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# University Course Review Committee

**Minutes**

**Meeting # 274**

# March 25, 2015 Tobin Room, Knight Hall

# 2:00 PM

**Present:**  Bruce Cameron, Audrey Shalinsky, Lane Buchanan, Dave Whitman, Leslie Rush, Kent Drummond, Rex Gantenbein, Pam Henderson, Veronica Jordan, and Reed Skull.

## Part I – Course Modifications (Consent Agenda)

* ***College of Agriculture***

**AECL/PLNT**

**4190/**

**5190 HERBS, SPICES AND MEDICAL PLANTS,**

***Current Course Description and Prerequisites:*** Includes the history and importance of HSMP, collection of medicinal plants in the wild, botany, chemistry, greenhouse and field production, organic production, harvesting, drying, and postharvest operations, legal aspects of HSMP and their products.

***Prerequisites:*** 8 hrs. LIFE and/or CHEM.

***Cross Listed:***  AECL 4190, PLNT 4190, AECL 5190, and PLNT 5190.

***Proposed Course Description:*** Includes the history and importance of herbs, spices, and medicinals; collection of these plants in the wild; botany; chemistry; greenhouse and field production; organic production; harvesting; drying; postharvest operations; legal aspects; and products.

***Proposed Prerequisites:*** 8 hrs. LIFE and/or CHEM.

***Proposed Cross Listed:*** PLNT 4190, PLNT 5190.

**Action Taken:** Approved.

**FCSC**

**4970 TEXTILES AND MERCHANDISING INTERNSHIP, 6 to 8 hrs. (max. 8)**

***Current Course Description and Prerequisites:*** Provides practical experience in retail, interior design or apparel design settings.

***Prerequisites:*** FCSC 3173.

***Proposed Course Title:***  DESIGN AND MERCHANDISING INTERSHIP

***Proposed Credit Hours:*** 3 hrs. (max. 6)

***Rational:*** We have not previously required students to participate in an internship experience. Beginning with incoming freshman in fall 2015 either an internship, an international field study or study abroad will be required. The current internship is 6-8 credits (which can be a financial burden. The internship credit hours is being changed to 3 to bring it in line with the existing Textiles Field Study in which students travel to a foreign country every other year during the summer.

**Action Taken:** Approved.

* ***College of Arts & Sciences***

**ART**

**1110 FOUNDATION: TWO DIMENSIONAL, 3 hrs.**

***Current Course Description and Prerequisites:*** First in a sequence of three foundation courses that investigate the fundamentals of design. Basic aesthetic/formal concepts and conceptual approaches are covered through a variety of two-dimensional mediums. Structured critiques are employed to provide students the experience of assessing formal, conceptual, and technical aspects of art. (Normally offered fall semester)

***Prerequisite***: none

***Proposed change of Course Description:*** First in a sequence of three foundation courses that investigate the fundamentals of design. Basic aesthetic/formal concepts and conceptual approaches are covered through a variety of two-dimensional mediums. Structured critiques are employed to provide students the experience of assessing formal, conceptual, and technical aspects of art.

**Action Taken:** Approved.

**ART**

**1120 FOUNDATION: THREE DIMENSIONAL, 3 hrs.**

***Current Course Description and Prerequisites:*** Second in a sequence of three foundation courses that investigate the fundamentals of design. Basic aesthetic/formal concepts and conceptual approaches are covered through a variety of three-dimensional mediums. Structural form is emphasized in various contextual settings. Structured critiques are employed to provide students in the experience of assessing formal, conceptual, and technical aspects of art. (Normally offered spring semester)

***Prerequisites:*** none.

***Proposed change of Course Description:*** Second in a sequence of three foundation courses that investigate the fundamentals of design. Basic aesthetic/formal concepts and conceptual approaches are covered through a variety of three-dimensional mediums. Structural form is emphasized in various contextual settings. Structured critiques are employed to provide students in the experience of assessing formal, conceptual, and technical aspects of art.

**Action Taken:** Approved.

**ART**

**2030 HISTORY OF GRAPHIC DESIGN, 3 hrs.**

***Current Course Description and Prerequisites:*** History of graphic language and evolution of graphic communication. Includes an extensive examination of the social forces that shaped the design profession and how in turn design has shaped society. The theories that moved designers to act to remake society are also considered. Prerequisites: HIST 1110, 1120, 1320, or 1330 or any of the following: ANTH 1200, 1300, 1450; MUSC 1000; RELI 1000; THEA 1000; HP 1020, 1151; ARE 3030; and successful completion of WA or COM1

***Prerequisites:*** ANTH 1200, 1300, 1450; MUSC 1000; RELI 1000; THEA 1000; HP 1020, 1151; ARE 3030; and successful completion of WA or COM1

***Proposed change of Prerequisite*:** No prerequisites.

**Action Taken:** Approved.

**ART**

**2112 GRAPHIC DESIGN, 3 hrs.**

***Current Course Description and Prerequisites:*** Explores techniques of graphic design preparation from concept through paste-up to the printed page, both on and off the computer. Provides knowledge of basic foundations and principals of graphic design through the solving of conceptual design problems.

***Prerequisites***: ART 1110.

***Proposed change of Prerequisite*:**  ART 1110, Foundation 2D and ART 1115, Digital Media

**Action Taken:** Approved.

**CHEM**

**4110/**

**5110 INORGANIC CHEMISTRY, 3 hrs**

***Current Course Description and Prerequisites:*** A basic course on theoretical and descriptive inorganic chemistry.

***Prerequisite:*** CHEM 2320 or 2420, and physical chemistry.

***Dual / Cross list:*** CHEM 5110.

***Proposed change of Course Description:*** A basic course on theoretical and descriptive inorganic chemistry.

***Prerequisite:*** CHEM 2420, and physical chemistry.

***Dual / Cross list:*** none. Decouple 4110/5110.

**Action Taken:** Approved.

**CHEM**

**5110/**

**4110 INORGANIC CHEMISTRY, 3 hrs**

***Current Course Description and Prerequisites:*** A basic course on theoretical and descriptive inorganic chemistry.

***Prerequisite:*** CHEM 2320 or 2420, and physical chemistry.

***Dual / Cross list:*** CHEM 4110 and CHEM 5110.

***Proposed change of Course Number:*** CHEM 5111

***Proposed change of Course Title:***  ADVANCED INORGANIC CHEMISTRY

***Proposed Dual / Cross list:*** none

**Action Taken:** Approved.

**MUSC**

**4330 BAROQUE PERIOD, 3 hrs.**

***Current Course Description and Prerequisites:*** Studies origins of Baroque literature. For graduate credit, students must present extra paper or project determined by instructor

***Prerequisites***: MUSC 2050 and 2055.

***Proposed change of Cross Listing:*** MUSC 4330 / MUSC 5330 (creating grad level).

**Action Taken:** Approved.

**MUSC**

**4340 ROMANTIC PERIOD, 3 hrs.**

***Current Course Description and Prerequisites:*** Surveys romantic musical literature. For graduate credit, students must present extra paper or project to be determined by instructor.

***Prerequisites***: MUSC 2050 and 2055.

***Proposed change of Cross Listing:*** MUSC 4340 / MUSC 5340 (creating grad level).

**Action Taken:** Approved.

**ZOO/**

**BOT**

**4100 WRITING IN THE BIOLOGICAL SCIENCES**

***Current Course Description and Prerequisites:*** Writing intensive course for zoology, physiology, biology and botany majors. Teaches students to write in the format of biological disciplines. Cross listed with ZOO 4100. Prerequisites: WA and WB or COM1 and COM2; prior or concurrent registration in an upper division ZOO, BOT, LIFE course.

***Prerequisite:*** WA and WB or COM1 and COM2; prior or concurrent registration in an upper division ZOO, BOT, LIFE course.

***Proposed change of Course Title:***  SCIENTIFIC COMMUNCATION

**Action Taken:** Approved.

* ***College of Business***

**DSCI**

**3210 PRODUCTION AND OPERATION MANAGEMENT, 3hrs**

***Current Course Description and Prerequisites:*** An introductory course in production and operations management. Typical topics include operations strategy, quality management, facilities location, facilities layout, forecasting, inventory management, production planning, scheduling and project management. Prerequisites: IMGT 2400 or equivalent, MATH 2355 or equivalent, STAT 2010 or equivalent and advanced business standing.

***Prerequisite:*** IMGT 2400 or equivalent, MATH 2355 or equivalent, STAT 2010 or equivalent and advanced business standing.

***Proposed change of Course Title:*** INTRODUCTION TO OPERATIONS AND SUPPLY CHAIN MANAGEMENT

**Action Taken:** Approved.

* ***College of Engineering***

**ATSC**

**5040 CLIMATE SCIENCE AND CLIMATE CHANGE, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Global climate system components, and their interactions. Radiative, dynamic, thermodynamic, chemical, and feedback processes affecting the climate system. Natural and anthropogenic drivers of climate change. Past and present climate variability and sensitivity, and its simulation. Structure of climate models, their components, parameterizations, and attributes. Current climate modeling results and predictions of future climate.

***Prerequisites:*** ATSC 5001, ATSC 5002, ATSC 5100, or consent of instructor.

***Proposed change of prerequisites:*** ATSC 5001, ATSC 5016.

**Action Taken:** Approved.

**ATSC**

**5310 ATMOSPHERIC DYNAMICS II, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Introduction to the dynamic energetics of the atmosphere, wave motions, atmospheric instabilities. Introduction to numerical modeling, applications.

***Prerequisites:*** ATSC 5100.

***Proposed change of prerequisites:*** ATSC 5015.

**Action Taken:** Approved.

**ATSC**

**5330 BOUNDARY LAYER METEOROLOGY, 3 hrs.**

***Proposed Course Description and Prerequisites:*** A quantitative and descriptive study of the thermodynamics and dynamics of the planetary boundary layer, including budgets (heat, moisture, momentum, turbulent kinetic energy, radiation), stability, turbulence and turbulent fluxes, convection, terrain effects, phenomenology, and measurement and analysis techniques.

***Prerequisites:*** ATSC 5001, 5100.

***Proposed change of prerequisites:*** ATSC 5010, 5015.

**Action Taken:** Approved.

**ATSC**

**5340 RADAR METEOROLOGY, 3 hrs.**

***Proposed Course Description and Prerequisites:*** The theory of radar and the application of radars to studies of the atmosphere, including basic radar design, distributed targets, attenuation, polarization, Doppler velocities, analysis techniques, and examples of radar studies of clear air, clouds, and precipitation.

***Prerequisites:*** ATSC 5002 and 5005.

***Proposed change of prerequisites:*** ATSC 5010, 5011.

**Action Taken:** Approved.

**ATSC**

**5500 ATMOSHERIC RADIATION AND OPTICS, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Overview of atmospheric radiation, basic definitions, and basic laws of radiation. Nature of solar and terrestrial radiation, and atmospheric transmission. Derivation and analytic solutions to the equation of radiative transfer. Radiative transfer models at solar and terrestrial wavelengths, net radiation, and effects of polarization. Radiative properties of molecules, aerosols, and clouds (Rayleigh and Mie scattering). Inadvertent climate modification. Atmospheric refraction, diffraction and polarization phenomenon.

***Prerequisites:*** ATSC 5002.

***Proposed change of prerequisites:*** ATSC 5011.

**Action Taken:** Approved.

**ATSC**

**5600 ADVANCED CLOUD MICROPHYSICS, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Analysis of the processes involved in cloud and precipitation formation. Detailed treatments of the condensation, ice nucleation, vapor growth, and collection processes. Emphasis is on reviewing the current state of knowledge in the field and on surveying directions of research.

***Prerequisites:*** ATSC 5005.

***Proposed change of prerequisites:*** ATSC 5010 and ATSC 5011.

**Action Taken:** Approved.

**CE**

**4440 SOLID WASTE ENGINEERING, 3 hr.**

***Current Course Description and Prerequisites:*** Course topics include municipal solid waste characteristics and quantities, collection, landfills, processing of municipal solid waste, materials separation, combustion and energy recovery, and biochemical processes with an emphasis on materials flow. Integrated solid waste management principles are also discussed.

***Prerequisites:*** CE 3400, consent of instructor.

***Proposed Change of Prerequisites:***  CHEM 1020 and CE 3400 for CE 4440. Graduate standing for ENVE 5440.

***Proposed Cross Listing:*** ENVE 5441 SOLID WASTE ENGINEERING

**Action Taken:** Approved.

**CE**

**5425 ENVIRONMENTAL ENGINEERING MICRCOBIOLOGY, 3 hr.**

***Current Course Description and Prerequisites:*** Development of microbiology for environmental engineering applications. Introduction to bacteria, fungi, protozoa and viruses with particular focus on pathogenicity and practical metabolic capabilities for waste treatment and remediation. Also examines the basis and pathways of important biochemical reactions including nitrification, hydrogen fermentation, dehalogenation and methanogenesis

***Prerequisites:*** consent of instructor.

***Proposed change of Course Description:*** Focuses on microbial processes of interest in environmental engineering applications, including microbial corrosion; acid mine drainage; biogenic greenhouse gas emissions; biogeochemical cycling of nitrogen, phosphorus, and sulfur; microbial transformations involving iron and other metals/metalloids; anaerobic processes and syntrophic associations; methane oxidation; environmental transmission of pathogens; remediation of hazardous materials.

***Proposed Change of Prerequisites:***  Graduate standing.

***Proposed Cross Listing:*** ENVE 5425 ENVIRONMENTAL ENGINEERING MICROBIOLOGY

**Action Taken:** Approved.

**CE**

**5445 HAZARDOUS WASTE SITE REMEDIATION, 3 hr.**

***Current Course Description and Prerequisites:*** The contamination of soil, air, and groundwater by improper disposal of hazardous wastes is covered. Control and cleanup of contaminated groundwater plumes, treatment of polluted soils and soil gases is emphasized. Case studies are extensively used.

***Prerequisites:*** CE 3400 and consent of instructor.

***Proposed Change of Prerequisites:***  CE 3400

***Proposed Cross Listing:*** ENVE 5445 HAZARDOUS WASTE SITE REMEDIATION

**Action Taken:** Approved.

**CHE**

**2060 INTRODUCTION TO CHEMICAL ENGINEERING COMPUTING, 3 hr.**

***Current Course Description and Prerequisites:*** Introduces chemical engineering problems, develops computational skills needed to solve them, and reinforces a computational tool that will be useful for other CHE classes. Prerequisites: grade of C or better in ES 1060 and concurrent enrollment in MATH 2310.

***Prerequisites:*** ES1060 Introduction to Engineering Problem Solving (C or better) MATH 2310 Applied Differential Equations I (concurrent)

***Proposed change of prerequisites:*** CHE 1005 Introduction to Chemical Engineering (C or better), MATH 2310 Applied Differential Equations I (concurrent).

**Action Taken:** Approved.

**CHE**

**3015 MICRCOMPONENT THERMODYNAMICS, 3 hr.**

***Current Course Description and Prerequisites:*** Introduces mixture properties, such as chemical potentials, excess properties, partial molar properties, heats of mixing, fugacities, and practical tools for estimating them from solution theories and equations of state. These tools and concepts are applied to phase and chemical equilibria.

***Prerequisites:*** ES 2310, CHE 2060 or PETE 2060. (Normally offered fall semester)

***Cross List***: PETE 3015.

***Proposed Change of Course Title:***  CHEMICAL THERMODYNAMICS

***Proposed Change of Prerequisites:*** CHE 2060 Introduction to Chemical Engineering Computing, CHE 2070 Chemical Thermodynamics I (or ES 2310)

***Proposed Cross List***: PETE 3015.

**Action Taken:** Approved.

**CHE**

**3030 UNIT OPERATIONS, 3 hr.**

***Current Course Description and Prerequisites:*** Applies transport and equilibrium concepts and models to the analysis and design of unit operations, such as distillation, absorption, extraction, crystallization, membrane, and heat exchange processes.

***Prerequisites:***  CHE 2000, 3015 and 3025.

***Cross Listed:***  PETE 3030.

***Proposed Change of Course Number:*** CHE 3035

***Proposed Change of Course Title:***  SEPARATION PROCESSES

***Proposed Change of Description:*** Applies transport and equilibrium concepts and models to the analysis and design of separation processes, such as distillation, absorption, extraction, leaching, adsorption, crystallization, and membrane separation processes.

***Proposed Change of Prerequisites:*** CHE 2060 Introduction to Chemical Engineering Computing, CHE 2070 Chemical Thermodynamics I (or ES 2310)

***Proposed Change of Cross List:*** No cross listing.

**Action Taken:** Approved.

**CHE**

**3040 UNIT OPERATIONS LABORATORY I, 3 hr.**

***Current Course Description and Prerequisites:***  Illustrates fluid-flow and heat-transfer principles with experiments, for example, on pipe flow, fluid viscosity, and convective heat transfer. Emphasizes experimental-error analysis and technical communication, both written and oral.

***Prerequisites:*** WA, CHE 3020.

***Proposed Change of Prerequisites:***  CHE 3026 HEAT TRANSFER

**Action Taken:** Approved.

**CHE**

**3070 PROCESS SIMULATION AND ECONOMICS, 3 hr.**

***Current Course Description and Prerequisites:***  Introduces the use of commercial process simulation software routinely used in the chemical industry. Problems involve heat and material balances, physical properties, phase/chemical equilibrium, and simulation of equilibrium-stage separations.

***Prerequisites:*** CHE 3015 Multicomponent Thermodynamics and CHE 3030 Unit Operations (concurrent)

***Proposed Change of Prerequisites:***  CHE 3015 Chemical Thermodynamics II and CHE 3030 Separation Processes (concurrent)

**Action Taken:** Approved.

**CHE**

**4050 UNIT OPERATIONS LABORATORY II, 3 hr.**

***Current Course Description and Prerequisites:***  Illustrates mass-transfer principles with experiments, for example, on extraction, gas absorption, and distillation. Emphasizes experiment planning and technical communication, both written and oral.

***Prerequisites:*** CHE 3030 Unit Operations

***Proposed Change of Prerequisites:***  CHE 3035 Separation Process

**Action Taken:** Approved.

**CHE**

**4060 REACTION ENGINEERING, 3 hr.**

***Current Course Description and Prerequisites:***  Introduces chemical process kinetics, catalysis and reactor design. Includes homogeneous and heterogeneous reaction kinetics; design of batch, stirred-tank and tubular reactors; and nonisothermal operation. ***Prerequisites:*** CHE 3015 and 3025.

***Proposed Change of Prerequisites:*** CHE 3015 Chemical Thermodynamics, CHE 3026 Heat Transfer and CHE 3028 Mass Transfer.

**Action Taken:** Approved.

**CHE**

**4070 PROCESS DESIGN I, 3 hr.**

***Current Course Description and Prerequisites:***  Encompasses engineering design of chemical processes. Introduces engineering economics, process safety management and environmental management.

***Prerequisites:*** CHE 3030, 3070 and 4060 or concurrent enrollment.

***Proposed Change of Credit Hours:*** 4 hrs.

***Proposed Change of Prerequisites:*** CHE 3035 Separation Process, CHE 3070 Process Simulation and Economics, CHE 4060 Reaction Engineering.

**Action Taken:** Approved.

**CHE**

**4080 PROCESS DESIGN II, 5 hr.**

***Current Course Description and Prerequisites:***  Intended for the last semester of the senior year. Applies all previous courses to the design of safe, economical and environmentally benign chemical processes.

***Prerequisites:*** CHE 3040 and CHE 4070.

***Current Course USP Designation:***  USP03-WC Upper Division Writing

***Proposed Change of Credit Hours:*** 4 hrs.

***Proposed Change of Prerequisites:*** COJO 2010 Public Speaking (COM2), CHE 4070 Process Design I.

***Proposed Change of USP Designation:*** COM3 Communications III

**Action Taken:** Approved.

**CHE**

**4090 PROCESS DYNAMICS AND CONTROL, 3 hr.**

***Current Course Description and Prerequisites:***  Encompasses analysis and design control systems for the chemical process industry including steady-state approximation, types of controllers, simple unsteady-state analysis, use of mathematical models and process dynamics under control.

***Prerequisites:*** CHE 3020, 3030 and 4060.

***Proposed Change of Prerequisites:***  CHE 3035 Separation Processes, CHE 4060 Reaction Engineering.

**Action Taken:** Approved.

* ***College of Health Science***

**MLTK**

**4840 LABORATORY EDUCATION METHODOLOGY, 1 hrs.**

***Current Course Description and Prerequisites:*** This course provides an overview of education methodology and issues related to roles aseducators in the clinical laboratory profession. Course topics and assignments include pedagogy, curriculum design, assessment and accreditation. Major educational responsibilities for clinical laboratory professionals relating to continuing education, competency assurance, certification and licensure will be addressed.

***Prerequisites:*** Medical Laboratory Technician (ASCP) certification or completion of an AS degree in medical laboratory technician within 5 years.

***Requested Change of Prefix****:* MLSK

**Action Taken:** Approved.

**MLTK**

**4850 CLINICAL RESEARCH DESIGN, 2 hrs.**

***Current Course Description and Prerequisites:*** A course in research design methods commonly used in clinical research. Emphasis is on research design, process, measurement, regulatory issues, and ethics, as used by investigators. The focus is to equip students with knowledge and skills necessary to critically examine professional literature, methodology and ethical considerations that influence research design.

***Prerequisites:*** Medical Laboratory Technician (ASCP) certification or completion of an AS degree in medical laboratory technician within 5 years.

***Requested Change of Prefix****:* MLSK

**Action Taken:** Approved.

**MLTK**

**4981 ADVANCED CLINICAL PRACTICUM-HEMATOLOGY, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Advanced hematology principles and techniques prepare students for practice in the clinical laboratory. Topics include leukopoiesis, FAB Leukemia classification, leukocyte dyscrasias, lymphomas, hemostasis and coagulopathies. Laboratory will focus on abnormal smears, cytochemistry, normal and leukemic bone marrow evaluations, and coagulation mixing studies and factor assays related to clinical disease states.

***Prerequisites:*** Medical Laboratory Technician (ASCP) certification or completion of an AS degree in medical laboratory technician within 5 years.

***Requested Change of Prefix****:* MLSK

**Action Taken:** Approved.

**MLTK**

**4982 ADVANCED CLINICAL PRACTICUM-MOLECULAR, 3hrs.**

***Current Course Description and Prerequisites:*** Principles of molecular technology used in clinical laboratories. Laboratory experiences include cytogenetics, nucleic acid extraction, hybridization, detection, amplification, sequencing, microarrays, and in-situ hybridization. Emphasis is on the areas of the clinical laboratory that use molecular techniques related to genetics, oncology, infectious disease, and identity testing for forensic and transplant purposes.

***Prerequisites:*** Medical Laboratory Technician (ASCP) certification or completion of an AS degree in medical laboratory technician within 5 years.

***Requested Change of Prefix****:* MLSK

**Action Taken:** Approved.

**MLTK**

**4983 ADVANCED CLINICAL PRACTICUM- IMMUNOHEMATOLOGY, 3hrs.**

***Current Course Description and Prerequisites:*** Principles of immunology theory, blood group systems, genetics, and immunohematology techniques. Procedures including evaluation of blood samples, pretransfusion compatibility testing, and transfusion reactions are studied. Serologic testing and problem-solving in antibody identification and complex procedures are stressed. Laboratory emphasizes modern practices, resolution of compatibility problems and advanced antibody identification methods.

***Prerequisites:*** Medical Laboratory Technician (ASCP) certification or completion of an AS degree in medical laboratory technician within 5 years.

**Action Taken:** Approved.

**SPPA**

**4070/**

**5070 DEAF CULTURE AND THE HISTORY OF DEAF AMERICA, 4 hrs.**

***Current Course Description and Prerequisites:*** Explores techniques of graphic design preparation from concept through paste-up to the printed page, both on and off the computer. Provides knowledge of basic foundations and principals of graphic design through the solving of conceptual design problems. Prerequisites: ART 1110.

***Prerequisites***: SPPA 2110.

***Current Cross List:***  SPPA 4070/5070

***Proposed change of Course Title*:** DEAF STUDIES

***Proposed change of Credit Hours:***  3 hrs.

***Proposed Cross List:***  Change to none.

**Action Taken:** Approved.

* ***College of Law***

**LAW**

**6530 AMERICAN LEGAL HISTORY, 2 hr.**

***Current Course Description and Prerequisites:***  A study of the life of John Marshall, Chief Justice of the United States from 1801 until 1835.

***Prerequisites:*** None.

***Proposed Change of Credit Hours:*** 3 hrs.

**Action Taken:** Approved.

**LAW**

**6930 LEGAL CLINIC, 3 hr.**

***Current Course Description and Prerequisites:***  Supervised clinical training in law office and court procedures. Clinical programs available are the Defender Aid Program, Legal Services Program, and the Prosecution Assistance Program. Satisfactory/unsatisfactory only.

***Prerequisites:*** Third year standing.

***Current Grading System:*** S/U

***Proposed Change of Grading System:*** A/F.

***Proposed Change of Prerequisites:*** Students must have completed first year of law school.

**Action Taken:** Approved.

## Part II – Courses to Discontinue (Consent Agenda)

* ***College of Agriculture***

**FCSC**

**1140 NUTRITION, 2 hrs.**

***Current Course Description and Prerequisites:*** Relationship of food to maintenance of health and importance to the individual and society. Recommended for non-majors.

***Prerequisites:*** None.

***Rationale:*** After much consideration, our nutrition faculty decided there is no need for FCSC 1140 Nutrition, a two credit introductory nutrition course recommended for non-majors. We currently offer two introductory nutrition classes, one two credit (FCSC 1140) class and one three credit (FCSC 1141) class, the latter of which is primarily for our majors. However, it would be beneficial for ALL students, not just our majors, who want to take an introductory nutrition course to take the three credit introductory nutrition course. This course still covers basic fundamental nutrition concepts, yet it allows for more time to cover additional important fundamental nutrition concepts.

**Action Taken:** Approved.

**FCSC**

**4146/**

**5146 THERAPUTIC NUTRITION, 4 hrs.**

***Current Course Description and Prerequisites:*** Rationale for dietary modifications in pathological conditions; experience in menu planning and diet instruction; as well as dietary and nutrient assessment of the sick individual with discussion of case studies.

***Prerequisites:*** FCSC 4145, senior standing.

***Dual listed:*** FCSC 4146/FCSC 5146

***Rationale:*** We have decided to expand this course, which has been a one-semester four credit course, into two one-semester courses: Therapeutic Nutrition 1 (fall semester) and 2 (spring semester). Therefore, Therapeutic Nutrition will no longer exist.

**Action Taken:** Approved.

**REWM**

**2500 RANGELAND PLANT IDENTIFICATION, 2 hrs.**

***Current Course Description and Prerequisites:*** Sight identification and distribution of western U.S. rangeland plants.

***Prerequisites:*** C or better in REWM 2000.

***Rationale:*** Drop REWM2500 and adopt new course REWM2400 with numerous changes in content and credit hours to better serve our students, and avoid confusion with who has taken which course(s) to meet major requirements.

**Action Taken:** Approved.

* ***College of Engineering***

**ATSC**

**5001 ATMOSHPERIC ENERGETICS, 2 hrs.**

***Proposed Course Description and Prerequisites:*** First and second laws of thermodynamics applied to energy transformations in the atmosphere. Investigated are: air saturating processes, conserved temperatures, dry air entrainment into clouds, and first and second law applications in atmospheric models.

***Prerequisites:*** MATH 2210, PHYS 1310 and 1320 (or equivalent).

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5010.

**Action Taken:** Approved.

**ATSC**

**5002 ATMOSHPERIC RADIATION I, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Covers the principles of atmospheric radiative transfer. Conceptual and theoretical frameworks are provided for the understanding of radiative measurement systems (e.g., satellite, lidar and radar), blackbody radiation, the planetary radiative budget, and the propagation of both longwave and shortwave radiation.

***Prerequisites:*** MATH 2210, PHYS 1310 and 1320 (or equivalent).

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5010.

**Action Taken:** Approved.

**ATSC**

**5003 PROBLEMS IN ENERGETICS AND RADIATION, 1 hrs.**

***Proposed Course Description and Prerequisites:*** Proficiency in the use of tools for assimilation, analysis and presentation of quantitative information is fostered. Also considers solutions to problems developed theoretically in ATSC 5001 and 5002. These consist of solution to thermodynamic and radiative transfer governing equations.

***Prerequisites:*** ATSC 5001 and 5002, or concurrent enrollment in each.

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5010.

**Action Taken:** Approved.

**ATSC**

**5004 PROBLEMS IN DYNAMIC METEOROLOGY I, 1 hrs.**

***Proposed Course Description and Prerequisites:*** Focuses on computational solutions to problems developed theoretically in ATSC 5100. In addition, students gain proficiency in interpretation and analysis of weather data, including surface and upper level maps, and sounding data, which will be used to understand static stability. Data visualization software is also introduced and used to develop understanding of dynamical processes. (add \*)

***Prerequisites:*** ATSC 5100 or concurrent enrollment in ATSC 5100

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5015.

**Action Taken:** Approved.

**ATSC**

**5005 MICROPHYSICS, 2 hrs.**

***Proposed Course Description and Prerequisites:*** Microphysical observations of clouds and precipitation are first briefly surveyed. Thermodynamic equilibria in multiphase microphysical systems are then examined, as are homogeneous and heterogeneous nucleation, and diffusional and collisional processes leading to time-dependent changes in hydrometeor size. Embedded in these discussions are elementary considerations of single particle mechanics and hydrodynamics

***Prerequisites:*** ATSC 5001, 5002 and 5003.

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5011.

**Action Taken:** Approved.

**ATSC**

**5006 PROBLEMS IN MICROPHYSICS, 1 hrs.**

***Proposed Course Description and Prerequisites:*** Atmospheric processes altering the hydrometeor size distribution are examined using computer algorithms developed by the student. Condensational and collisional growth processes, in warm and cold clouds, are examined. Data from hydrometer size spectrometers are used to initialize the problems.

***Prerequisites:*** ATSC 5005 or concurrent enrollment.

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5016.

**Action Taken:** Approved.

**ATSC**

**5007 PROBLEMS IN SYNOPTIC METEOROLOGY, 1 hrs.**

***Proposed 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. Dual listed with ATSC 4007.

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

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5012.

**Action Taken:** Approved.

**ATSC**

**5020 PHYSICAL METEOROLOGY II, 1 hrs.**

***Proposed Course Description and Prerequisites:*** Laboratory course concerned with physical processes in the atmosphere. Approximately eight experiments are conducted examining phenomena related to atmospheric radiation, gas expansions, phase transitions, and nucleation.

***Prerequisites:*** MATH 2210, PHYS 1310 and 1320 (or equivalent).

***Rationale:*** This course is an old course that was left over from a previous curriculum. It is not part of our existing core curriculum nor has it been taught for several years. Material in this course will be treated in ATSC 5012.

**Action Taken:** Approved.

**ATSC**

**5100 ATMOSPHERIC DYNAMICS I, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Development and interpretation of the atmospheric equations of motion, scales of motion, horizontal atmospheric winds, thermal wind equation, circulation and vorticity. Introduction to planetary boundary layer flows. ***Prerequisites:*** ATSC 5005, ATSC 5006 or concurrent enrollment.

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5015.

**Action Taken:** Approved.

**ATSC**

**5160 SYNOPTIC METEORLOGY, 2 hrs.**

***Proposed Course Description and Prerequisites:*** Structure and evolution of the extratropical 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. Dual listed with ATSC 4160.

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

***Rationale:*** Curriculum change. Content of this course will be covered in ATSC 5016.

**Action Taken:** Approved.

**CHE**

**3025 TRANSPLANT PHENOMENA, 3 hr.**

***Current Course Description and Prerequisites:*** Introduces energy and mass transfer to concepts and the development of mathematical models of physical phenomena, including convection, diffusion, conduction and radiation, applicable to the analysis and design of chemical processes.

***Prerequisites:***  C or better in ES 2330 and CHE 2005.

***Cross Listed:*** PETE 3025.

***Rationale:*** CHE 3025 Transport Phenomena, which introduces CHE students to both heat and mass transfer concepts, is considered insufficient to provide both concepts. The heat transfer concepts are now taught in a new course CHE 3026 Heat Transfer, while the mass transfer concepts are in a new course CHE 3028 Mass Transfer. Both heat and mass transfer concepts, which are important in CHE, can thus be discussed in depth.

**Action Taken:** Approved.

**CHE**

**3030 UNIT OPERATIONS, 3 hr.**

***Current Course Description and Prerequisites:*** Applies transport and equilibrium concepts and models to the analysis and design of unit operations, such as distillation, absorption, extraction, crystallization, membrane, and heat exchange processes.

***Prerequisites:***  CHE 2000, 3015 and 3025.

***Cross Listed:***  PETE 3030.

***Rationale:*** CHE 3030 Unit Operations now replaced by CHE 3035 Separation Process.

**Action Taken:** Approved.

* ***College of Health Science***

**SPPA**

**5070 DEAF CULTURE AND THE HISTORY OF DEAF AMERICA, 4 hrs.**

***Current Course Description and Prerequisites:*** Explores techniques of graphic design preparation from concept through paste-up to the printed page, both on and off the computer. Provides knowledge of basic foundations and principals of graphic design through the solving of conceptual design problems. Prerequisites: ART 1110.

***Prerequisites***: SPPA 2110.

***Current Cross List:***  SPPA 4070/5070

***Rationale:*** The 5070 version of SPPA 4070 has not been offered for at least 6 years and was never taught at a differentiated graduate level. There is no intention to offer the dual listing or the graduate version again.

**Action Taken:** Approved.

## Part III – Courses for Addition (Regular Agenda)

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

**FCSC**

**2200 PROFESSIONALISM AND COMMUNICATION IN FCS, 3 hrs.**

***Proposed Course Description and Prerequisites:*** An introduction to the field of Family and Consumer Sciences. Students will learn the history, approaches to problem solving using the body of knowledge and systems theory. The course will focus on professionalism and communication strategies using our departmental competencies.

***Proposed Prerequisites:*** FCS majors, FYS and COM1

***Rationale:*** With the discontinuation of FCSC 1010 and FCSC 4010, this new course replaces much of the content from these two classes and introduces the interdisciplinary nature of Family and Consumer Sciences and its body of literature to students at an earlier point in their academic career.

**Action Taken:** Approved.

**FCSC**

**4220 THERAPUTIC NUTRITION II, 4 hrs.**

***Proposed Course Description and Prerequisites:*** Rationale for dietary modifications in pathological conditions; experience with learning and applying the nutrition care process to develop nutrition care plans for individuals with various medical conditions with discussion of case studies.

***Proposed Prerequisites:*** FCSC 4210; MOLB 4100 or concurrent enrollment.

***Rationale:*** As this course covers an extensive amount of material and can be overwhelming for students, we decided to change this one semester course and divide it up into two classes: Therapeutic Nutrition 1 and Therapeutic Nutrition 2. Therapeutic Nutrition 1 will include some of the information previously covered in Therapeutic Nutrition and will also add new material to better prepare students for Therapeutic Nutrition 2. This allows more time to focus on case studies and nutrition therapy for various disease states in Therapeutic Nutrition 2 because the students will have a strong background in nutrition assessment after taking Therapeutic 1 and will therefore be better prepared to grasp difficult concepts covered in Therapeutic Nutrition 2.

**Action Taken:** Approved.

**FCSC**

**4230 THERAPUTIC NUTRITION COUSELING, 4 hrs.**

***Proposed Course Description and Prerequisites:*** Course is designed to help students develop basic nutrition counseling and communication skills. Students will learn how to apply the concepts learned during lecture through interactive classroom experiences with peers and outside of the classroom experiences with an assigned client.

***Proposed Prerequisites:*** FCSC 4220 or concurrent enrollment, Dietetics students only.

***Rationale:*** After reviewing the curriculum of dietetics programs at other universities and surveying our dietetics alumni, it was determined that a nutrition counseling class would greatly enhance our program and better prepare students for dietetic internships. In addition, this class provides a means for providing students with practical experience under the supervision of a registered dietitian.

**Action Taken:** Approved.

**REWM**

**2400 RANGE ECOSYSTEM & PLANTS, 2 hrs.**

***Proposed Course Description and Prerequisites:*** Ecology of range ecosystems of western North America and identification of 200 most common plants species, including taxonomic keying..

***Proposed Prerequisites:*** REWM 2000 with grade of C or better.

***Rationale:*** Need a new, better and more comprehensive course to replace REWM2500 which is being dropped. Three lecture periods needed to better cover range ecosystems of western North America and learn to use taxonomic keying. One 2hr lab period can accommodate studying major plants and practice taxonomic keying major groups.

**Action Taken:** Approved.

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

**ART**

**3350 ILLUSTRATION I, 3 hrs.**

***Proposed Course Description and Prerequisites:*** This is an introductory Illustration course. The primary class objective is to develop conceptual skills through a variety of media traditionally used in fine art illustration and a variety of illustration problems and projects. This class is designed to further your interest in illustration and initiate portfolio development.

***Proposed Prerequisites:*** ART 2000 Portfolio Review

***Rationale:*** This is a new course proposal to add to existing curricula. Illustration I will initiate a bridge between studio courses and graphic design courses via content. Students will develop portfolios that will help them to attain experience for possible jobs in the applied field of illustration

**Action Taken:** Approved.

**ART**

**4350 ILLUSTRATION II, 3 hrs.**

***Proposed Course Description and Prerequisites:*** Illustration II. 3. This is the second level Illustration course for students who have had ART 3350, Illustration I. Students will continue to develop conceptual skill in creating narrative illustrations for a variety of projects. The majority of the semester will be dedicated to developing a single project: Graphic Novelization or book illustrations. Students will be focusing on character development, narrative arc, and compelling imagery using materials appropriate for their project.

***Proposed Prerequisites:*** ART 3350

***Rationale:*** This course will progress from Illustration I, ART 3350, and allow students interested in pursuing illustration as their avocation to further develop fine art illustration skills and create a comprehensive portfolio for future illustration opportunities.

**Action Taken:** Approved.

**GEOL**

**2220 COMMUNICATING EARTH SCIENCE, 3 hrs.**

***Proposed Course Description and Prerequisites:*** This course will focus on communicating science to non-scientists. Students will deliver earth science information through written, digital and oral presentations designed to be informative and interesting to the public.

***Proposed Prerequisites:*** Grade of C or higher in GEOL 2010, COM 1

***Rationale:*** This course is being developed to meet the needs of USP 2015. This is a new course, designed specifically to fulfill the learning goals of COM 2 (as explained in the COM 2 form and syllabus), and to provide an opportunity for students to learn to communicate earth science to the public. Many public misconceptions about science stem from a lack of understanding, and it is the responsibility of scientists to make science understandable and accessible. In this course we will address the skills necessary to present earth science in a way that is interesting and comprehensible to people without a background in the field.

**Action Taken:** Approved.

**GEOL**

**3040 INTRODUCTION TO GROUNDWATER, 3 hrs.**

***Proposed Course Description and Prerequisites:*** This class will introduce the basic principles of Groundwater Hydrology such as hydrological cycle, mass balance, fluid properties, mechanics of flow through porous media, Darcy’s law, aquifer and aquitards, groundwater wells, groundwater geology, and surface water/groundwater interaction. ***Proposed Prerequisites:*** Students must have a grade of B or above in MATH1405 or MATH1450

***Rationale:*** This introductory level class is needed to allow geology undergraduate students (for example: those in the BA program who have less of a mathematics background) to develop a rudimentary understanding of the basic principles of Groundwater Hydrology. Another upper division Hydrology class (Geohydrology, GEOL 4444) requires Calc II or equivalent, thus students who cannot meet that criterion will not be able to take hydrology courses. A basic understanding of hydrology (though at a less quantitative level) can help students prepare for the Professional Geologist certification exam, which will increase the competitiveness of our undergraduate students for the job market.

**Action Taken:** Approved.

**MATH**

**1123 MATH, MUSIC AND ACOUSTICS, 3 HRS.**

***Proposed Course Description and Prerequisites:*** For music majors and minors not planning to enroll in MATH 1400, 1450 or a calculus course. Serves as an introduction to the mathematics and physics underlying music and develops quantitative reasoning in a musical context. Topics include the wave nature of sound, intervals, scales, temperment, acoustics and psychoacoustics. Note: MATH 1123 is neither a prerequisite nor suitable preparation for MATH 1400 (College Algebra).

***Proposed Prerequisites:*** Grade of C or better in Math 0921 or Level 2 on the Math Placement Exam or Math ACT of 21 or Math SAT of 600 and grade of C or better in MUSC 1030.

***Rationale:*** In discussions with the music faculty, it became clear that they felt the current quantitative options were of little value to their majors. In addition, most of them had taken a course in acoustics as undergraduates and noted with concern the absence of any such course at the university. They felt that an introduction to acoustics is critical to a becoming a complete musician and music educator. The proposed course would help to rectify both of these problems, i.e., providing the music students with a quantitative course that introduces them to acoustics, thereby enriching their experience in their own major.

**Action Taken:** Approved.

* ***College of Education***

**NASC**

**5400 SPATIAL DATA INSTRUCTIONAL TECHNOLOGY, 1 hr.**

***Proposed Course Description and Prerequisites:*** Teaching strategies appropriate for elementary/middle school students’ conceptual level of development. Positive attitudes toward teaching children about the Earth, its physical environment and human/environment relationships will be promoted. The course content will be supported by the use of geospatial technologies, such as GPS and GIS.

***Proposed Prerequisites:*** Graduate Standing.

***Rationale:*** This rotating (once every three years) core course is currently part of the SMTC's Mathematics and Science Education Master's Degree Program. This class will make connections between the courses, Earth Science in Global Context and Astronomy for Teachers, teaching earth science topics in the elementary/middle school, and technologies for investigating such topics.

**Action Taken:** Approved.

**NASC**

**5660 STANDARDS, PEDAGOGY AND RESEARCH, 2 hrs.**

***Proposed Course Description and Prerequisites:*** This course is designed to provide Master of Science in Natural Science students with background in three areas: current science standards, pedagogical practices, and the understanding of various types of educational research as well as some of the practices related to conducting their own research projects.

***Proposed Prerequisites:*** Masters of Natural Science - MMA, MSC, or NED who have completed at least one year of coursework, or permission of the Instructor or SMTC director. Graduate Standing.

***Rationale:*** This rotating (once every three years) core course is a part of the SMTC's Mathematics and Science Education Master's Degree Program. This course provides students with understandings about current science standards, related pedagogy, and an introduction to educational research methodology

**Action Taken:** Approved.

**NASC**

**5670 RESEARCH METHODOLOGY, 4 hr.**

***Proposed Course Description and Prerequisites:*** This course provides foundational information on asking appropriate questions, researching (including IRB), writing, formatting, and defending a Plan B project. At the end of the semester students will have a committee, a preliminary draft, and present their research. Spring semester will be used to complete projects with committee members.

***Proposed Prerequisites:*** Masters of Natural Science - MMA, MSC, or NED who have completed at least one year of coursework, or permission of the Instructor or SMTC director. Graduate Standing

***Rationale:*** Core course currently needed for Masters of Natural Science students in the SMTC's Mathematics and Science Education Master's Degree Program. Many students languish after their core content courses are completed as most are practicing teachers working full-time with no research experience or an understanding of the process of doing this type of project. This course will provide foundational information on how to ask appropriate questions, do the research (including an IRB if necessary), use university and electronic sources and tools, write, and defend the Plan B.

**Action Taken:** Approved.

**NASC**

**5890 DIRECTED PROFESSIONAL STUDY, 1 hr. (max 6)**

***Proposed Course Description and Prerequisites:*** Primarily for upper-division students who can benefit from independent study with minimal supervision. Given to allow interested students to pursue specific aspects of curriculum and instruction.

***Proposed Prerequisites:*** Consent of Instructor andGraduate Standing

***Rationale:*** Primarily for upper-division students who can benefit from independent study with minimal supervision. Gives the students an opportunity to work on a project that is not covered by a regularly scheduled course.

**Action Taken:** Approved.

**PRST**

**5070 INTRODUCTION TO COLLEGE TEACHING, 3hrs.**

***Proposed Course Description and Prerequisites:*** This course is designed to provide students with an understanding of instructional theory and experiences in applying teaching and assessment methods relevant to the role of an educator in higher education. Linking theories, perspectives, and principles of effective teaching and learning to practice in higher education is a priority of the course. Practicing and experiencing “hands-on” activities will be prime formats of the class

***Proposed Prerequisites:*** Graduate standing.

***Rationale:*** This course replaces PRST 5900 as the course to introduce doctoral students to teaching in higher education settings. A lecture designation replaces the practicum designation to allow for A/F grading and fixed credit hours. [PRST 5900 will remain a standing, variable credit, S/U graded course.]

**Action Taken:** Approved.

* ***College of Engineering***

**ATSC**

**5010 PHYSICAL METEOROLOGY I, 4 hrs.**

***Proposed Course Description and Prerequisites:*** First and second law of thermodynamics applied to energy transformations in the atmosphere, including dry, moist, and saturated processes and atmospheric stability. Fundamentals of radiation including blackbody, planetary budget, and propagation and how these drive the thermodynamics of the earth’s atmosphere.

***Proposed Prerequisites:*** MATH 2210, PHYS 1310 and PHYS 1320 or equivalent.

***Rationale:*** Modifying core curriculum for MS students to allow for addition of ATSC5040. Discontinues are handled in separate CARFs. Prerequisites are maintained.

**Action Taken:** Approved.

**ATSC**

**5011 PHYSICAL METEOROLOGY II, 4 hrs.**

***Proposed Course Description and Prerequisites:***  Quantitative description of cloud particle nucleation, growth by condensation, and growth by deposition and collection. Ties to other atmospheric processes, e.g., radiation budgets and cloud dynamics, are also emphasized. Course material is presented in lecture and computer-laboratory settings. A numerical cloud model is developed and analyzed in the laboratory.

***Proposed Prerequisites:*** ATCS 5010

***Rationale:*** Combining two courses, Microphysics (ATSC5005) and Problems in Microphysics (ATSC5006), into one course (Physical Meteorology II; ATSC5011); 2) increasing the course load from 3 hrs. to 4 hrs.; and 3) maintaining focus on a core area of our discipline. Courses affected are: ATSC5005 (discontinued), ATSC5006 (discontinued); ATSC5020 (discontinued), ATSC5210; ATSC5340; ATSC5600. Discontinues and prerequisite changes are handled in separate CARFs.

**Action Taken:** Approved.

**ATSC**

**5014 DYNAMIC METEOROLOGY, 4 hrs.**

***Proposed Course Description and Prerequisites:***  Development and interpretation of the atmospheric equations of motion, scales of motion, horizontal atmospheric winds, thermal wind equation, circulation and vorticity, mesoscale motions. Introduction to planetary boundary layer flows. Data visualization software is also introduced and used to develop understanding of dynamical processes.

***Proposed Prerequisites:*** MATH 2210, PHYS 1310 and PHYS 1320 or equivalent.

***Rationale:*** Restructuring Atmospheric Science curriculum. Combining two courses, Problems in Dynamic Meteorology (ATSC5004) and Atmospheric Dynamics I (ATSC5100), into one course (Dynamic Meteorology; ATSC5015); 2) increasing the course load from 3 hrs. to 4 hrs.; and 3) maintaining focus on a core area of our discipline. Courses affected are: ATSC 5004 (discontinued), ATSC5100 (discontinued), ATSC5016, ATSC5040, ATSC5050, and ATSC 5330. Discontinues are handled in separate CARFs.

**Action Taken:** Approved.

**ATSC**

**5016 SYNOPTIC AND MESOSCALE METEOROLOGY, 4 hrs.**

***Proposed Course Description and Prerequisites:*** Large-scale vertical motion as viewed form a quasigeostrophic and isentropic potential vorticity perspectives. Baroclinic instability, and the structure and evolution of extratropical cyclones.Identification and development of fronts, jet streams and associated weather streams. Symmetric instability and other mesoscale instability. Role of topography on large-scale and mesoscale circulations.

***Proposed Prerequisites:*** MATH 2210, PHYS 1310 and PHYS 1320 or equivalent.

***Rationale:*** Restructuring Atmospheric Science curriculum. The laboratory part (formerly ATSC5007) now becomes an integral part of the course, adding one cr. The course content is that of ATSC5160 (Synoptic Meteorology), plus elements of ATSC5008 (Mesoscale Meteorology), justifying the increase from 2 to 3 credits for the lecture component. Thus ATSC5016 will have 4 cr. ATSC5016 will be a “core” course in the new graduate curriculum in Atmospheric Science. Discontinues and prerequisite changes are handled in separate CARFs.

**Action Taken:** Approved.

**ATSC**

**5018 ETHICS AND RESEARCH METHODS, 1 hrs.**

***Proposed Course Description and Prerequisites:*** Ethics and ethical dilemmas in research and academia and how to address them are discussed. This course also covers general research methodology and describes processes for research funding and disseminating research findings and the peer-review process.

***Prerequisites:*** Graduate Standing.

***Rationale:*** Modifying core curriculum for MS students. The content covered satisfies NSF required for Research Ethics training for students funded through NSF grants.

**Action Taken:** Approved.

**CHE**

**1005 INTRODUCTION TO CHEMICAL ENGINEERING, 1 hr.**

***Proposed Course Description and Prerequisites:*** Provides an overview of chemical engineering and its role in the current technological importance: energy, biotechnology, production of chemicals, and materials processing. Introduces strategies for solving engineering problems, including ethical considerations and teamwork, discusses process variables, units, mass balance, and data analysis, and incorporates active learning exercises using spreadsheet to solve chemical engineering problems. (add \*)

***Proposed Prerequisites:*** CHEM 1050 Advanced General Chemistry (or CHEM 1020) PHYS 1210 Engineering Physics I (concurrent)

***Rationale:*** Since ES 1000 has been removed and not all students take ES 1101 Introduction to Engineering Study, an overview of Chemical Engineering is provided in this course. Furthermore, ES 1060 has to be removed from the new curriculum to keep the total number of credit hours in the program less than or equal to 128. An introduction to spreadsheet is then given in this course.

**Action Taken:** Approved.

**CHE**

**2070 CHEMICAL THERMODYNAMICS, 3 hr.**

***Proposed Course Description and Prerequisites:*** Discusses first and second laws of thermodynamics applied to chemical processes, production of power from heat, refrigeration, and liquefaction processes, develops thermodynamic relations for calculating thermodynamic properties of fluids, including the use of equations of state, and introduces heat effects, Gibbs-energy change of reaction, and chemical-reaction equilibria. (add \*)

***Proposed Prerequisites:*** CHE 2005 Chemical Process Analysis (C or better), MATH 2210 Calculus III, and PHYS 1210 Engineering Physic.

***Rationale:*** This course prepares CHE students well for the second course CHE 3015 Chemical Thermodynamics II. It emphasizes on volumetric and thermodynamic properties of fluids, Maxwell relations, residual properties, equations of state, heat effects, Gibbs-energy change of reaction, and chemical-reaction equilibria.

**Action Taken:** Approved.

**CHE**

**2080 CHEMICAL ENGINEERING FLUID MECHANICS, 3 hr.**

***Proposed Course Description and Prerequisites:*** Introduces the fundamental aspects of macroscopic fluid mechanics, including physical properties, fluid statics, mass, energy, and momentum balances, momentum transport, and flow through pumps, pipes, and other chemical engineering equipment for both incompressible and compressible fluids, and of microscopic fluid mechanics, including differential mass and momentum balances. (add \*)

***Proposed Prerequisites:*** CHE 2005 Chemical Process Analysis (C or better), MATH 2210 Calculus III, MATH 2310 Applied Differential Equations I (concurrent), and PHYS 1210 Engineering Physic.

***Rationale:*** This course prepares CHE students well for the other two transport phenomena classes (CHE 3026 Heat Transfer and CHE 3028 Mass Transfer). It emphasizes on mass, energy, and momentum balances, momentum transfer, and flow in chemical engineering equipment for both incompressible and compressible fluids, and further exposes students to Navier-Stokes.

**Action Taken:** Approved.

**CHE**

**3026 HEAT TRANSFER, 3 hr.**

***Proposed Course Description and Prerequisites:*** Introduces the theory and application of energy transport (e.g. conduction, convection, radiation), discusses in depth fundamentals of microscopic energy transport, and applies the knowledge to macroscopic chemical engineering processes and systems. (add \*)

***Proposed Prerequisites:***  CHE 2080 Chemical Engineering Fluid Mechanics or ES 2330 Fluid Dynamics

***Rationale:*** CHE 3025 Transport Phenomena, which introduces CHE students to both heat and mass transfer concepts, is removed from the CHE curriculum. The heat transfer concepts are now taught in the proposed course, while the mass transfer concepts are in a new course CHE 3028 Mass Transfer. This way, more heat transfer concepts and heat exchanger design can be discussed.

**Action Taken:** Approved.

**CHE**

**3028 MASS TRANSFER, 3 hr.**

***Proposed Course Description and Prerequisites:*** Introduces mass transfer concepts, including molecular diffusion, convective mass transfer, and mass transfer between phases, and the development of mathematical models of these physical phenomena, applicable to the analysis and design of chemical processes. (add \*)

***Proposed Prerequisites:***  CHE 2080 Chemical Engineering Fluid Mechanics or ES 2330 Fluid Dynamics

***Rationale:*** CHE 3025 Transport Phenomena, which introduces CHE students to both heat and mass transfer concepts, is removed from the CHE curriculum. The mass transfer concepts are now taught in the proposed course, while the heat transfer concepts are in a new course CHE 3026 Heat Transfer. More mass transfer concepts, which are important in CHE, can thus be discussed.

**Action Taken:** Approved.

**PETE**

**1060 INTRODUCTION TO PETROLEUM ENGINEERING, 1 hr.**

***Proposed Course Description and Prerequisites:*** This course in 1 hour weekly lecture format covers elements of Petroleum Engineering calculations associated with typical computations in Drilling, Production, and Reservoir Engineering, Rock and Fluids properties, to simultaneously train the student on basic computing skills as well as basic language of Petroleum Engineering. The preferred computing tool is Matlab, which will be introduced through simple calculations on the computer. The students will also be provided notions of the petroleum engineering curriculum through examples of the different subjects. The student is anticipated to complete computing exercises as a way to acquire skills on computing systems.

***Proposed Prerequisites:***  Math placement 5 or concurrent enrollment in Math 2200.

***Rationale:*** The Petroleum Engineering curriculum committee identified the need to prepare freshman students on basic computer-based tools such as Matlab and Excel to illustrate calculations in Petroleum Engineering in PETE 2050 and PETE 2060, using specific PETE examples. This course will replace our current ES 1060 course in the new curriculum.

**Action Taken:** Approved.

* ***College of Health Sciences***

**KIN**

**5086 QUALITATIVE RESEARCH METHODS, 3 hrs.**

***Proposed Course Description and Prerequisites:*** This course presents students with an introduction to qualitative research methods, designs, and analysis. This involves: creation of purpose statements

***Proposed Prerequisites:*** Graduate standing.

***Justification:*** The Division of Kinesiology and Health wishes to offer a graduate course in qualitative research methods in order to provide graduate students with the knowledge and skills in this research paradigm in order to successfully complete thesis projects as well as prepare them for future careers in higher education, if desired.

**Action Taken:** Approved.

**MLSK**

**4860 LABORATORY MANAGEMENT, 3 hrs.**

***Proposed Course Description and Prerequisites:*** This s course introduces students to laboratory management systems, testing, reimbursement, accrediting/regulatory issues, finances, information systems, QA/QC improvement and supervisory roles in the clinical laboratory. Emphasis is on management and communication skills needed to work successfully as entry-level professionals in a health care setting. This course fulfills USP COM3 requirements.

***Proposed Prerequisites:*** Medical Laboratory Technician (ASCP) certification or completion of an AS degree in medical laboratory technician from an articulate.

***Justification:*** This is a new course for the Medical Laboratory Science Program. This program will be seeking accreditation with National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). NAACLS curriculum standards include principles of administration and supervision as applied to clinical laboratory science.

**Action Taken:** Approved.

## Part IV – FYS Courses for Addition (Consent Agenda)

* ***College of Education***

**EDEC**

**1101 THE POWER OF PLAY, 3 hrs.**

***Proposed Course Description:*** This course fulfills the First-Year Seminar (FYS) requirement of the 2015 University Studies Program. Students will read controversial positions and opinions about the role of play in children’s learning, development, and identify formation. Students will critically examine and evaluate evidence, claims, beliefs, or points of view about these meaningful, relevant issues. During class sessions students will be actively engaged in constructing meaning and knowledge through engagement with peers. Students are expected to share diverse perspectives, work collaboratively to process ideas, creatively represent their thinking, and examine pressing issues related to the importance of play.

***Justification:*** This course fulfills the First‐Year Seminar (FYS) requirement of the 2015 University Studies Program. Students will critically examine and evaluate evidence, claims, beliefs, or points of view about meaningful, relevant issues. Students will be introduced to active learning, inquiry of pressing issues, and individual and collaborative processing of ideas through the First‐Year Seminar curriculum

**Action Taken:** Approved.

* ***Other Programs***

**UWYO**

**1101 FYS: KEEP YOUR MONEY, WE WANT CHANGE: LEADERSHIP FOR A**

**BETTER WORLD, 3 hrs.**

***Proposed Course Description:*** “How wonderful it is that nobody need wait a single moment before starting to improve the world.” Anne Frank so eloquently speaks to this generation of change agents. Young leaders across the globe are creating change in the political, environmental, and social realm. This course will focus on how leadership can affect positive social change by looking at historical and contemporary leaders and the causes they led. Students will explore how leadership and change intertwine and how they can play a part in creating a better world for future generations.

***Justification:*** This course fulfills the First‐Year Seminar (FYS) requirement of the 2015 University Studies Program. Students will critically examine and evaluate evidence, claims, beliefs, or points of view about meaningful, relevant issues. Students will be introduced to active learning, inquiry of pressing issues, and individual and collaborative processing of ideas through the First‐Year Seminar curriculum.

**Action Taken:** Approved.