March 7, 2003

REPORT FROM THE OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS

The following Undergraduate petitions have been approved:

**Minor Modification**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 415</td>
<td>History of Rhetoric</td>
<td>3 Cr. Hrs.</td>
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</table>

Change prerequisites to match ENG 415 (which is cross-listed with PHIL 415). The prerequisites are ENG 201 and junior standing.


**University Core Curriculum**

The University Core Council recommends the deletion of the following course from the University Core Curriculum: ENG 301—Advanced Composition (from Category A1: Composition and Speech).

Implementation Date: Fall, 2003.

**Undergraduate Course Modifications:**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>ENG 286</td>
<td>Classical Mythology</td>
<td>3 Cr. Hrs.</td>
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Course prerequisite: ENG 201.

Implementation Date: Fall, 2003.

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<tr>
<td>UNIV 101</td>
<td>Learning Communities Seminar</td>
<td>1 Cr. Hrs.</td>
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</tbody>
</table>

Course Description: This course provides the integrative component for the identified Freshman Interest Group linked courses. It is designed to help students adjust to university life and academic expectations. Topics that will be explored pertain to academic policies, campus resources, self-management tools, and reading/thinking skills.

Implementation Date: Fall, 2003.

The following graduate petitions were approved at the 2/27/03 Graduate Council Meeting:

**Graduate New Courses**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EDUC 624</td>
<td>Seminar in Adolescent Development</td>
<td>3 Cr. Hrs.</td>
</tr>
</tbody>
</table>

Course Description: Examines human development during the age range from 13 to 19. Focuses on preparation for field experiences. Clinical experiences and substitute teaching in high school settings required. Enrollment restricted to Secondary Transition to Teaching candidates.

Implementation Date: Fall, 2003.

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<tr>
<th>Course</th>
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<tr>
<td>IM 641</td>
<td>Principles and Practices of Quality Management</td>
<td>3 Cr. Hrs.</td>
</tr>
</tbody>
</table>

Course Description: Application of fundamental principles of quality management in analyzing and solving operations and manufacturing decisions in modern technological enterprises. Emphasis is directed at the management and control of quality to provide an environment for continuous improvement. Topics to be examined are quality philosophies, Total Quality Management, continuous improvement, Baldrige Award and criteria, ISO Standards, quality control, statistical
process control, quality improvement, reliability management, six sigma, design of experiments, quality measurement tools, and quality function deployment. Prerequisites: Graduate standing and IM 603 Survey of Statistics or equivalent or approval of graduate advisor.

Implementation Date: Fall, 2003.

NURS 632 Administration in Nursing and Health Care Organizations 3 Cr. Hrs.

**Course Description:** Administrative theories are examined and applied to complex human relationships existing in nursing and health care. The course focuses on the nature and make up of organizations, structuring and coordinating work, and the influence of complex systems, community behavior and internal leadership on the direction and decision-making capacity of health care organizations.

Implementation Date: Fall, 2003.

**Graduate Course Modifications**

EDUC 541 Young Adult Literature 3 Cr. Hrs.
Change course from EDUC 590 ST: Literature—Young Adult/Adolescent.

**Course Description:** Course provides an overview of literature for adolescents and young adults. Participants will critique these materials and design plans for incorporating all genres of young adult literature in middle school and high school classrooms.

Implementation Date: Summer I, 2005.

EDUC 542 Advanced Children’s Literature 3 Cr. Hrs.
Change course from EDUC 590 ST: Advanced Children’s Literature.

**Course Description:** Course provides an opportunity for classroom teachers and media specialists to explore recently published books and non-print materials for children in Pre-K through grade 6. Participants will critique these materials and design plans for incorporating all genres of children’s literature in their classrooms.

Implementation Date: Summer I, 2003.

EDUC 607 Issues in Reading, Diversity, and Exceptional Needs 3 Cr. Hrs.
Change course from EDUC 690 ST: Issues in Reading, Diversity, and Exceptional Needs.

**Course Description:** Examines approaches for improving adolescent/young adult literacy in various content areas. Emphasis on strategies for teaching students with a wide range of abilities in culturally diverse settings. Enrollment restricted to Secondary Transition to Teaching candidates.

Implementation Date: Fall, 2003.

EDUC 615 Integrated Curriculum I 3 Cr. Hrs.
Change course from EDUC 690 ST: Issues in Reading, Diversity, and Exceptional Needs.

**Course Description:** One of the analysis courses in the Elementary Transition to Teaching program, this course examines the theoretical views of cognitive development with a focus on how children acquire, organize and apply knowledge. Integrated methods and developmentally appropriate activities for working with diverse and exceptional populations are emphasized. Also examines strategies to develop working partnerships with parents. Guided field experience required. Enrollment restricted to Elementary Transition to Teaching candidates.

Implementation Date: Fall, 2003.

EDUC 616 Integrated Curriculum II 3 Cr. Hrs.
Change course from EDUC 690 ST: Transition to Teaching Curriculum II.

**Course Description:** One of the analysis courses in the Elementary Transition to Teaching program, this course examines the theoretical views of cognitive development with a focus on how children acquire,
organize and apply knowledge. Integrated methods and developmentally appropriate activities for elementary content areas are emphasized. Also examines strategies for working in high need and impoverished schools. Continuation of EDUC 615. Guided field experience required. Enrollment restricted to Elementary Transition to Teaching candidates.

Implementation Date: Spring, 2004.

EDUC 622 Assessment in Elementary Education 3 Cr. Hrs.

Change name from Seminar in Educational Psychology.

Course Description: Examines the impact of testing and assessment. Reviews accountability movements, standardized testing, and high stakes assessment systems as they affect the roles and power of teachers and administrators. Students will learn to construct normative and criterion referenced assessments, and learn their utility in aligning curriculum and activities with K-12 content standards. Field experiences may be required. Enrollment restricted to Elementary Transition to Teaching candidates.

Implementation Date: Fall, 2004.

EDUC 623 Child Development and Elementary Education 3 Cr. Hrs.

Change course from EDUC 690 ST: Child Development and Elementary Education.

Course Description: The initial course in the Elementary Transition to Teaching program, this course introduces candidates to current theories of child development in the areas of physical/motor, psychosocial (cultural influences), and cognitive/language/literacy development of children ages birth to 12 years. Focuses on the integration of research findings and theories of growth and development and educational psychology in early childhood and elementary practice. Guided field experience may be required.

Implementation Date: Fall, 2003.

EDUC 641 Literacy Programs in the Classroom 3 Cr. Hrs.

Change name from Interdisciplinary Processes in Communication Skills.

Course Description: A study of the ways teachers can sustain a balanced literacy program in their classrooms for all students. Topics for the course will be flexible depending on teachers' needs and interests; however, in general, the topics covered will include current innovations in the fields of reading (i.e., 4-Block instruction, incorporating standards, comprehension strategies, using literature circles), writing (i.e., writing process, writing assessment through writing traits and rubrics, choosing writing prompts), listening and speaking. Emphasizes instructional practices and activities for use in the classroom.

Implementation Date: Summer I, 2003.

EDUC 651 Supervised Teaching in the Elementary School 3 Cr. Hrs.

Change course from EDUC 690 ST: Supervised Elementary Student Teaching.

Course Description: Engages in the professional role of elementary educator, with qualified supervision, in an appropriate program placement. Enrollment only by permission of Director of Field Experiences in Education.

Implementation Date: Spring, 2004.

EDUC 652 Supervised Teaching in the Secondary School 3 Cr. Hrs.

Change course from EDUC 690 ST: Supervised Student Teaching I.

Course Description: Engages in the professional role of secondary educator, with qualified supervision, in an appropriate program placement. Enrollment only by permission of Director of Field Experiences in Education.

Implementation Date: Spring, 2004.

The following undergraduate petitions will be discussed when the Curriculum Committee meets on March 21, 2003 from 11:00 a.m. – noon in UC 215.
Undergraduate New Course Petitions

ENGR 324  Construction Materials and Estimating (3 hours lecture, 3 hour lab)  4 Cr. Hrs.
A study of aggregates, concrete and asphaltic materials; includes concrete mix designs and testing. The course will study factors relating to labor, equipment, and materials involved in construction. Several estimating projects will be completed. Additional subject matter covered will be construction contracts, planning and monitoring. Prerequisite: Junior standing.

Rationale: This course combines two important parts of civil engineering—construction materials and construction estimating. They are interrelated, the first part of the course studies the materials involved in construction – concrete and asphalt – with the emphasis on concrete. The laboratory shows the student how to develop the mix and to test the mix effectiveness for the purpose of the concrete pour. The second part of the course (about 60% of the lecture and 50% of the lab) teaches the student how to estimate construction projects that will use concrete, steel, asphalt and soils. The course also covers planning, conceptual estimating and monitoring using critical path and Microsoft Project and estimating software. Three field trips to construction sites are taken in the lab periods and 3 major estimating projects are assigned covering – excavation, paving and material take-off. It is expected when the student successfully completes the class, he/she will have the basics of materials and estimating that will allow them to work for a construction company where they will learn the details of the construction business.

Implementation Date: Spring, 2004.

ENGR 325  Structural Analysis (3 hours lecture, 3 hours lab)  4 Cr. Hrs.
Classification of structures, loads, reactions, shear and moment diagrams, trusses, framed structures, influence lines, moving loads, deflections, and analysis of statically indeterminate structures, including moment distribution. Prerequisite: ENGR 355 Strength of Materials.

Rationale: The purpose of this course is to introduce the engineering student to the elementary fundamentals of structural analysis for beams, trusses, and frames. Sufficient information is included for a thorough understanding of statically determinate structures and for a first course in statically indeterminate structures. This course will enhance the student’s structural analysis skills as preparation for structural steel and reinforced concrete design.

Implementation Date: Spring, 2004.

ENGR 422  Geotechnical Engineering Design  3 Cr. Hrs.
Topics that will be studied include bearing capacity, isolated and combined footing design, lateral earth pressure, retaining wall design, pile and pier design, slope stability, and design of foundations for seismicity. Professional and ethical responsibility and legal ramifications of design problems will also be considered. Prerequisites: ENGR 321 Soil Mechanics and Consent of the Instructor.

Rationale: This course is an elective for students in the Civil Engineering Option. This course builds on previous fundamental courses such as Statics, Strength of Materials and Fluid Mechanics as well as its prerequisites – Soil Mechanics and Reinforced Concrete Design. It should provide the students with a firm background in geotechnical engineering allowing them to design shallow and deep foundations, retaining walls and slopes for engineering projects. It contributes 3 hours of engineering design towards the 16 hours required by ABET.

Implementation Date: Spring, 2004.

ENGR 447  Microprocessor Systems Design (2 hours lecture, 3 hour lab)  3 Cr. Hrs.
This course involves the design of firmware and hardware for microprocessor-based systems, including analog and digital interfaces,
system architecture, memory system design, IO structure and
handshaking protocols, interrupts, timers, parallel and serial subsystems,
and analog-to-digital conversion. Prerequisites: ENGR 347 Microcomputer
Engineering or Consent of Instructor.

Rationale: Microcomputers form the heart of almost every modern electrical
appliance. Microcomputers are used for controlling automobile fuel
injection systems, radio and television tuners, home heating and cooling
systems, cellular telephones and countless other products. Their use is
also extensive on manufacturing lines for automation and robotics.
Engineers are frequently called upon to design or maintain the
communication and control systems that employ microcomputers and
microprocessing devices. The students in this course will experience a
real-world product development cycle by designing and creating software
and hardware products using assembly language and “c” language
compilers, and testing and debugging in an integrated development
environment. The final project will involve a free-running 68HC12 device.

Implementation Date: Spring, 2004.

ENGR 448 Software Engineering (2 hours lecture, 3 hour lab) 3 Cr. Hrs.
An introduction to software engineering principles, with emphasis on
the methods, processes, tools, and metrics needed to develop quality
software products and systems. Prerequisites: ENGR 347
Microcomputer Engineering or Consent of Instructor.

Rationale: Software has become an integral part of the engineering career field.
In every engineering discipline, software applications are used to perform
complex calculations, time and cost estimates, and system simulations.
Most engineering graduates will use these applications and a large
percentage will create these applications using knowledge gained in their
particular area of emphasis. For example, a civil engineer may be asked to
develop a simulation of an urban drainage system; a mechanical engineer
may need to simulate the compression of a shock absorber. For these tasks,
it is essential to have exposure to the accepted methods for creating quality
software products. It is also necessary to know the types of metrics involved
in determining the level of quality in a software product. The students in this
course will experience a real-world product development cycle by designing
and creating a product model, participating in product review meetings, and
functioning within a product development team.

Implementation Date: Spring, 2004.

ENGR 463 Heat Transfer 3 Cr. Hrs.
An investigation into heat transfer and the formulation of the fundamental
principles and laws that govern conduction, convection, and radiation for
both steady state and transient conditions with their application in the
analysis and design of actual processes and heat exchangers.
Prerequisites: MATH 433, ENGR 225 and ENGR 375.

Rationale: Heat and its transfer are very important issues that are involved in
many aspects of human life. It is essential to anyone in a technical field,
especially engineers, to have a fundamental understanding of the basic
concepts of heat transfer, its specialized terms, and foster an ability to
conduct engineering computations in both analysis and design.

Implementation Date: Fall, 2004.

GENS 199 Select Topics in Study Strategies 1 Cr. Hr.
This course focuses on an intensive study of specialized topics in study
strategies including Vocabulary, Speed Reading, and PRAXIS
Preparation. Course is open to all students and repeatable with change
in course content. Prerequisites: None.

Rationale: Currently GENS 105, College Study Strategies, offers students an
overview of approaches to the challenges and demands of being a
college student. It does not, however, exhaust the range of study
strategies students should consider, and it does not allow for in-depth
skill development. Thus, we are proposing GENS 199, Select Topics
in Study Strategies, to provide students with classes that allow them to focus on one skill at a time. For example, vocabulary development is an ongoing problem for students in every class they encounter, yet they often don’t appreciate the impact that understanding the class jargon has on learning the concepts. The select topic of Advancing Vocabulary would focus on strategies to deal with new vocabulary in any class.

In addition to developing special topics for the general student population, GENS 199 gives Academic Skills the opportunity to collaborate with departments and faculty so that students who need particular study strategies can be helped. This has already begun with the development of a section of GENS 105 for education students who need to prepare for the PRAXIS. It is confusing, however, for both students and advisors to distinguish that a particular section is restricted to a particular group of students. GENS 199 would alleviate that confusion by being labeled as a select topic: PRAXIS Preparation.

Finally, GENS 199 would offer students a variety of topics they could take based on interest. Speed Reading, for instance, is a class that students often request in Academic Skills. As the student population continues to grow and diversify, we will have an avenue through which to address changing needs.

Implementation Date: Spring, 2004.