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# University Course Review Committee

**Agenda**

**Meeting # 252**

# January 23, 2012 Tobin Rm, Knight Hall

# 10:00 AM

**Present: Bruce Cameron, Kent Drummond, Audrey Shalinsky, David Whitman, Rex Gantenbein, Suzanne Young, Jacquelyn Bridgeman, Tammy Aagard**

## Part I – Consent Agenda

* ***College of Agriculture and Natural Resources***

**MOLB/CHEM**

**3610 PRINCIPLES OF BIOCHEMISTRY, 4 hr.**

 ***Current Course Description and Prerequisites*:** For students who desire a thorough study of biological systems chemistry from a physical and physical organic approach, but who do not have a background in physical chemistry. Biochemical systems of living organisms are examined in terms of basic chemical concepts. No credit if credit earned in MOLB 4600. Cross listed with CHEM 3610.

 *Prerequisite*: LIFE 1000 or 1010, and CHEM 2300.

 ***Requested Change of Course Description, Prerequisites and Drop Cross Listing*:** One-semester biochemistry course for life-, health- and physical-science students. Introduces a full range of biochemical concepts including discussion of major macromolecules, metabolism, and molecular biology. Credit cannot be earned in MOLB 3610 and MOLB 4600 or MOLB 4610. (Normally offered fall and summer semesters).

 *Prerequisite*: LIFE 1010 and a grade of C or better in CHEM 2300 or 2440.

 Remove Cross List with CHEM 3610 and discontinue.

***Action Taken:*** Approved.

**MOLB**

**4050/5050 STUDENT SEMINAR, 1 (MAX 4) hrs.**

 ***Current Course Description and Prerequisites*:** Examines selected topics appearing in journal literature with oral presentation and discussion. Exposes undergraduate students to current research in molecular biology. Dual listed with MOLB 5050.

 *Prerequisite*: molecular biology course.

 ***Requested Change of Course Description, Prerequisites for 4050:*** Exposes students to current topics in molecular biosciences and examines primary journal literature with oral presentations and class discussions. S/U only. (Normally offered fall and spring semesters.)

*Prerequisite*: MOLB 3000 and 3610 or 4600.

 ***Requested Change of Title, Credit Hours, Course Description and Prerequisites for 5050:*** Advanced Student Seminar. 2 (MAX 8) hrs. Introduction of reading, analyzing, and discussing primary sources in scientific literature. Read primary research papers, give presentations with full participation in critical discussions of data and interpretations of all journal articles analyzed. Papers chosen for review are typically related to research of Molecular Biology Departmental Seminar Series speakers. S/U only. (Normally offered fall and spring semesters).

*Prerequisite*: MOLB 3000 and 3610 or 4600.

***Action Taken:*** Approved.

**MOLB**

**4051/5051 DEPARTMENTAL SEMINAR, 1 (MAX 5) hrs.**

 ***Current Course Description and Prerequisites*:** Students are required to attend a series of weekly seminars presented by faculty from other universities on a diverse set of research topics. Undergraduates will be able to use one credit hour of this course to partially fulfill the seminar requirement. Offered S/U only. Dual listed with MOLB 5051.

 *Prerequisite*: None.

 ***Requested Change of Course Description and Prerequisites:*** Attend a series of weekly seminars on a diverse set of research topics presented by visiting faculty or research scientists and will participate in a discussion following the seminar. S/U only. (Normally offered fall and spring semesters).

 *Prerequisite*: MOLB 3000 or 3610 or 4600.

***Action Taken:*** Approved.

**MOLB**

**4100 CLINICAL BIOCHEMISTRY, 3 hr.**

 ***Current Course Description and Prerequisites*:** Discusses biochemical principles underlying human health and disease. Relates molecular mechanisms and the associated chemical and enzymatic alterations to normal and abnormal clinical conditions.

 *Prerequisite*: MOLB 3610 or 4610 concurrently.

 ***Requested Change of Course Description and Prerequisites:*** An integrated discussion of biochemical, molecular, and physiological principles underlying human medical disorders and the biochemical and molecular genetic tests used in prevention, diagnosis and treatment. (Normally offered spring semester.)

 *Prerequisite*: MOLB 3610 or 4600.

***Action Taken:*** Approved.

**MOLB**

**4170/5170 CLONING AND DNA SEQUENCE LABORATORY, 1 hr.**

 ***Current Course Description and Prerequisites*:** Introduces cloning and DNA sequencing. Dual listed with MOLB 5170.

 *Prerequisite*: MOLB 3610 or 4600.

 ***Requested Change of Course Title, Course Description, and Prerequisites*:**

DNA Cloning Laboratory. Introduces molecular genetic engineering strategies and methodologies in a 5-week laboratory. (Normally offered spring semester.)

*Prerequisite*: MOLB 3000 or 3610 or 4600.

***Action Taken:*** Approved.

**MOLB**

**4180/5180 PROTEIN ISOLATION AND CHARACTERIZATION LABORATORY, 1 hr.**

 ***Current Course Description and Prerequisites*:** Protein isolation using HPLC techniques followed by limited chemical characterization. Dual listed with MOLB 5180.

 *Prerequisite*: MOLB 3610 or 4600.

 ***Requested Change of Course Description and Prerequisites:*** Strategies and methodologies used in protein isolation and characterization are presented and coordinated with a 5-week laboratory. Normally offered spring semester.

 *Prerequisite*: MOLB 3000 or 3610 or 4600.

***Action Taken:*** Approved.

**MOLB**

**4440/5440 MICROBIAL GENETICS, 3 hrs.**

 ***Current Course Description and Prerequisites*:** Introduction to reading the molecular genetics literature. Discusses historical background and current literature. Dual listed with MOLB 5440; cross listed with MICR 4440. *Prerequisites*: MOLB 2021, MOLB 3610, or 4610, BIOL 3050 or consent of instructor. (Normally offered fall semester).

 ***Requested Change of Course Description and Prerequisites:*** Discusses microbial genetic approaches to study cell function and provides a molecular foundation for understanding how genes work to elicit phenotypes. Dual listed with MOLB 5440; cross-listed with MICR 4440. (Normally offered spring semester.)

 *Prerequisites*: MOLB 2021 and 3000 and LIFE 3050.

***Action Taken:*** Approved.

**MOLB**

**4450/5450 CELL AND DEVELOPMENT GENETICS, 3 hrs.**

 ***Current Course Description and Prerequisites*:** Integrates the genetic control of cell regulation and animal development in both vertebrate and invertebrate model systems such as Drosophila, C. elegans and the mouse. Includes studies of eukaryotic signal transduction, gene control, and current transgenic technologies.

 *Prerequisites*: MOLB 3000 and 4610 or concurrent enrollment, or MOLB 3000 and MOLB 3610.

 ***Requested Change of Prerequisites:*** MOLB 3000 and 4610, or consent of instructor.

***Action Taken:*** Approved.

**MOLB**

**4600/5600 GENERAL BIOCHEMISTRY I, 3 hrs.**

 ***Current Course Description and Prerequisites*:** First course of comprehensive two-semester sequence for all biological and physical science majors. Students wishing to acquire laboratory experience in biochemistry should enroll in Molecular Biology laboratory pods. Dual listed with MOLB 5600.

 *Prerequisites*: CHEM 2300 or CHEM 2340 or 2440. (Normally offered fall semester.)

 ***Requested Change of Course Description and Prerequisites:*** First course of a comprehensive two-semester sequence for biological and physical science majors. Introduction to chemical and thermodynamic basis of enzyme structure and enzyme-catalyzed biochemical reactions. Description and regulatory basis for key metabolic pathways is also emphasized. Credit cannot be earned in both MOLB 4600 and MOLB 3610. Dual listed with MOLB 5600. (Normally offered fall semester.)

 *Prerequisites*: LIFE 1010 and MOLB 3000 and a grade of C or better in CHEM 2300 or 2440.

***Action Taken:*** Approved.

**MOLB**

**4610/5610 GENERAL BIOCHEMISTRY II, 3 hrs.**

 ***Current Course Description and Prerequisites*:** Second course of comprehensive two-semester series for molecular biology majors. Dual listed with MOLB 5610. *Prerequisite*: MOLB 4600.

 ***Requested Change of Course Description and Prerequisites:*** Second course of comprehensive two-semester series for majors in molecular biology or other life or physical sciences. Explores the biochemistry of cell function including information transfer, protein metabolism, signaling and assembly of macromolecular complexes. Credit cannot be earned in both MOLB 4610 and MOLB 3610. Dual listed with MOLB 5610. (Normally offered spring semester).

 *Prerequisite*: LIFE 1010, grade of C or better in CHEM 2300 or 2440, and MOLB 3000 or 4600.

***Action Taken:*** Approved.

**MOLB**

**4660/5660 MAINTENANCE AND FLOW OF GENETIC INFORMATION: A MOLECULAR PERSPECTIVE, 3 hrs.**

 ***Current Course Description and Prerequisites***: Current research in the maintenance and flow of genetic information - replication, recombination, repair, transcription, and translation - are discussed. Students are exposed to new knowledge of DNA and protein structure and function, organization of the genome, gene expression, and principles of contemporary experimental methods. Dual listed with MOLB 5660.

 *Prerequisites*: MOLB 3000 or MOLB 4610.

 ***Requested Change of Title, Course Description and Prerequisites:*** Flow of Maintenance of Molecular Genetic Information. Introduction to current research in the flow and maintenance of genetic information, including discussions of transcription, translation and DNA replication, recombination and repair. New advances in understanding DNA and protein structure and function, genome organization, and gene expression are explored as well as principles of contemporary experimental methods.

 *Prerequisites*: MOLB 3000 and 3610 or 4610.

***Action Taken:*** Approved.

**MOLB**

**4850 UNDERGRADUATE TEACHING INTERNSHIP, 0-1 (MAX 3) hrs.**

 ***Current Course Description and Prerequisites*:** Supervised participation of undergraduates in the teaching of courses offered by the molecular biology department.

 *Prerequisites*: junior standing and consent of supervising instructor.

 ***Requested Change of Credit Hours, Course Description and Prerequisites:***

 0-1 (MAX 4) hrs. Undergraduate student will assist in classroom or laboratory teaching under the guidance of an instructor in Molecular Biology. S/U only.

 *Prerequisites*: Junior standing and consent of instructor.

***Action Taken:*** Approved.

**MOLB**

**4990 TOPICS IN:, 0-1 (MAX 3) hrs.**

 ***Current Course Description and Prerequisites*:** Lectures, literature reviews and discussion of selected current topics in different areas of molecular biology. Please check class schedule for current offerings each semester.

 *Prerequisites*: MOLB 3610 or 4610.

 ***Requested Change of Credit Hours and Prerequisites:*** 0-1 (MAX 6) hrs.

 *Prerequisites*: MOLB 3000 or 3610 or 4600.

***Action Taken:*** Approved.

**MOLB**

**5010 PROBLEMS IN MOLECULAR BIOLOGY, 1-3 (MAX 6) hrs.**

 ***Current Course Description and Prerequisites*:** Introduces the graduate and undergraduate student to biochemical literature, scientific reports, and introductory research. Introduces graduate molecular biology students to the teaching process.

 *Prerequisite*: courses in molecular biology and related areas necessary to pursue problems selected; consent of instructor.

 ***Requested Change of Title, Credit Hours, Course Description and Prerequisites:*** Advanced Laboratory Research in Molecular Biology. 1-3 (MAX 18) hrs. Students in PhD, MS and MA programs in Molecular Biology and doctoral students in the Molecular and Cellular Life Sciences (MCLS) graduate program, work in laboratory or computational research projects under the guidance of a Molecular Biology faculty member.

 *Prerequisite*: Graduate standing and consent of instructor.

***Action Taken:*** Approved.

**MOLB**

**5520 ADVANCED PROBLEMS IN MOLECULAR BIOLOGY, 1-3 (MAX 10) hrs.**

 ***Current Course Description and Prerequisites*:**

*Prerequisite***:** 6 semester hours above MOLB 4610 and consent of instructor.

 ***Requested Change of Title, Credit Hours, Course Description and Prerequisites:*** Molecular and Cellular Life Sciences Laboratory Rotations. 3 (MAX 6) hrs. Laboratory research rotations for first year Molecular and Cellular Life Sciences (MCLS) students in the doctoral program.

 *Prerequisite***:** Enrollment in the Molecular and Cellular Life Sciences (MCLS) program.

***Action Taken:*** Approved.

**MOLB**

**5630 ADVANCED TOPICS IN MOLECULAR BIOLOGY, 1-3 (MAX 15) hrs.**

 ***Current Course Description and Prerequisites*:** Lectures, literature reviews and discussion of selected current topics in different areas of microbiology. Please check class schedule for current offerings each semester.

 *Prerequisite*: 9 hours of molecular biology and consent of instructor.

 ***Requested Change of Credit Hours, Course Description and Prerequisites:*** 1-3 (MAX 6) hrs. Lectures, literature reviews and discussion of selected current topics in molecular biology. Please check class schedule for current offerings each semester.

 *Prerequisite*: MOLB 3000 or 3610 or 4600.

***Action Taken:*** Approved.

* ***College of Business***

**ECON**

**5350 ADVANCEDECONOMETRIC THEORY I, 3 hrs.**

 ***Current Course Description and Prerequisites*:** Covers important topics in advanced econometric analysis such as: (1) cross-section time series pooling; (2) the concept of maximum likelihood, maximum likelihood methods, and computer algorithms; (3) selection of regressors, use of prior information, and Bayesian analysis; (4) qualitative or limited dependent variables; (5) unobservable variables; and (6) the use of nonsample information.

 *Prerequisites*: ECON 5340 and MATH 4450 or STAT 4020.

 ***Requested Change of Course Description and Prerequisites:*** Review topics in probability theory and mathematical statistics. The course will also provide an introduction to the classical linear regression model, estimation, hypothesis testing, and prediction.

 *Prerequisites*: Calculus and Basic Statistics.

***Action Taken:*** Approved.

**ECON**

**5360 ADVANCED ECONOMETRICONTHEORY II, 3 hrs.**

 ***Current Course Description and Prerequisites*:** Provides more in-depth coverage of topics covered in ECON 5340 and ECON 5350 such as limited dependent variables, simultaneous systems, and Bayesian analysis. Additional topics will be selected based on students' research interests. Possible topics include: time series analysis, methods of estimating nonlinear models, specification, errors in variables, variable parameter models, and causality.

 *Prerequisites*: ECON 5340 and 5350.

 ***Requested Change of Course Description and Prerequisites:*** Continue the analysis in ECON 5350 and cover topics such as panel data, limited-dependent variables, simultaneous systems, nonlinear models, Bayesian analysis, and time series methods.

 *Prerequisites*: ECON 5350.

***Action Taken:*** Approved.

**ECON**

**5370 SEMINAR IN ADVANCED ECONOMICS, 1-3 (MAX 9) hrs.**

 ***Current Course Description and Prerequisites*:** An advanced tutorial-conference course intended to give graduate students experience in research in economic problems.

 *Prerequisite*: consent of instructor.

 ***Requested Change of Title, Course Description and Prerequisites:***

Advanced Econometric Theory III. More in-depth coverage of topics in ECON 5350 and 5360. Topics will be selected based on current advancements in econometrics and students’ research interests. Topics may include generalized method of moments (GMM), nonparametric estimation, state-space models and the Kalman filter, mixed and nested logit models, multinomial discrete-choice models, and simulated maximum likelihood.

 *Prerequisite*: ECON 5360.

***Action Taken:*** Approved.

* ***College of Education***

**EDEC**

**4320 ORAL/WRITTEN LANGUAGE ACQUISITION, 3 hrs.**

 ***Current Course Description and Prerequisites*:** Introduces the student to the nature of language development as it pertains to oral and written communication in education. Recent research in the areas of oral and written language acquisition is compared and contrasted. Implications for facilitating the development of all language models in educational settings is emphasized.

 *Prerequisites*: EDST 2480 and junior class standing with declared major in Elementary Ed or Family and Consumer Sciences, and EDEL 2280.

 ***Requested Change of Prerequisites:*** EDST 2480 or equivalent, Junior standing and declared Elementary Education or Family and Consumer Sciences major.

***Action Taken:*** Approved.

* ***College of Engineering and Applied Science***

**ATSC**

**5007 PROBLEMS IN SYNOPTIC METEROLOGY, 1 hr.**

 ***Current Course Description and Prerequisites*:** Laboratory supplement to ATSC 5160. Analysis of weather systems using operational observations and numerical model output. Real-time weather briefings. Numerical simulation of select weather phenomena.

 *Prerequisite*: ATSC 5160 or concurrent enrollment.

 ***Requested Change of Adding a Dual list and Prerequisites:*** ATSC 4007.

 *Prerequisite*: ATSC 4130, 5130; 4160, 5160 or concurrent enrollment and permission of instructor.

***Action Taken:*** Approved.

**ATSC**

**5008 MESOSCALE METEROLOGY, 2 hrs.**

 ***Current Course Description and Prerequisites*:** Mesoscale energy sources, including symmetric instability. Fronts, frontogenesis, and frontogenetic circulation. Surface fronts and cold fronts aloft. Orographically modified flow and boundary-layer circulations. Shallow and deep convection and mesoscale organized convection. Effects of buoyancy, shear and cold pool-shear interaction on the structure and longevity of thunderstorms.

 *Prerequisites*: ATSC 5160 and ATSC 5007.

 ***Requested Change of Adding a Dual list and Prerequisites:*** ATSC 4008.

 *Prerequisites*: ATSC 4007, 4160, 5007, 5160 and permission of the instructor.

***Action Taken:*** Approved.

**ATSC**

**5160 SYNOPTICY METEROLOGY, 2 hrs.**

 ***Current Course Description and Prerequisites*:** Structure and evolution of the extratropic cyclone, identification and development of fronts, jet streams and associated weather features; theories of cyclogenesis; role of topography. Climatology of formation and movement of a cyclone. Mesoscale circulation features; ingredients of severe weather.

 *Prerequisite*: ATSC 5001, 5003, 5100 and 5004.

 ***Requested Change of Adding a Dual list and Prerequisites:*** ATSC 4160.

 *Prerequisite*: ATSC 4031, 5001, 5003, 5100, 5004 5031 and permission of instructor.

***Action Taken:*** Approved.

* ***Other***

**ENR**

**4700/5700 NEGOTIATION ANALYSIS, 3 hrs.**

 ***Current and Requested Course Description and Prerequisites*:** Focuses on using an analytical perspective for maximizing joint gains between negotiators. The student will learn analytical techniques to prepare for negotiation, evaluate options and proposals during a negotiation, and evaluate negotiated outcomes with respect to maximization of joint gains and fairness criteria.

 *Prerequisites:* Completion of QA.

 ***Justification*:** The course uses economic theory to analyze negotiation positions and outcomes and is a companion course to AGEC 4450/5450, Negotiations.

 ***Requested Change of Adding a Cross and Dual list:*** AGEC 4700/5700 already exists, for this reason, ENR 4700/5700 will be discontinued and the new dual/cross listed course will be ENR/AGEC 4550/5550.

***Action Taken:*** Approved.

##  Part II – Consent Agenda

##  Courses for Discontinue

* ***College of Arts and Sciences***

**PSYC/STAT/ZOO**

**5050 STATISTICAL METHODS FOR BIOLOGICAL AND BEHAVIORAL SCIENCES, 3 hrs.**

 ***Current Course Description and Prerequisites*:** General statistical analyses and their application to the biological and behavioral sciences. Analysis of variance, regression and correlation methods are studied from a data analytic perspective, emphasizing the conceptual understanding of where and when these techniques should be used and the interpretation of their results. Available computer programs will be utilized. Credit cannot be earned in more than one of the following courses: STAT 2020, 3050, 5050, 5060 5070. Identical to ZOO 5050. *Prerequisite*: one course in statistics (all introductory courses except 2000).

 **(STAT and ZOO 5050 will remain).**

***Action Taken:*** Approved.

## Part III – Regular Agenda

## Courses for Addition

* ***College of Agriculture***

**MOLB**

**4010 LABORATORY RESEARCH IN MOLECULAR BIOLOGY, 1-3 (MAX 12) hrs.**

 ***Proposed Course Description and Prerequisites*:** Undergraduate student will conduct a laboratory or computational research project under the guidance of a Molecular Biology Department faculty member, who will serve as the student's research adviser.

 *Prerequisite*: LIFE 1010 or concurrent enrollment, and consent of instructor.

 ***Justification*:** Undergraduate students participating in research projects in the Department of Molecular Biology have been enrolling in 5000-level Problems classes to receive credit for undergraduate research projects. We propose to have undergraduate students enroll in MOLB 4010 for credit for undergraduate laboratory research specifically. Choice of the credit hours enrolled (1 to 3) will depend on the extent of the laboratory experience mutually agreed upon by the student and research mentor. A 12-credit hour maximum is proposed to allow students to participate in research projects during several semesters of their undergraduate education.

***Action Taken:*** Approved.

**MOLB**

**5521 MOLECULAR AND CELLULAR LIFE SCIENCES CORNERSTONE, 1 hr.**

 ***Proposed Course Description and Prerequisites*:** Introduction for students in the Molecular and Cellular Life Sciences program to graduate school and research. Exposes students to diverse faculty research programs and elements fundamental to successful graduate and scientific careers, including scientific publishing, grants, careers, intellectual property, and ethical expectations. S/U only. Normally offered fall semester.

 *Prerequisite*: Enrollment in the Molecular and Cellular Life Sciences doctoral program.

 ***Justification*:** This introductory course for the doctoral students in the Molecular and Cellular Life Sciences program has been taught previously as a section of a graduate topics course, MOLB 5630. We propose to offer this MCLS cornerstone course under a separate number to clarify the content of this course for the students.

***Action Taken:*** Approved.

* ***College of Arts and Sciences***

**MUSC**

**4700 ELEMENTARY STUDENT TEACHING IN MUSIC, 8 hrs.**

 ***Proposed Course Description and Prerequisites*:** The final professional academic semester of the teacher education program. A full-time residency with an elementary mentor teacher. S/U.

 *Prerequisites*: 2.75 cumulative GPA, 3.0 GPA in major content courses, completion of all content courses, successful completion of Phase IIIa specific pedagogy and practicum, complete review of the prospective teacher's record.

 ***Justification*:** Music is taking over responsibility for student teaching from College of Education. This is the course for elementary student teaching in music. Students currently are registered for EDEL 4500. That course will continue for College of Education students.

***Action Taken:*** Approved.

**MUSC**

**4710 SECONDARY STUDENT TEACHING IN MUSIC, 8 hrs.**

 ***Proposed Course Description and Prerequisites*:** The final professional academic semester of the teacher education program. A full-time residency with a secondary mentor teacher. S/U.

 *Prerequisites*: 2.75 cumulative GPA, 3.0 GPA in major content courses, completion of all content courses, successful completion of Phase IIIa specific pedagogy and practicum, complete review of the prospective teacher's record.

 ***Justification*:** Music is taking over responsibility for student teaching from College of Education. This is the course for secondary student teaching in music. Students currently are registered for EDSE 4500. That course will continue for College of Education students.

***Action Taken:*** Approved.

* ***College of Business***

**ECON**

**5890 SEMINAR IN ADVANCED ECONOMICS, 1-3 (MAX 9) hrs.**

 ***Proposed Course Description and Prerequisites*:** An advanced tutorial- conference course intended to give graduate students experience in research in economic problems.

*Prerequisites*: Consent of instructor.

 ***Justification*:** Our PhD program is designed to train students in the area of applied microeconomic theory. While the microeconomic theory sequence and field courses are on par with many of the top programs in the country, our econometrics sequence has fallen behind. To maintain competitiveness with other top graduate programs, we propose modifying our econometrics sequence. The new sequence will add an introductory review of mathematical statistics and a third course of advanced econometric topics. A new seminar number needs to be added because of the changes.

***Action Taken:*** Approved.

* ***College of Education***

**EMAT**

**5100 THEORY AND RESEARCH FOR MATHEMATICAL LEARNING, 3 (MAX 6) hrs.**

 ***Requested Course Description and Prerequisites:*** Advanced study of theory and research related to learning of mathematics, with attention to significant human mental development factors. This course critically examines the scholarly basis for mathematical learning, including reviews of epistemological foundations, research-based factors, core issues, and advocacies for educational practices.

*Prerequisites:* Enrollment in Mathematics Education Ph.D. specialization or permission of the instructor.

 ***Justification*:** This is a new course designed for Ph.D. students enrolled in the Mathematics Education specialization of the C&I doctoral program. The new approved prefix is used. This course has been taught once as EDCI 5700 prior to the approval of the new prefix. This course will prepare future scholar/teachers in Mathematics Education with the critical epistemological and psychological knowledge base related to human learning and development. Extensive reviews of both historical and contemporary theories and research will be emphasized, leading to competencies for conducting research in this important domain of our field.

***Action Taken:*** Approved.

**EMAT**

**5200 ADVANCED STUDY OF MATHEMATICS CURRICULUM, ASSESSMENT AND EVALUATION, 3 (MAX 6) hrs.**

 ***Requested Course Description and Prerequisites:*** Advanced study of theory, research and practices related to curriculum, assessment and evaluation in mathematics education. This course critically examines the historical and contemporary influences on these, including mathematical, philosophical, psychological, pedagogical, social and political forces and factors.

 *Prerequisites:* Enrollment in Mathematics Education Ph.D. program or permission of the instructor.

 ***Justification*:** This is a new course designed for Ph.D. students enrolled in the Mathematics Education specialization of the C&I doctoral doctoral program. The new approved prefix is used. This course has been taught once as EDCI 5070 prior to the approval of the new prefix. This course will prepare future scholar/teachers in Mathematics Education with the critical knowledge base related to mathematics curriculum, assessment and evaluation practices. Extensive reviews of both historical and contemporary theories and research will be emphasized, leading to competencies for conducting research and professional development programs.

***Action Taken:*** Approved.

**EMAT**

**5300 THEORY AND PRACTICE FOR MATHEMATICS TEACHING AND TEACHER EDUCATION, 3 hrs.**

 ***Requested Course Description and Prerequisites:*** Advanced study of theory and research of mathematics teaching teacher education. This course examines the scholarly basis for current rationales and practices, including a critical review of evidential effectiveness, core issues, and advocacies for reform. A major emphasis will include analysis and critique of significant theoretical and research literature.

 *Prerequisites:* Enrollment in Mathematics Education Ph.D. program or permission of the instructor.

 ***Justification*:** This is a new course designed for Ph.D. students enrolled in the Mathematics Education specialization of the C&I doctoral doctoral program. The new approved prefix is used. This course has been taught once under the EDCI prefix prior to the approval of the new prefix using a "Trends in" number (EDCI 5070). This course will prepare future teacher educators in mathematics to work with pre- and in-service teachers in mathematics education. Theory and research related to mathematics teacher preparation and continuing professional development will be emphasized, leading to competencies for conducting research in this domain.

***Action Taken:*** Approved.

**EMAT**

**5400 ANALYSIS AND CRITIQUE OF RESEARCH IN MATHEMATICS EDUCATION, 3 hrs.**

 ***Requested Course Description and Prerequisites:*** Both theoretical and empirical research and scholarship in the field of mathematics education are critically analyzed. Students will develop a deep understanding of pivotal historical and contemporary literature that helped shape the field of mathematics education and begin a formative development of their research interests.

 *Prerequisites:* Enrollment in Ph.D. program or permission of the instructor, and satisfactory completion of at least two from EMAT 5100, EMAT 5200, or EMAT 5300.

 ***Justification*:** This is a new course designed for doctoral students enrolled in the Mathematics Education specialization of the C&I doctoral program to help prepare them to be researchers. The new prefix, EMAT (Education Mathematics) is therefore used. This course has been taught twice under the EDCI prefix of 5870 prior to the approval of the new prefix. This required course will prepare doctoral students to know the seminal literature in the field of mathematics education in preparation for developing their dissertation prospectus. Emphasis will be placed on publications of expemplary empirical studies and key fundamental theoretical frameworks.

***Action Taken:*** Approved.

**LTED**

**5840 RESEARCH IN LITERACY EDUCATION WITH DIVERSE POPULATIONS, 3 hrs.**

 ***Requested Course Description and Prerequisites:*** Examines historical and current research on literacy practices with diverse students including African American, Latino, American Indian/Alaska Native, and English Language Learners of many cultures and linguistic groups.

 *Prerequisites:* Graduate student status.

 ***Justification*:** This is a Literacy PhD Program course focusing on research that addresses literacy theory and practice with diverse students including African American, Latino, American Indian/Alaska Native, and English Language Learners of many cultures and linguistic groups.

***Action Taken:*** Approved.

* ***College of Engineering***

**COSC**

**3750 LINUX PROGRAMMING FOR SYSTEM APPLICATIONS, 3 hrs.**

 ***Requested Course Description and Prerequisites:*** Provide the necessary tools and skills to begin programming effectively on UNIX and Linux operating systems. Topics will include, shells and basic shell scripting, Linux utilities, editors, compilation, I/O and the file system, sockets and interprocess communication, and time permitting, threads.

 *Prerequisites:* COSC 3020.

 ***Justification*:** Our students need more exposure to Operating Systems other than Windows, not only as part of program that attempts to prepare them for positions in industry but as a requirement for ABET accreditation of our Computer Science program. As part of the exposure, they need to understand not only the user interface of the operating system but how to interact with it at a level that allows them to design, create, modify, update, and debug programs written for/on alternative systems. Linux is the most prevalent alternative to Windows and is used in many facets of IT and Computer Science including high performance computing, distributed computing, and networking. Microsoft uses Linux-based web servers and Mac OSX is a UNIX derivative. This course is designed to be an introduction to programming on Linux to fill the department's current needs and better prepare our graduates for their futures in the computing profession.

***Action Taken:*** Approved.

**Part IV**

**Tabled Courses**

**CHE/PETE**

**5355 MATHEMATICAL METHODS IN CHEMICAL ENGINEERING, 3 hrs.**

***Requested Course Description and Prerequisites:*** Covers mathematical modeling: conservation laws and constitution relationships; partial differential equations (PDEs): the types and analytical solution techniques; applied linear algebra; matrices and Eigen-analysis; numerical solution techniques: finite difference and finite element methods, Newton-Raphson method, and temporal discretization techniques, and linear solution techniques: direct and iterative methods. *Prerequisites:* MATH 2210, CHE/PETE 3025 or equivalent.

***Justification:*** This course is required of all graduate students in chemical and petroleum engineering. It has been taught under the topics number CHE 5150 since Fall 2007 and should be given a permanent course number.

 ***Clarification*:** This course was tabled for no justification and an incomplete syllabus. A new CARF and syllabus have been submitted.

 ***Action Taken:*** Removed from Table andApproved.