0). Credit 3.
to: (2-3). Credit 3.

Course description
from: Historical perspectives, conceptual models and constitutional characteristics; documenting child progress in special settings with implications for change.
Field-based course designed to provide pre-service teachers with strategies and techniques effective in teaching students with mild to moderate disabilities in a variety of general and special education settings; addresses teaching of academic, social and behavioral skills.

SPED 311. Assessment of Students with Disabilities.

Course prefix
from: SPED 311.
to: SEFB 311.

Course title
from: Assessment of Students with Disabilities.
to: Instructional Design for Students with Disabilities.

Credit hours
from: (3-0). Credit 3.
to: (2-3). Credit 3.

Course description
from: Assessment techniques used with children and youths with mild to moderate learning behavior problems.
to: Field-based course involving formal and informal assessment techniques used with students with disabilities, including progress monitoring; development of Individual Education Plans and the IEP process.

SPED 312. Reading for Handicapped Populations.

Course prefix
from: SPED 312.
to: SEFB 312.

Course title
from: Reading for Handicapped Populations.
to: Effective Reading Instruction for Students with Disabilities.

Credit hours
from: (3-0). Credit 3.
to: (2-3). Credit 3.

Course description
from: Origins, functions and philosophies of reading for students with disabilities; theories of text analysis; development of communication skills through functional reading.
to: Information and competencies through field-based instruction in effective reading
instruction for students K–12 with academic learning problems and mild/moderate
disabilities; reading assessment, effective instruction design and teaching techniques, error
analysis, correction procedures, and analyses and adaptations of commercial reading
materials.


Course prefix
from: SPED 320.
to: SEFB 320.

Course description
from: Psychological, social, physical and cognitive development of secondary-age students; career
assessment; programmatic options within educational and employment settings; transition
models from school settings to adult educational and employment settings; transition
models from school settings to adult employment.
to: Field-based course involving psychological, social, physical and cognitive development of
secondary-age students; career assessment; programmatic options within educational and
employment settings; transition models from school to adult settings.

SPED 425. Student Teaching in Special Education.

Course prefix
from: SPED 425.
to: SEFB 425.

Credit hours
from: (1-8). Credit 3.
to: (0-12). Credit 3.

SPED 426. Effective Instruction of Students of Diverse Abilities.

Course prefix
from: SPED 426.
to: SEFB 426.

Credit hours
from: (3-0). Credit 3.
to: (0-12). Credit 3.
Course description
from: Overview of effective instructional strategies for teaching students of diverse abilities; analysis of teaching style and strategies for improving ability to work with diverse populations.
to: Field-based application of effective instructional strategies for teaching students of diverse abilities; analysis of teaching style and strategies for improving ability to work with diverse populations.

SPED 471. Dynamics and Management in Multicultural/Inclusionary Learning Environments.

Course prefix
from: SPED 471.
to: SEFB 471.