1. Approval of the minutes of December 4, 2015 (correction).

2. Approval of the e-vote minutes of February 5, 2016.

3. Change in Courses

   C11 College of Agriculture and Life Sciences
   Department of Agricultural Economics
   AGEC 285, AGEC 291, AGEC 484, AGEC 485, AGEC 491 – include zero credit
   C12 BIOL 456 – lec hrs, SCH

4. Texas A&M University at Galveston

   a. Change in Courses

      G1c MARB 303 – prerequisites
      G2c MARB 310 – course description
      G3c MARB 408 – prerequisites
      G4c MARB 425 – prerequisites

5. Other Business
Members present: Tim Scott (Chair), College of Science; James Herman (Vice Chair), College of Veterinary Medicine and Biomedical Sciences; Bob Knight, College of Agriculture and Life Sciences; Leslie Feigenbaum, College of Architecture; Kisha Bryan, College of Education and Human Development; Prasad Enjeti, Dwight Look College of Engineering; Chris Houser, College of Geosciences; Nancy Street (for Steve Oberhelman), College of Liberal Arts; Brian Holland, College of Nursing; Glenn Jones, Texas A&M University at Galveston; Stephanie Graves, Texas A&M University Libraries; Kristin Harper (for Ann Kenimer), Undergraduate Studies; John Louis Bolch, Office of the Registrar; Jean Layne, Center for Teaching Excellence.

Guests: Nancy Klein, Department of Architecture; Gail Rowe, Department of Aerospace Engineering; Ashlea Schroeder, Department of Biological and Agricultural Engineering; John Keyser and Lynn Schlemeyer, Department of Computer Science and Engineering; Joe Horlen and Shelley Smith, Department of Construction Science; Ivan Damnjanovic, Department of Civil Engineering; Chris Cherry, College of Education and Human Development; Trez Jones, Department of Educational Administration and Human Resource Development; Aydin Karsilayan, Department of Electrical and Computer Engineering; Sally Kallina and Matthew Pariyothorn, Department of Engineering Academic and Student Affairs; Jay Porter, Department of Engineering Technology and Industrial Distribution; Craig Coates, Department of Entomology; Lori Greenwood, Paul Keiper and Alyssa Locklear, Department of Health and Kinesiology; Natarajan Gautam, Department of Industrial and Systems Engineering; Timothy Jacobs, Department of Mechanical Engineering; Ann Alexander, Department of Recreation, Park and Tourism Sciences; Steve Hague, Department of Soil and Crop Sciences; Tim McLaughlin, Department of Visualization.

The Undergraduate Curriculum Committee recommends approval of the following:

1. The minutes of the November 6, 2015 meeting.

2. New Courses

**AERO 451. Human Spaceflight Operations. (3-0). Credit 3.** Essential aspects of human spaceflight operations as performed by NASA; in-depth understanding of the state-of-the-art in spacecraft operations, including spacecraft systems, ground and launch operations, mission management and on-orbit activities such as science, robotics, spacewalking and human health maintenance; applications to future space systems. Prerequisite: Grade of C or better in AERO 321 or equivalent; senior classification.

**AGCJ 411. Audience and Communications Research Methods. (2-2). Credit 3.** Evaluation and implementation of research designs and methods used in audience and communications research; data collection methods and strategies, including interviews, observations, focus groups, surveys and content analyses, use of descriptive and comparative analyses to develop data-driven personas and recommendations for engaging target audiences. Prerequisite: Junior or senior classification.

**AGSC 305. Management of Supervised Agricultural Experiences. (3-0). Credit 3.** Overview of supervised agricultural experiences (SAEs) and content that can be used in the secondary agricultural science program; engagement in SAE programs; management practices for SAE projects including record keeping and student reports. Prerequisite: Junior or senior classification.

**ANSC 351. Current issues in Animal Agriculture. (3-0). Credit 3.** Preparation to project a professional image and the use of communication skills to describe animal agriculture; converse about the strengths and weaknesses of animal agriculture. Prerequisite: Junior or senior classification.

**ARAB 104. Intensive Beginning Arabic. (8-0). Credit 8.** Accelerated elementary language study, with oral, listening, reading and writing practice. Equivalent to ARAB 101 and ARAB 102.
ARAB 204. Intensive Intermediate Arabic. (6-0). Credit 6. Accelerated intermediate language study, with oral, listening, reading and writing practice. Equivalent to ARAB 201 and ARAB 202. Prerequisite: ARAB 102 or ARAB 104.

ARCH 281. Seminar in Contemporary Architecture. (1-0). Credit 1. Presentations by and discussions with professionals representing specialty areas related to environmental design through the Department of Architecture Lecture Series. May be taken four times for credit.

ARCH 353. History of Product Design. (3-0). Credit 3. History of product design in Europe and America including the relationship between designer and object, the relationship of design, industry and media over time and design criticism; focus on material/technical and typological approaches, comparative method and content analysis in context of original environment and social history. Prerequisite: Junior or senior classification or approval of instructor.

ARCH 381. Design Seminar. (1-0). Credit 1. Presentations by and discussions with professionals representing specialty areas related to architectural fabrication and product design. May be taken three times for credit. Prerequisite: Junior or senior classification or approval of instructor.

ATTR 201 Field Experience in Athletic Training I. (0-4). Credit 1. Field based experience in athletic training to provide on-the-job training designed to enhance and clarify career objectives; knowledge and skill development in professional behaviors, injury prevention and risk management. Prerequisite: Kinesiology majors.

ATTR 202. Field Experience in Athletic Training II. (0-4). Credit 1. Field based experience in athletic training to provide on-the-job training designed to enhance and clarify career objectives; knowledge and skill development in recognition and evaluation of common injuries and illnesses and their management. Prerequisite: ATTR 201.

ATTR 301. Field Experience in Athletic Training I. (0-4). Credit 1. Field based experience in athletic training to provide on-the-job training designed to enhance and clarify career objectives; knowledge and skill development in the treatment and rehabilitation of athletic injuries. Prerequisite: ATTR 202.

ATTR 302. Field Experience in Athletic Training II. (0-4). Credit 1. Field based experience in athletic training to provide on-the-job training designed to enhance and clarify career objectives; knowledge and skill development in athletic training administration; exploration of policy and position statements; professional development. Prerequisite: ATTR 301.

BAEN 484. Internship. No Credit. Practical experience working in a professional biological and agricultural engineering setting. May be taken three times. Prerequisite: Junior or senior classification; approval of the instructor.

BESC 311. International Perspectives on Environmental Issues. (3-0). Credit 3. Role of the United Nations and other institutions that promote international cooperation toward sustainable development goals; influence of cultural views on critical thinking about environmental issues, including population, water and agriculture, biodiversity and energy. Prerequisite: Junior classification or approval of instructor; must attend two mandatory pre-departure meetings.

CARC 181. First Year Seminar. (3-0). Credit 3. Seminar on various contemporary topics; introduction to high quality college instruction and research; focus on writing, speaking, exploration, discussion and
research. May be taken two times for credit. Prerequisite: First time in college and College of Architecture undergraduate studies.

**CHIN 405. Modern Chinese Fiction. (3-0). Credit 3.** Analysis of major Chinese literary and other prose works of the twentieth and twenty-first centuries; taught in English. May be taken two times for credit. Prerequisite: Junior or senior classification or approval of instructor.

**CHIN 465. Chinese Film. (3-0). Credit 3.** Consideration and analysis of major works and directors of Chinese film; interpretation of culture through film; relationship of film to history, literature and other arts; taught in English. May be taken two times for credit. Prerequisite: Junior or senior classification or approval of instructor. Cross-listed with FILM 465.

**CSCE 451. Software Reverse Engineering. (2-2). Credit 3.** Overview of the compilation mechanism to generate executable files and raw binary codes from source codes; executable file formats for an operating system to run the binary code; disassembly algorithms and control graph analysis; static and dynamic analyses; case studies on code obfuscation, codebreaking, malware analysis. Prerequisite: CSCE 313 or approval of instructor.

**COSC 202. Introduction to Housing. (3-0). Credit 3.** Overview of the social, economic, environmental and cultural impacts of housing on communities and nations; varied prospectives to understand the different facets of housing and their impacts on the human experience; critical thinking skills to gain knowledge and to be informed of housing choices.

**COSC 310. Design and Construction Leadership Education I. (1-0). Credit 1.** Promotion of personal leadership skills utilized within the design and construction professions; primary understanding and developing management skills with specific attention to developing personal attributes and skills necessary for achieving organizational goals. Prerequisites: CARC majors only pursuing the minor in leadership in the design & construction professions; junior or senior classification or approval of instructor.

**COSC 333. Project Management for Faculty Managers. (3-0). Credit 3.** Overview of project management for facility managers covering concepts and components of project management and their interrelationships in construction practice. Prerequisite: Minor in facility management; junior or senior classification or approval of instructor.

**COSC 410. Design and Construction Leadership Education II. (1-0). Credit 1.** Development of competencies in various leadership and management practices that are useful in an array of situations; emphasis on organizational leadership and management development with specific attention to intragroup relationships and techniques for achieving group goals. Prerequisites: COSC 310, CARC majors only pursuing the minor in leadership in the design and construction professions; junior or senior classification or approval of instructor.

**COSC 411. Seminar in Design and Construction Executive Leadership. (1-0). Credit 1.** Promotes an understanding of leadership and builds the capacity to understand and meet the challenges involved in developing and leading ethical and sustainable organizations in today's economy; examination of theory, conceptualizing, reflection and application; share experiences in everyday life and learn to predict outcomes based on theoretical models. Prerequisite: COSC 410; CARC majors only pursuing the minor in leadership in the design and construction; junior or senior classification or approval of instructor.

**CVEN 399. Mid-Curriculum Professional Development. No Credit.** Participation in an approved high-impact learning practice; refletion on professional outcomes from civil engineering body of
knowledge; documentation of experience appropriate to eventual professional licensure; self-assessment of learning at mid-curriculum point. Prerequisites: CVEN 207, CVEN 250, CVEN 303, CVEN 306, CVEN 311, CVEN 322, CVEN 345 and CVEN 363.

**ECEN 423. Computer and Wireless Networks. (3-0). Credit 3.** Fundamentals of wired and wireless computer networks, design and performance evaluations of wired and wireless networks, various unguided media characterizations and classifications/comparisons, digital-data representations/transmissions, error control, MAC protocols, routing, TCP/UDP/IP, wireless TCP, queuing-delay/loss modeling, IEEE 802.11 and its interconnections with Internet, and QoS provisioning over wired/wireless networks. Prerequisite: Grade of C or better in MATH 311; junior or senior classification.

**ECEN 484. Professional Internship. (1-0). Credit 1.** Professional internship in a private company, government agency or laboratory, university or organization to provide work and/or research experience related to the student’s major and career objectives. May be taken three times for credit. Prerequisites: Grade of C or better in ECEN 214 or ECEN 248; junior or senior classification; approval of instructor and internship agency.

**ENDS 108. Design and Visual Communication Foundations II. (1-12). Credit 5.** Approaches to problem identification and problem solving emphasizing human, physical and cultural factors influencing architectural design; understanding of space, materiality and tectonics in a human body scale; development of drawing methods with emphasis on analytical drawing; reinforcement of visual and verbal communication as applied to design processes. Prerequisite: ENDS 105 and ENDS 115.

**ENGL 305. Texas Literature. (3-0). Credit 3.** Examination of Texas literature, culture and multimedia; exploration of the development of Texas identities and responses to the rich cultural diversity within the state; topics vary from each section. Prerequisite: Junior or senior classification.

**ENGR 380. Seminar Series in Engineering Project Management. (1-0). Credit 1.** Presentations by practicing engineers and professionals addressing engineering project management process and practice; discussion forum to better understand the opportunities and challenges of engineering project management and the analytical tools and skills required to be successful. Must be taken on a satisfactory/unsatisfactory basis. Prerequisites: ENGR 333 or approval of instructor; junior or senior classification in the Dwight Look College of Engineering or biological and agricultural engineering (BAEN).

**ENGR 430. Fundamentals of Subsea Engineering. (3-0). Credit 3.** Orientation to subsea engineering fundamentals, including SURF (Subsea, Umbilicals/Controls, Risers, Flowlines) equipment and configurations; exposure to practical, industry focused problems; subsea equipment components; design considerations and design drivers; subsea production operations; integrity critical maintenance activities. Prerequisite: Junior or senior classification; enrolled in the Dwight Look College of Engineering or approval of instructor.

**ENTO 209. Veterinary Entomology Laboratory. (0-2). Credit 1.** Insects and their relatives causation of economic loss, impacts to well-being and transmission of disease pathogens to domestic and companion animals and wildlife, as well as health and well-being of humans through occupational or recreational exposure; laboratory emphasizes identification of major arthropod pests, use of microscopy and dissection equipment. Prerequisite: Concurrent enrollment with ENTO 208.

**FILM 465. Chinese Film. (3-0). Credit 3.** Consideration and analysis of major works and directors of Chinese film; interpretation of culture through film; relationship of film to history, literature and other
arts; taught in English. May be taken two times for credit. Prerequisite: Junior of senior classification or approval of instructor. Cross-listed with CHIN 465.

**GEOG 391. Geodatabases. (3-1). Credit 3.** GIS data modeling; introductory and advanced spatial SQL (structured query language); spatial database management system (DBMS) server setup, management and maintenance; spatial DBMS design, implementation, tuning, performance analysis and indexing; connecting spatial data services and warehouses to GIS software. Prerequisite: Junior or senior classification.

**GEOL 102. Principles of Geology Laboratory. (0-2). Credit 1.** Laboratory exercise-based introduction to the physical and chemical nature of the Earth and dynamic process that shape it; rock and mineral types; topographic and geologic maps; a complement to GEOL 101, but may be taken independently.

**MATH 140. Mathematics for Business and Social Sciences. (3.0). Credit 3.** (MATH 1324) Application of common algebraic functions, including polynomial, exponential, logarithmic and rational, to problems in business, economics and the social sciences; includes mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. No credit will be given for more than one of MATH 140, MATH 141 and MATH 166. Prerequisite: High school algebra I and II and geometry.

**NRSC 350 Science of Mind and Brain. (3-0). Credit 3.** Research in cognitive neuroscience; methodological advances that enable the study of the human brain safely in the laboratory; complex aspects of the mind like emotion, social behavior, and consciousness. Prerequisite: Junior or senior classification.

**PHLT 484. Public Health Studies Field Experience. (3-0). Credit 3.** On the job training in the area of public health studies industry; development of objectives and goals; evaluation by supervisor required. Prerequisites: Approval of instructor; junior or senior classification; public health major with a minimum overall 3.0 TAMU GPA.

**PHYS 328. Experimental Physics II. (1-1). Credit 1.** Laboratory experiments in modern physics and physical optics with an introduction to current, state-of-the-art recording techniques. Prerequisites: PHYS 225, PHYS 309, PHYS 327.

**PHYS 416. Physics of the Solid State. (3-0). Credit 3.** A survey of solid state physics; an introduction to crystal structures and the physics of electrons, lattice vibrations and photons; applications to semiconductors; magnetism; superconductivity; physics of nanostructures; brief introduction to selected current topics in condensed matter physics. Prerequisites: PHYS 304 and PHYS 412.

**PSYC 350. Sciences of Mind and Brain. (3-0). Credit 3.** Research in cognitive neuroscience; methodological advances that enable the study of the human brain safely in the laboratory; complex aspects of the mind like emotion, social behavior and consciousness. Prerequisite: Junior or senior classification. Cross-listed with NRSC 350.

**SPAN 208. Spanish for Health Professionals I. (3-0). Credit 3.** First half of a two-semester sequence for intermediate level Spanish; for those interested in careers in the health professions; presentation and practice of the most important basic communication functions in patient-provider interaction. Prerequisite: SPAN 102 or placement by exam.

**SPAN 218. Spanish for Health Professionals II. (3-0). Credit 3.** Second half of a two-semester course sequence for intermediate level Spanish; for those interested in careers in the health professions;
presentation and practice of the most important basic communication functions in patient-provider interaction. Prerequisite: SPAN 201, SPAN 208, or placement by exam with approval of instructor.

**SPAN 318. Oral Communication for Health Professionals. (3-0). Credit 3.** Development of advanced oral communication skills in Spanish within the context of the medical professions through discussion and study of health related and cultural issues relating specifically to the Latino/Hispanic community. Field trips, service learning, volunteering, interviews, impromptu speaking and formal presentations may be required. Prerequisite: Junior or senior classification or approval of instructor with placement exam, or SPAN 202 or SPAN 218.

**SPAN 407. Spanish-English Translation. (3-0). Credit 3.** Foundations of translation methodology, strategies and practice; rendering of literary and non-literary texts; ethics of translation; emphasis on translation into the first language. Prerequisite: 6 credits of upper division SPAN with a grade of B or better or approval of instructor.

**SPAN 417. Advance Spanish-English Translation. (3-0). Credit 3.** Expansion of translation practice and development of lexical and stylistic competence in specialized fields, including commercial, legal, medical, technical and scientific; mandatory service learning component included. Prerequisite: SPAN 407 with a grade of B or better or approval of instructor.

**SPMT 481. Seminar. (1-0). Credit 1.** A variety of topical seminars in communicating contemporary and historical sport management subjects designed to complement the curriculum in sport management. May be taken three times for credit. Prerequisite: Admission to the professional phase of the sport management program; junior or senior classification; or approval of instructor.

**VIBS 243. Introductory Mammalian Histology. (1-2). Credit 2.** Biological aspects of the human body by integrating histology and anatomy and physiology; emphasis on the transition of cell and tissue organization to organ systems that comprise mammalian organisms; builds upon concepts introduced in lower-level biology and builds a foundation to succeed in upper-level histology, anatomy and physiology.

**VIST 432. Applied Perception. (3-0). Credit 3.** An advanced introduction to perceptual science, including the cognitive, neural and evolutionary processes that undergird perceptual systems as well as the variety of perceptual factors that influence design decision. Prerequisite: Visualization major; junior or senior classification or approval of instructor.


3. Change in Courses

**AERO 291. Research.**

Variable credit hours

From: Credit 1 to 4.
To: Credit 0 to 4.
AERO 491. Research.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.


Prerequisites
From: ENDS 116 or approval of instructor.
To: None.


Prerequisites
From: Junior or senior classification, or approval of instructor; ENDS 106.
To: Junior or senior classification or approval of instructor; ARCH 216 or approval of instructor.

ARCH 433. Architectural Lighting.

Prerequisites
From: Junior or senior classification.
To: ARCH 335 or junior or senior classification in EDAS.

BMEN 428. Microcontrollers & Comm. in Medical Devices.

Lecture and lab contact hours
From: (3-0). Credit 3.
To: (2-3). Credit 3.

CHEN 204. Elementary Chemical Engineering.

Lecture and lab contact hours
From: (3-0). Credit 3.
To: (2-3). Credit 3.

Prerequisites
From: Admission to chemical engineering major or approval of instructor.
To: Grade of C or better in CHEM 102, CHEM 112, ENGR 112, MATH 152 and PHYS 218; admission to chemical engineering major; or approval of instructor.

COMM 475. Media and the Middle East.

Course number
From: COMM 475.
To: COMM 367.
ECEN 314. Signals and Systems.

Lab contact hours
From: (3-0). Credit 3.
To: (3-1). Credit 3.

ENGL 320. Technical Editing and Writing.

Course title
From: Technical Editing and Writing.
To: Technical and Professional Editing.

Course description
From: Clarifying, reducing, expanding and synthesizing such technical materials created by others as manuals, annual reports, and technical articles and reports; audience adaptation, invention, organization, style and mechanics explored.
To: Principles and techniques of technical editing for print and electronic media, including standards, style, copy-editing, comprehensive editing and project management.

ENGL 460. Writing for the Web.

Course title
From: Writing for the Web.
To: Digital Authoring Practices.

Course description
From: Integration of technology instruction and proven technical communication strategies for developing effective audience-appropriate websites (infrastructure, structure, content, design, and navigation); focus on rhetorical shifts of the Internet medium, as well as ethical, sociocultural and legal issues, including web accessibility.
To: Analysis and practice of authoring in digital environments, including individual and collaborative approaches, audience concerns, theoretical, ethical and stylistic issues; environments and topics may include web design, content management system (CMS), text encoding, project management, usability, version tracking, content authoring and accessibility.

ENGR 291. Research.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.

ENGR 491. Research.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.
ENTO 208. Veterinary Entomology.

Lab contact hours and semester credit hours
From: (2-2). Credit 3.
To: (2-0). Credit 2.

Course description and prerequisites
From: Classification, biology and control of insects and other arthropods associated with livestock and poultry production; identification emphasized in laboratory.
To: Insects and their relatives causation of economic loss, impacts to well-being and transmission of disease pathogens to domestic and companion animals and wildlife as well as health and well-being of humans through occupational or recreational exposure; insect biology, economic importance and principles and methods of prevention and control.

GEOG 203. Plant Earth.

Lab contact hours
From: (3-0). Credit 3.
To: (3-1). Credit 3.


Prerequisites
From: GEOG 361 and GEOG 475 or equivalents, or approval of instructor; junior or senior classification.
To: GEOG 361, GEOG 390, GEOG 475; CSCE 110 or CSCE 111.

GEOG 484. Internship.

Course description
From: Directed internship in a private firm, government agency, or non-governmental organization to provide work experience related to the student's degree program and career objectives. May be taken 2 times for credit.
To: Directed internship in a private firm, government agency or non-governmental organization to provide work experience related to the student's degree program and career objectives.


Lab contact hours
From: (3-0). Credit 3.
To: (3-1). Credit 3.

JOUR 304. Editing for the Mass Media.

Lecture and lab contact hours
From: (2-2). Credit 3.
To: (3-0). Credit 3.
Course description and prerequisites

From: Principles and practice of editing including: improving and tightening print and broadcast copy; writing headlines, titles and subheads; photo editing and cutlines; graphics and layout. Prerequisites: JOUR 203, junior or senior classification and enrollment in journalism minor; or approval of program director.*To: Principles and practice of editing including: improving and tightening text; writing headlines, titles and subheads; self-editing and editing others; tailoring texts for specific audiences; understanding style guides. Prerequisites: Junior or senior classification; or approval of program director.

KINE 223. Introduction to the Science of Health and Fitness.

Course description

From: Overview of the human body systems; interdisciplinary focus on wellness, fitness, nutrition, disease, drug use; integrated physical activity centering on principles and applications of conditioning; collect data, evaluate information, formulate plans based on findings; experience with pedometers, heart rate monitors, bioelectrical impedance devices, software and other technology. Not open to students who have taken KINE 120.

To: Overview of the human body systems; interdisciplinary focus on wellness, fitness, nutrition, disease, drug use; integrated physical activity centering on principles and applications of conditioning; collect data, evaluate information, formulate plans based on findings; experience with pedometers, heart rate monitors, bioelectrical impedance devices, software and other technology.

LAND 200. Introduction to Landscape Architectural Practice.

Course number

From: LAND 200.
To: LAND 101.

Cross-listing

From: Cross-listed with URPN 200.
To: Cross-listed with URPN 101.

LAND 254. Landscape Architecture Communications I.

Course number

From: LAND 254.
To: LAND 111.

LAND 255. Landscape Architectural Communications II.

Course number

From: LAND 255.
To: LAND 112.

LAND 318. Landscape Design I.

Course number

From: LAND 318.
To: LAND 211.
LAND 319. Landscape Design II.

Course number
From: LAND 319.
To: LAND 212.

LAND 320. Landscape Design III.

Course number
From: LAND 320.
To: LAND 311.

Course description
From: Design process, synthesis and design refinement; problems to stimulate highly creative self-motivated results, design thinking to integrate behavioral settings into natural and/or built landscape systems.
To: Design process, sustainable landscape design, synthesis and design refinement; problems to stimulate highly creative self-motivated results, design thinking to integrate behavioral settings into natural and/or built landscape systems.

LAND 321. Landscape Design IV.

Course number
From: LAND 321.
To: LAND 312.

Course description
From: Continuation of LAND 320; land design projects of increased complexity with site scale problems used to demonstrate complete design thought. One or more field trips may be required as part of the course.
To: Continuation of LAND 311; land design projects of increased complexity and emphasis on sustainability, with site scale problems used to demonstrate complete design thought. One or more field trips may be required.

LAND 330. Landscape Construction II.

Course number
From: LAND 330.
To: LAND 232.

LAND 421. Landscape Design VI.

Course number
From: LAND 421.
To: LAND 412.
Course description
From: Advanced study and research designed to take the student beyond the core design experience; introduction of issues, methodologies, tools and techniques developing in professional practice.
To: Capstone studio; advanced study and research designed to go beyond the core design experience; introduction of issues, methodologies, tools and techniques developing in professional practice.

LAND 442. Professional Practice.

Course number
From: LAND 442.
To: LAND 431.

MATH 141. Business Mathematics I.

Course title
From: Business Mathematics I.
To: Finite Mathematics.

Course description
From: Linear and quadratic equations and applications; functions and graphs, systems of linear equations, matrix algebra and applications, linear programming, probability and applications, statistics. No credit will be given for more than one of MATH 141 and MATH 166.
To: Linear equations and applications; systems of linear equations, matrix algebra and applications, linear programming, probability and applications, statistics. No credit will be given for more than one of MATH 140, MATH 141 and MATH 166.

MATH 142. Business Mathematics II.

Course title
From: Business Mathematics II.
To: Business Calculus.

Prerequisites
From: High school algebra I and II and geometry or satisfactory performance on a qualifying examination
To: MATH 140 or equivalent or acceptable score on Texas A&M University math placement exam.

MATH 166. Topics in Contemporary Mathematics II.

Course description
From: Finite mathematics, matrices, probability and applications. No credit will be given for more than one of MATH 141 and MATH 166.
To: Finite mathematics, matrices, probability and applications. No credit will be given for more than one of MATH 140, MATH 141 and MATH 166.
MEEN 357. Engineering Analysis for Mechanical Engineers.

Prerequisites
From: ENGR 112 and MATH 308.
To: ENGR 112 and MATH 308; MEEN 210 or concurrent enrollment.

MEEN 360. Materials and Manufacturing Selection in Design.

Prerequisites
From: MEEN 222, MEEN 260; CVEN 305; junior or senior classification; or approval of instructor.
To: MEEN 210, MEEN 222, MEEN 260; CVEN 305; junior or senior classification.

MEEN 363. Dynamics and Vibrations.

Prerequisites
From: MEEN 225; MATH 308; MEEN 357 or CVEN 302, or registration therein; CVEN 305 or registration therein.
To: MEEN 225; MATH 308; MEEN 357 or concurrent enrollment; CVEN 305 or concurrent enrollment.

OCNG 251. Oceanography.

Lab contact hours
From: (3-0). Credit 3.
To: (3-1). Credit 3.

PHYS 327. Experimental Physics I.

Lecture and lab contact hours and semester credit hours
From: (2-3). Credit 3.
To: (1-2). Credit 2.

SCMT 340. Supply Chain Management.

Course title
From: Supply Chain Management.
To: Global Supply Chain Management.

Course description
From: Focus on the integrated management of the total product delivery system; purchasing, inventory management and distribution functions, with emphasis on materials and information flows.
To: Extend knowledge of basic concepts of transportation and logistics to specialized situations in international business in order to understand (a) the international trade and commercial environment, (b) exporting and importing documentation and procedures and (c) operations involving international shipping and transportation.
SCSC 305. Production Agronomy Experience.

Course title
From: Production Agronomy Experience.
To: Professional Development in Agronomy.

Course description
From: Agronomy industry practices related to crop production; site visits in Texas and in the Mississippi Delta include a review of farming equipment, conservation agriculture practices, agro-chemical distribution and sales, grain product processing and distribution and on-farm management techniques.
To: Enhancement of human relation skills related to a career in soil and crop sciences; field trip to Mississippi to interact with leadership from a global agricultural company; on-campus experiences to improve effective learning practices, job seeking and retention and setting and achieving near-term and long-term professional goals.

SCSC 312. Introductory Turfgrass Management Laboratory.

Course title
From: Introductory Turfgrass Management Laboratory.
To: Professional Development in Turfgrass.

Course description
From: Fundamentals of turfgrass anatomy, growth habit, identification and characteristics of cool- and warm-season turfgrass species; understanding of seed quality and labeling, pesticide safety, handling, and application, and fertilizer sources, safety, and application; specialized equipment used in the turfgrass industry.
To: Includes but not limited to fertilizer, pesticide, irrigation calculations; turfgrass, insect and weed identification and management, soils and rootzone construction; irrigation system operation and auditing; sprayer and spreader operation and calibration; builds upon and allows application of information obtained in SCSC 302; designed to better prepare those intending to compete in the GCSAA and STMA Collegiate Turf Bowl competitions.

SPMT 482. Seminar.

Course title
From: Seminar.
To: Professional Writing Seminar.

Course description
From: Acquaint students with current research and the research process in their chosen field of study (sport management). May be taken 4 times for credit.
To: Acquaint students with a primary means of communicating contemporary research in sport management; extensive readings, intensive writings and an oral presentation designed to complement the curriculum in sport management by introducing the application of sport management research to organizational decision making.


Course title

To: Cybersecurity and Digital Ethics.

4. Change in Curriculum

**College of Agriculture and Life Sciences**
Department of Biological and Agricultural Engineering
   BS in Agricultural Systems Management

Department of Nutrition and Food Science
   BS in Food Science and Technology – Food Science Option
   BS in Food Science and Technology – Industry Option

**College of Architecture**
Department of Architecture
   BED in Environmental Design Architectural Studies

Department of Construction Science
   Minor in Facility Management

Department of Visualization
   Minor in Art

**Mays Business School**
Minor in Business Administration

Department of Information and Operations Management
   BBA in Management Information Systems
   BBA in Supply Chain Management

**College of Education and Human Development**
Department of Health and Kinesiology
   BS in Health – Allied Health Track

   Minor in Sport Management

**Dwight Look College of Engineering**
Department of Computer Science and Engineering
   BS in Computer Science

Department of Engineering Technology and Industrial Distribution
   BS in Manufacturing and Mechanical Engineering Technology

Department of Engineering Technology and Industrial Distribution
   BS in Industrial Distribution

Department of Industrial and Systems Engineering
   Minor in Industrial Engineering
College of Geosciences
BS in Environmental Geosciences

BS in Environmental Studies

Minor in Climate Change

Minor in Earth Sciences

Minor in Environmental Geosciences

Department of Geography
  BS in Geographic Information Science and Technology
  All tracks

Department of Oceanography
  BS in Environmental Geosciences and MS in Oceanography – 3+2

Department of Geology and Geophysics
Department of Oceanography
  BA in Geology and MS in Oceanography – 3+2
  BS in Geology and MS in Oceanography – 3+2

Department of Atmospheric Sciences
Department of Oceanography
  BS in Meteorology and MS in Oceanography – 3+2

College of Liberal Arts
Minor in Liberal Arts Honors

Department of Communication
  BA in Communication
  BA in Telecommunication Media Studies
  BS in Telecommunication Media Studies

Department of History
  BA in History

Department of Sociology
  BA in Sociology
  BA in Sociology and MPSA – 3+2
  BS in Sociology
  BS in Sociology and MPSA – 3+2

Minor in Latina/o and Mexican-American Studies
a. New Courses

DIVE 250. SCUBA Diving I. (2-2). Credit 3. Fundamental academic knowledge and practical application of SCUBA diving practices and theory; introduction to diving tables and diving physiology. Prerequisite: Must complete a medical statement showing no contraindications to diving, or have a recreational SCUBA diver's physical examination.

DIVE 251. SCUBA Diving II. (2-2). Credit 3. Methods to promote safe, self-reliant diving and improve the diver's comfort, coordination and strength in the water; to build competency in dive planning and organization. Prerequisite: Must complete a medical statement showing no contraindications to diving, or have a recreational SCUBA diver's physical examination; open water certification from a nationally recognized agency; Divers Alert Network (DAN) insurance or equivalent.

DIVE 330. Rescue Diving. (2-2). Credit 3. Relates skills necessary to perform basic life support, administer dive first aid, evacuate victim, assist and rescue other divers in water; illustrate proper dive planning; practice accident prevention and effective accident management. Prerequisites: Must complete a medical statement showing no contraindications to diving, or have a recreational SCUBA diver's physical examination; certification as a SDI SCUBA diver or equivalent; Divers Alert Network (DAN) diving accident insurance or equivalent.

DIVE 331. Alternative Diving Technology. (2-2). Credit 3. Illustrates the realities of operating in the scientific, public safety and military diving disciplines; practice real world training scenarios involving multiple aspects of each of the three fields. Prerequisites: Must complete a medical statement showing no contraindications to diving, or have a recreational SCUBA diver's physical examination (or AAUS physical if rating with AAUS); certification as an Advanced and Rescue Diver or equivalent; Divers Alert Network (DAN) diving accident insurance or equivalent; junior or senior classification or approval of instructor.

DIVE 357. Dive Leadership – Divemaster. (2-2). Credit 3. Examines divemaster-level dive knowledge, dive leadership theory and application, presentations skills, physical diving skills, logistics and planning, and operational execution; develops a multi-environment capable diving leader. Prerequisites: Must complete a medical statement showing no contraindications to diving, or have a recreational SCUBA diver's physical examination; certification as a SDI Advanced SCUBA Diver and SDI SCUBA Rescue Diver or equivalent; 60 varied dives logged; current certifications in First Aid, CPR and Emergency Oxygen Administration; Divers Alert Network (DAN) diving accident insurance (or equivalent); junior or senior classification or approval of instructor.

DIVE 457. Dive Leadership – Instructor. (2-2). Credit 3. Apply effective methods to teach skin and SCUBA diving in compliance with training agency instructional standards; evaluate instructional level dive knowledge, water skills and presentation performance in accordance with training agency teaching standards. Prerequisites: Recreational SCUBA diver’s medical evaluation; certification as a
SCUBA divemaster or equivalent; 100 varied dives logged; current certification in First Aid, CPR and Emergency Oxygen Administration; Divers Alert Network (DAN) diving accident insurance or equivalent; junior or senior classification or approval of instructor.

b. Withdrawal of Courses

MAST 110. Scuba Lecture.
MAST 120. Scuba II Lecture.
MAST 331. Alternate Diving Technology.
MAST 357. Diving Leadership-Divemaster.
MAST 457. Dive Leadership-Dive Instructor.

c. Change in Course

**MASE 319. Naval Architecture Design I.**

Prerequisites

From: CVEN 311, CVEN 345; MASE 221, MASE 214. Junior or senior classification or approval of instructor. Enrollment in OCSE major degree sequence.

To: CVEN 311 and CVEN 345 or concurrent enrollment; MASE 221 and MASE 214 or concurrent enrollment; junior or senior classification or approval of instructor; enrollment in OCSE major degree sequence.

CIP code

From: 1424010006.
To: 1422010006.

6. Texas A&M University at Galveston

d. Change in Curriculum

**Texas A&M University at Galveston**

Department of Liberal Studies
Minor in Diving Technology and Methods

Department of Marine Biology
BS in Marine Biology – License Option

7. Special Consideration

**College of Agriculture and Life Sciences**

Department of Recreation, Park and Tourism Sciences
BS in Community Development
Request to discontinue degree program

**College of Architecture**

Department of Architecture
Minor in Architectural Fabrication and Product Design
Request for a new minor
Department of Construction Science
   Minor in Leadership in the Design and Construction Professions
      Request for a new minor

Department of Visualization
   Minor in Game Design and Development
      Request for a new minor

College of Education and Human Development
   Department of Health and Kinesiology
      BS in Kinesiology and MS in Athletic Training
      Request for a new 3+2 program

Dwight Look College of Engineering
   Minor in Cybersecurity
      Request for a new minor

   Minor in Engineering Project Management
      Request for a new minor

   Department of Computer Science and Engineering
      Minor in Game Design and Development
      Request for a new minor

8. New Courses – from November 2015 UCC Meeting

   **AGSM 284. Internship. No Credit.** Practical experience working in a professional agricultural systems management setting. May be taken three times. Prerequisite: Freshman or sophomore classification; approval of the instructor.

   **AGSM 484. Internship. No Credit.** Practical experience working in a professional agricultural systems management setting. May be taken three times. Prerequisite: Junior or senior classification; approval of the instructor.

   **BAEN 284. Internship. No Credit.** Practical experience working in a professional biological and agricultural engineering setting. May be taken three times. Prerequisite: Freshman or sophomore classification; approval of the instructor.

9. Tabled Items

   **New Course**
   AGE C 416 (cross-listed with GEOS 416) – The College of Geosciences requested the course be tabled in order to continue discussions on the proposed new courses and the certificate associated with the courses.

10. Pulled Items

   **Special Consideration**
   College of Science, Department of Biology, new Minor in Bioinformatics - The College of Science withdrew the minor to continue discussions about the proposed new minor with other colleges.
The Undergraduate Curriculum Committee recommends approval of the following:

1. The minutes of the December 4, 2015 meeting.

2. New Courses

**MSEN 210. Thermodynamics of Materials.** *(3-0). Credit 3.* Basic concepts and fundamental laws of thermodynamics; processes and thermodynamic engines; phase equilibria and phase diagrams of simple substances; chemical reactions of condensed phases; computational software for thermodynamic and phase diagram calculations. Prerequisites: MSEN 201 and MATH 152. Concurrent enrollment: MSEN 201 and MATH 152.

**MSEN 220. Physics and Chemistry of Inorganic Materials.** *(3-0). Credit 3.* Structure, properties and function of materials developed from an atomistic and molecular perspective emphasizing quantum chemical descriptions; elements of solid-state chemistry and physics including bonding, crystal structure and symmetry, origin of electronic band structure, synthesis and characterization tools in materials chemistry, and role of finite size effects. Prerequisite: PHYS 208 or CHEM 102. Concurrent enrollment: PHYS 208 or CHEM 102.

**MSEN 240. Kinetics of Materials.** *(3-0). Credit 3.* Application of physical principles that drive evolution of materials as they approach thermodynamic equilibrium states; includes Gibbs free energy, driving forces, point defects, diffusion in solids, interface and grain boundary motion, nucleation, growth, transformation diagrams, precipitation, phase separation, ordering and solidification. Prerequisite: MSEN 210.

**MSEN 250. Soft Matter.** *(3-0). Credit 3.* Structure, properties and function of various classes of soft matter including colloids, polymers, amphiphils, liquid crystals and biomacromolecules; basic concepts of viscoelasticity, glass transition, liquid-liquid and liquid-solid transitions and gelation; forces acting between mesoscopic objects; supramolecular self-assembly in soft condensed matter. Prerequisites: PHYS 208, CHEM 102 and CHEM 112.

**MSEN 281. Materials Science and Engineering Seminar.** *(1-0). Credit 1.* Presentation of technical advances in the field of materials science and engineering; applications toward solving engineering challenges; presentations from visiting industry, academic speakers, and faculty; introduction to current research themes and focal points in industry. Prerequisite: MSEN 201.

**MSEN 301. Unified Materials Lab I.** *(2-3). Credit 3.* Integration of materials synthesis, structural characterization and property evaluation; theory and practice of experimental and simulation techniques; emphasis on relationship between processing parameters and resulting materials structure. Prerequisites: MSEN 240 and MSEN 310. Concurrent enrollment: MSEN 240 and MSEN 310.

**MSEN 302. Unified Materials Lab II.** *(2-3). Credit 3.* Integration of materials synthesis, structural characterization and property evaluation; theory and practice of experimental and simulation techniques; emphasis on relationship between materials structure and resulting materials physical properties. Prerequisite: MSEN 301.

**MSEN 320. Deformation and Failure Mechanisms in Engineering Materials.** *(3-0). Credit 3.* Survey of deformation and failure mechanisms in different materials, including metals, ceramics, polymers and composites; effect of atomistic structure, defects and microstructure on deformation and
failure; deformation and failure mechanism maps and effects of temperature and deformation rate. Prerequisite: MSEN 310 or approval of instructor.


MSEN 400. Design and Analysis of Materials Experiments. (2-3). Credit 3. Systematic design of experimental investigations; team approach to identify topics and develop experiment designs including establishing the need, associated requirements and objective; conduct experiments; characterize materials; analyze and interpret results; documenting the procedures, analysis, results and conclusions; present written and oral reports. Prerequisites: MSEN 220, MSEN 302 and MSEN 320.

MSEN 401. Materials Research and Design I. (2-3). Credit 3. Research and design process; need definition, functional analysis, performance requirements, evaluation criteria, conceptual design evaluation; introduction to systems engineering; parametric and risk analysis, failure analysis, material selection and manufacturability; cost and life cycle issues, project management; topics from sponsored research or an industry-sponsored design project. Prerequisites: MSEN 281, MSEN 340 and MSEN 400.

MSEN 402. Materials Research and Design II. (2-3). Credit 3. Continuation of MSEN 401; development of innovative solutions to research or industry-provided design challenges; structured framework and methodology for design activities; innovation, computational materials science, synthesis/processing and analysis/characterization of material components; project definition, management, customer interaction and effective team participation; presentations and design reviews. Prerequisite: MSEN 401.

MSEN 415. Defects in Solids. (3-0). Credit 3. Overview of point, line and surface defects in solids; relates defect properties to diffusion, deformation, phase transformations; focuses on atomic defects in crystals, with additional examples from liquid crystals, superconductors and ferromagnets; incorporates atomistic modeling to examine defect structure. Prerequisite: MSEN 310 or approval of instructor.

MSEN 426. Polymer Laboratories. (2-3). Credit 3. Laboratory to prepare those interested in polymer research with necessary experimental and analytical skills to conduct and analyze experimental work. Prerequisite: MSEN 250 or approval of instructor.

MSEN 430. Nanomaterials Science. (3-0). Credit 3. Nanotechnology and nanomaterials; types, fabrication, characterization methods and applications; current roles in technology and future impact of such systems on industry targeting. Prerequisite: MSEN 310, junior or senior classification; or approval of instructor.
MSEN 440. Materials Electrochemistry and Corrosion. (3-0). Credit 3. Survey of thermodynamic and kinetic fundamentals of electrochemistry; multiscale materials corrosion mechanisms; details of interfacial aqueous electrochemical mechanisms and the environmental effects when materials are exposed to different conditions. Prerequisite: MSEN 220 or approval of instructor.

MSEN 444. Corrosion and Electrochemistry Lab. (2-3). Credit 3. Laboratory practice and principles for corrosion and electrochemistry methods; design, carry out and analyze a series of labs illustrating the most important techniques in the field; builds to an open-ended corrosion engineering problem resulting in preparation of a technical report for a hypothetical client. Prerequisite: MSEN 440.

MSEN 446. Corrosion Prevention and Control Methods. (3-0). Credit 3. Cathodic protection and coatings; functional engineering approach to controlling and preventing aqueous corrosion; impressed current, galvanic anodes, organic, inorganic and hybrid coatings; case studies in oil and gas, energy, automotive and different industries. Prerequisites: MSEN 360 and MEEN 444.

MSEN 458. Fundamentals of Ceramics. (3-0). Credit 3. Structure-property relationships of ceramics and ceramic composites; atomic bonding in ceramics; crystalline and glassy structures; phase equilibria and ceramic reactions; mechanical, electrical, thermal, dielectric, magnetic and optical properties; ceramic processing; different properties of ceramics will be related to their underlying structure. Prerequisite: MSEN 310 or approval of instructor.

MSEN 462. Advanced Materials Characterization. (2-3). Credit 3. Principles and techniques used in characterization of different materials, including metals, ceramics, polymers, composites and semiconductor systems; microstructural, chemical/compositional and surface analysis methods; interpretation and analysis of the characterization results. Prerequisites: MSEN 220, MSEN 250, and MSEN 310; or approval of instructor.

MSEN 472. Atomistic Simulation of Materials. (3-0). Credit 3. Modern methods of computational modeling and simulation of materials properties and phenomena at the atomistic scale; quantum, classical and statistical mechanical methods, including semi-empirical atomic and molecular-scale simulations, and other modeling techniques using macroscopic input. Prerequisite: MSEN 370 or approval of instructor.


MSEN 476. Multi-Scale Computational Materials Science. (2-3). Credit 3. Advanced and problem-based; illustrating elements of challenges associated with multi-scale simulations; examination of multi-scale modeling of elastic response of a multi-phase microstructure; elements of uncertainty quantification and propagation. Prerequisite: MSEN 370 or approval of instructor.

MSEN 484. Internship. Credit 0 to 4. Practical experience working in a professional materials science and engineering setting offered on an individual basis. Must be taken on a satisfactory/unsatisfactory basis. Prerequisites: Junior or senior classification and approval of instructor.

TCMG 486. Cybersecurity Capstone Seminar. (1-1). Credit 1. Capstone seminar on significant issues in industry; examination of current trends in the cybersecurity field; investigation into the multidisciplinary nature of cybersecurity events and incursions. Prerequisites: CSCE 110 or CSCE 121; CSCE 206 or CSCE 221; TCMG 308; junior or senior classification.

3. Change in Courses

ANSC 291. Research.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.

ANSC 485. Directed Studies.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.

ANSC 491. Research.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.

ANSC 494. Internship.

Variable credit hours
From: Credit 1 to 5.
To: Credit 0 to 5.

DASC 485. Directed Studies.

Variable credit hours
From: Credit 1 to 4.
To: Credit 0 to 4.

MSEN 201. Introduction to Materials Science.

Course Title
From: Introduction to Materials Science.
To: Fundamentals of Materials Science and Engineering.

Course Description
From: Processing, structure, properties and performance in materials; materials structure and defects over many orders of scale; mechanical, thermal, electrical, magnetic and optical properties.
To: Fundamental principles of materials science and engineering and their application toward complex engineering challenges; relationship between materials structure and structural and functional properties of engineered materials; property-performance relationships; principle classes of materials, as illustrated through key materials advances; current directions in the field.

**MSEN 310. Structure of Materials.**

**Course Description**
- From: Symmetry, unit cell and the atomic structure of crystalline and non-crystalline materials; the bonding forces and energy for van der Waals, metallic, ionic and covalent crystals.
- To: Materials structure over many orders of scale; structure of non-crystalline materials; symmetry, unit cell and the atomic structure of crystalline materials; liquid crystals; structural defects in ordered solids; microstructures and hierarchical structures.

**MSEN 410. Materials Processing.**

Lecture and lab contact hours
- From: (3-0). Credit 3.
- To: (2-3). Credit 3.

**MSEN 420. Polymer Science.**

**Course Description**
- From: Polymer structure, processing, property characterization at the molecular, microscopic and macroscopic dimensional levels for thermosets, thermoplastics, elastomers, fibers and advanced non-particle filled composites and smart multi-performance structures.
- To: Types of polymerization; molecular characteristics of polymer chains; single chain statistics and rubber elasticity; phase transitions, glass transition, viscoelasticity and time-temperature superposition; polymer structure at the molecular, microscopic and macroscopic level; polymer thermosets, thermoplastics, elastomers, fibers, and advanced nanoparticle-filed composites.

**Prerequisites**
- From: MSEN 201, MSEN 222, AERO 413, BMEN 343, CHEN 313, CVEN 306, ENTC 206, or NUEN 206, or approval of instructor.
- To: PHYS 208, CHEM 102 and CHEM 112; or approval of instructor.

**MSEN 460. Electronic, Optical and Magnetic Properties of Materials.**

**Course Title**
- To: Properties of Functional Materials.

**MSEN 485. Directed Studies.**

Variable credit hours
- From: Credit 1 to 4.
- To: Credit 0 to 4.

**MSEN 491. Research.**
Variable credit hours
   From: Credit 1 to 4.
   To: Credit 0 to 4.

**POSC 491. Research.**

Variable credit hours
   From: Credit 1 to 4.
   To: Credit 0 to 4.

**TCMG 476. Managing Technical Networks.**

Prerequisites
   From: TCMG 272 and TCMG 274 with a grade of C or better; junior or senior classification.
   To: TCMG 308 with a grade of C or better or approval of instructor.

4. Change in Curriculum

**College of Science**
   Department of Physics and Astronomy
   BA in Physics
   BS in Physics

5. Special Consideration

**Dwight Look College of Engineering**
   Department of Materials Science and Engineering
   BS in Materials Science and Engineering
   Request for a new degree program

6. Texas A&M University at Qatar

a. Change in Courses

**PETE 336. Petroleum Technical Presentations I.**

Course Description
   From: Preparation of a written technical paper on a subject related to petroleum technology and an oral presentation of the paper in a formal technical conference format; oral presentations judged by petroleum industry professionals.
   To: Preparation of a written technical paper on a subject related to petroleum technology.

**PETE 436. Petroleum Technical Presentations II.**

Course Description
   From: Preparation of a written technical paper on a subject related to petroleum technology and an oral presentation of the paper in a formal technical conference format; oral presentations judged by petroleum industry professionals at the departmental student paper contest held during the same academic year.
To: Preparation of a written technical paper on a subject related to petroleum technology and an oral presentation of the paper in a formal technical conference format.

b. Change in Curriculum

**Texas A&M University at Qatar**
Petroleum Engineering Program
BS in Petroleum Engineering
CHANGE IN COURSES
February 4, 2016

Memorandum

To: Sandra Williams
   Associate Registrar

Through: Dr. Kim Dooley
   Associate Dean

From: Department of Agriculture Economics
   Dr. Fred Boadu

Subject: Request to Include Zero Credit Hour in Existing Courses

The College of Agriculture and Life Sciences, Department of Agricultural Economics, request the following existing courses to be changed to include a zero credit hour option effective 201631. No other changes are being made to the course.

<table>
<thead>
<tr>
<th>Department Name</th>
<th>Course Number/Title</th>
<th>Existing Credit Hours</th>
<th>Proposed Credit Hours</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Economics</td>
<td>AGEC 285</td>
<td>1-4</td>
<td>0-4</td>
<td>Zero credit option will be used to track student participation in internships</td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>AGEC 291</td>
<td>1-4</td>
<td>0-4</td>
<td>Zero credit option will be used to track student participation in internships</td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>AGEC 484</td>
<td>1-6</td>
<td>0-6</td>
<td>Zero credit option will be used to track student participation in internships</td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>AGEC 485</td>
<td>1-6</td>
<td>0-6</td>
<td>Zero credit option will be used to track student participation in internships</td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>AGEC 491</td>
<td>1-6</td>
<td>0-6</td>
<td>Zero credit option will be used to track student participation in internships</td>
</tr>
</tbody>
</table>

606 John Kimbrough Blvd, 214 AGLS Building
2124 TAMU
College Station, TX 77843-2124
Tel. 979.845-4911 Fax 979.458-1755
http://agecon.tamu.edu/undergraduate

RECEIVED
By Currie Services at 4:37 pm, Feb 04, 2018
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

Form Instructions
1. Course request type:  ☑ Undergraduate  ☐ Graduate  ☐ First Professional (DDS, MD, JD, PharmD, DVM)
2. Request submitted by (Department or Program Name): Department of Biology
3. Course prefix, number and complete title of course: BIOL 456 MEDICAL MICROBIOLOGY

4. Change requested
   a. Prerequisite(s): From: ___________________________ To: ___________________________
   b. Withdrawal (reason):
   c. Cross-list with:

   Cross-listed courses require the signature of both department heads.

   d. Change in course title and description. Enter complete current course title and current course description in item 9; enter proposed course title and proposed course description in item 10. Complete item 11a and b for a change in title.

   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 11a and b. Attach a course syllabus.

5. Is this an existing core curriculum course?  ☐ Yes  ☑ No
6. If grade type is changing for existing course, indicate the new grade type: ☐ Grade ☐ S/U ☐ P/F (CLMD)
7. If this course will be stacked, please indicate the course number of the stacked course:

   I verify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://vpr.tamu.edu/resources/export-controls/export-controls-basics-for-distance-education).

9. Complete current course title and current catalog course description:

10. Complete proposed course title and proposed catalog course description (not to exceed 50 words):

11. a. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>456</td>
<td>Medical Microbiology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lect.</th>
<th>Lab</th>
<th>Other</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>FICE Code</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00</td>
<td>0.00</td>
<td>4.00</td>
<td></td>
<td>26.0503</td>
<td>0440</td>
<td>010298</td>
<td>4</td>
</tr>
</tbody>
</table>

b. Change to:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>456</td>
<td>Medical Microbiology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lect.</th>
<th>Lab</th>
<th>Other</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>FICE Code</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>0.00</td>
<td>3.00</td>
<td></td>
<td>26.0503</td>
<td>0440</td>
<td>010298</td>
<td>4</td>
</tr>
</tbody>
</table>

Approval recommended by:

[Signature]  2/1/16
Department Head or Program Chair (Type Name & Sign) Date

Chair, College Review Committee  2/1/16
Date

Dean of College  2/9/16
Date

Submitted to Coordinating Board by:

[Signature]  2/9/16
Associate Director, Curricular Services

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 08/14

[RECEIVED]

FEB 11 2016
CURRICULAR SERVICES
BIOL 456-MEDICAL MICROBIOLOGY Fall 2015

Lecture: MWF 10:20-11:10 in ENPH 205

Instructor: Dr. Rita B. Moyes
office: 301B BSBE  tel: 979-862-7485
office hours: TR 2:30-4:30 or by appointment
email: rita-b-moyes@tamu.edu

Required Texts:
- Medical Microbiology 7th Ed. By Murray, Rosenthal, and Pfaffer
- Demon in the Freezer by Richard Preston

Course Description and Prerequisites:
BIOL 456. Medical Microbiology (3-0). Credit 3
Microbiology, epidemiology and pathology of human pathogens with an emphasis on bacterial agents.
Prerequisite: BIOL 351 or approval of instructor.

Course objectives:
Medical Microbiology course objectives aim to provide an understanding of the scientific basis for prevention, pathogenesis, diagnosis, and treatment of infectious human diseases. The course presents a broad introduction to immunology, general and pathogenic microbiology, and host responses to infectious agents. The student should develop an understanding of the biological characteristics of pathogenic microorganisms, the course of their infections, the functions of the immune system, and the actions of antibiotics against these pathogens.

Upon completion of this course, the student should be able to:
- use microbiology concepts and terminology in describing important aspects of microbial cell physiology and virulence factors and toxin production
- outline the host defense mechanisms against pathogens and how the host response can also contribute to the pathogenesis of the disease
- describe the basis of pathogenic process of disease and how it correlates to the areas of epidemiology, chemotherapy, and immunology
- understand the mechanisms of prevention of disease especially in the area of vaccine production

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Test A</td>
<td>100</td>
</tr>
<tr>
<td>Test B</td>
<td>100</td>
</tr>
<tr>
<td>Test C</td>
<td>100</td>
</tr>
<tr>
<td>Test D</td>
<td>100</td>
</tr>
<tr>
<td>Quiz</td>
<td>120</td>
</tr>
<tr>
<td>Friday Articles</td>
<td>150</td>
</tr>
</tbody>
</table>

Monday Sept 26
Friday October 21
Friday November 11
December 13 (Tuesday 8-10am) Final Exam
(every weds -grade based on best 12)
(small group discussions)

670 / 6.7 = average

(A=90-100, B=80-89, C=70-79, D=60-69, F=<59)

Invited Speakers:
- Dr. Nancy Street- Associate Dean UT Southwestern Medical Center at Dallas Southwestern Graduate School of Biomedical Sciences- Summer Undergraduate Research Fellowships
- Rana Gunjat- Research Scientist with LumineX
- The final exam will be a noncomprehensive exam; that is, it will only cover the material presented after the material for Test C.
- Exam questions will be drawn mainly from lecture material but will also come from study questions and from reading assignments. Format of exams will be mostly short answer, discussion, and problem solving questions.
- Quizzes will be given every Wednesday over material covered in lecture and the reading assignments. The top 10 quiz scores will make up your quiz grade. You must attend class or have an excused absence to take the quiz.
- No make-up exams will be given. If you have a legitimate excuse, your final exam will count twice. According to University regulations the following excuses are acceptable: attendance at a University authorized activity (signed form needed), illness *(written excuse from Doctor), death in the immediate family (documentation), or legal proceedings requiring the student’s presence (documentation). *Remember an excuse from a Doctor’s appointment is not valid unless it was necessary to see the Doctor during class time and you are deemed infectious or too sick to attend class.

Class attendance: You have a quiz every Wednesday and a journal discussion every Friday. Unexcused absences cannot be made up. Wednesday Quizzes- total of 50 points. Each quiz is 5 pts each and your best 10 quiz grades will be used to calculate your quiz grades. If you have an excused absence you can make up the quiz before it is turned back on Friday otherwise it will be one of your dropped quiz grades. Quizzes will be an individual effort unless otherwise indicated.

- Students have the right to challenge a question on the examination. However, the following rules must be followed:
  - Challenges must be made within 7 days after the examination is returned to the class.
  - Challenges must be in writing using text page number(s) to justify your challenge.
  - Challenges are to be placed on the credenza outside of my office. I will evaluate your test and then give you my response. My decision will be final and I reserve the right to re-grade your entire test.

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

"Misconduct in research or scholarship includes fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting." Cheating and plagiarism will be reported to the honor council. http://www.tamu.edu/aggiehonor/definitions.php
<table>
<thead>
<tr>
<th>Lecture Topic</th>
<th>Lecture pages in book</th>
<th>Assigned Text Reading (includes all associated charts, figures, and boxes within the reading)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td></td>
<td>Rhinoviruses p. 503-504</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enterobacteriaceae p. 258</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>(reading ends at the beginning of the section titled “clinical diseases”)</em></td>
</tr>
<tr>
<td><strong>Bacterial Cell Wall</strong></td>
<td>112-119</td>
<td>Teichoic acids through spores p.118-121</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pathogenesis of Fungal Disease p. 611-613</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*(does not include tables and reading ends at the beginning of the section titled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Presentation of Surface Antigen modulates the T helper...”)*</td>
</tr>
<tr>
<td><strong>Normal Flora</strong></td>
<td>6-10</td>
<td>Opportunistic Mycoses &amp; Candidiasis p. 675-680</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>(reading ends at the beginning of section titled “clinical symptoms”)</em></td>
</tr>
<tr>
<td><strong>Innate Immune Defenses</strong></td>
<td>37-46</td>
<td>Mycotoxins &amp; Aflatoxins p.706-708 and clinical case 75-1 on p.709</td>
</tr>
<tr>
<td>• overview</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• cells</td>
<td>37-46</td>
<td>Mechanisms of Viral Pathogenesis p.410-412</td>
</tr>
<tr>
<td>• phagocytosis</td>
<td>50-57</td>
<td><em>(intro through viral pathogenesis up to but not including lytic infections)</em></td>
</tr>
<tr>
<td>• Ag presentation</td>
<td>67-68</td>
<td></td>
</tr>
<tr>
<td>• Inflammation</td>
<td>57-60</td>
<td></td>
</tr>
<tr>
<td>• Fever</td>
<td>58-59</td>
<td></td>
</tr>
<tr>
<td>• Cytokines/IFN</td>
<td>38,57-59</td>
<td>Pathogenesis of Parasitic diseases p.722-725</td>
</tr>
<tr>
<td>• Complement</td>
<td>47-50,65-66,86-90</td>
<td></td>
</tr>
<tr>
<td><strong>Specific Immune Defenses</strong></td>
<td>61-62</td>
<td>Flagellates p. 748-751</td>
</tr>
<tr>
<td>• Antigens</td>
<td>72-75</td>
<td><strong>Chlamydia</strong> p. 381-384</td>
</tr>
<tr>
<td>• Antibodies</td>
<td>62-72</td>
<td><em>(reading ends at the beginning of the section titled “clinical diseases”)</em></td>
</tr>
<tr>
<td><strong>Vaccines</strong></td>
<td>100-106</td>
<td><strong>Enteroviruses through polio infections</strong> p.497-500</td>
</tr>
<tr>
<td><strong>Epidemiology</strong></td>
<td></td>
<td><strong>Ticks</strong> p. 825-826</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Sucking Lice, Fleas, p. 830-831</strong></td>
</tr>
<tr>
<td><strong>Mechanisms of Pathogenesis</strong></td>
<td>138-146</td>
<td><strong>Neisseria</strong> p. 248-253</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>(reading ends at the beginning of the section titled “Neisseria meningitidis- clinical diseases”)</em></td>
</tr>
<tr>
<td><strong>Bacteria and their Diseases</strong></td>
<td></td>
<td><strong>Streptococcus pyogenes</strong> p. 188-196</td>
</tr>
<tr>
<td><strong>Staphylococcus aureus</strong></td>
<td>176-184</td>
<td><em>(Pathogenesis &amp; Immunity through clinical diseases up to but not including Staphylococcus epidermidis)</em></td>
</tr>
<tr>
<td><strong>Bacillus</strong></td>
<td>209-215</td>
<td><strong>Treponema pallidum</strong> p.350-354</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*(reading ends at the beginning of the section titled “treatment, prevention, and control”)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Yersinia</strong> p.267-269</td>
</tr>
<tr>
<td><strong>Clostridium</strong></td>
<td>327-338</td>
<td><strong>Vibrio</strong> p.273-277</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>(intro through clinical diseases up to but not including laboratory diagnosis)</em></td>
</tr>
<tr>
<td><strong>Mycobacterium</strong></td>
<td>235-246</td>
<td><strong>Bordetella</strong> p. 304-307</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>(intro through clinical diseases up to but not including laboratory diagnosis)</em></td>
</tr>
<tr>
<td>DATE</td>
<td>TITLE</td>
<td>AUTHOR</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>9/2/16</td>
<td>The Past is Never Dead- Measles Epidemic</td>
<td>David M. Morens</td>
</tr>
<tr>
<td></td>
<td>Filoviruses (including Clinical case 58-1)</td>
<td>Murray et al</td>
</tr>
<tr>
<td></td>
<td>Ebola: Is it fair that Americans Received the Treatment?</td>
<td>Art Caplan</td>
</tr>
<tr>
<td></td>
<td>Fecal Transplantation</td>
<td></td>
</tr>
<tr>
<td>9/16/16</td>
<td>Temple Monkeys and Health Implications</td>
<td>L. Jones-Engel</td>
</tr>
<tr>
<td>9/23/16</td>
<td>Bacillus anthracis Incident Tokyo</td>
<td>H. Takahashi</td>
</tr>
<tr>
<td></td>
<td>Tetracycline Promotes S. aureus nasal colonization</td>
<td>Adnan Syed</td>
</tr>
<tr>
<td>9/26/16</td>
<td>TEST 1 (MONDAY)</td>
<td></td>
</tr>
<tr>
<td>10/7/16</td>
<td>Antimicrobial Mechanisms of Phagocytes-part 2</td>
<td>Ronald S. Flannagan</td>
</tr>
<tr>
<td>10/14/16</td>
<td>Ebola Virus Entry</td>
<td>Sven Moller-Tank</td>
</tr>
<tr>
<td>10/21/16</td>
<td>TEST 2</td>
<td></td>
</tr>
<tr>
<td>11/4/16</td>
<td>Bedeviled by Dengue</td>
<td>Beth Mole</td>
</tr>
<tr>
<td></td>
<td>Guinea Worm Eradication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GWD Epidemiology &amp;Risk Factors</td>
<td></td>
</tr>
<tr>
<td>11/11/16</td>
<td>TEST 3</td>
<td></td>
</tr>
<tr>
<td>12/13/16</td>
<td>TEST 4</td>
<td></td>
</tr>
</tbody>
</table>
BIOL 456 – Friday Journal Articles- articles will be posted in ecampus.

- EID= Emerging Infectious Diseases which is an online journal put out by the CDC. To access these articles go to www.cdc.gov/eid
- Science articles can be accessed at www.sciencemag.org
- To access other articles: On a TAMU computer go to http://library.tamu.edu
- Click on ejournal and type the name of the journal in the search word box.
- (CID = Clinical Infectious Diseases)
- Click on the correct journal then click on a site that provides the journal covering the volumes required (usually the first site).
- Everyone will be responsible for the assigned Friday journal readings. You will have an individual quiz and a group quiz.
- Be sure to look up any words you don’t know
- Some papers assume you are familiar with the organism or disease- be sure to look it up if you don’t know the background info.

Friday Journal Articles  Total- 150 pts (15 pts/Friday)

1) Individual journal quiz of 5 multiple choice questions =5pts
2) Group journal quiz of same 5 multiple choice questions =5pts
3) Group discussion of ~3-6 discussion questions grade=5pts

You will meet as the same group throughout the semester and I will assign the groups
You may have one 3x5 card of information that you can use when you meet as a group (you will not be able to refer to the journal articles)

*No electronics of any kind during the journal quizzes and discussions- you will receive a zero on the assignment
TEXAS A&M UNIVERSITY
AT GALVESTON
TAMUG
Change in Courses
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

1. Request submitted by (Department or Program Name): Department of Marine Biology
   MARB 303. Biostatistics

2. Course prefix, number and complete title of course:
   Change requested
   - MATH 151. Curriculum sophomore, junior or senior classification or approval of instructor.
   - MATH 151 or 142, Sophomore, junior, or senior classification or approval of instructor.

3. Change list:
   - Prerequisite(s): From: To:
   - Withdrawal (reason):
   - Cross-list with:

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description:
   Biostatistics. (2-2). Credit 3. Introduction to sampling, experimental design, analysis of data, and testing of
   hypotheses, with emphasis on methods applied to biological investigations. Parametric and non-parametric
   techniques. Descriptive statistics, analysis of variance, correlation and regression. Prerequisites: MATH 151.
   Curriculum sophomore, junior, or senior classification or approval of instructor.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   Biostatistics. (2-2). Credit 3. Introduction to sampling, experimental design, analysis of data, and testing of
   hypotheses, with emphasis on methods applied to biological investigations. Parametric and non-parametric
   techniques. Descriptive statistics, analysis of variance, correlation and regression. Prerequisites: MATH 151 or 142.
   Sophomore, junior, or senior classification or approval of instructor.

7. a. As currently in course inventory:
<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARB</td>
<td>303</td>
<td>BIOSTATISTICS</td>
</tr>
<tr>
<td>Lect.</td>
<td>Lab</td>
<td>SCH</td>
</tr>
<tr>
<td>02</td>
<td>20</td>
<td>03</td>
</tr>
</tbody>
</table>
   b. Change to:
<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin Unit</td>
<td>Year</td>
<td>PUB Code</td>
</tr>
<tr>
<td>-</td>
<td>0 1 0 2 9 8 3</td>
<td></td>
</tr>
</tbody>
</table>

Approval recommended by:

[Signature]

Department Head or Program Chair (Type Name & Sign) Date
Chair, College Review Committee Date
Dean of College Date
Submitted to Coordinating Board by:

[Signature]

Date

Associate Director, Curricular Services

Questions regarding this form should be directed to Sandra Williams at 845-8301 or sandra.williams@tamu.edu
Curricular Services • 621

FEB 19 2016
CURRICULAR SERVICES
Brief Supporting Statement

MARB 303 (Biostatistics): Adding MATH 142 as a pre-requisites because students can choose to take either MATH 151 or MATH 142 to satisfy one of their math electives.

John R. Schwarz, Regents Professor and Head
Department of Marine Biology
Director, Seafood Safety Laboratory
Texas A&M University, Galveston Campus
P.O. Box 1675, OCSB Room 268
Galveston, Texas 77553-1675

(409) 740-4453 (voice)
(409) 740-5001 (fax)
schwarzj@tamug.edu
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

1. Request submitted by (Department or Program Name):
   Department of Marine Biology

2. Course prefix, number and complete title of course:
   MARB 310. Introduction to Cell Biology

3. Change requested
   a. Prerequisite(s): From:
   b. Withdrawal (reason):
   c. Cross-list with:
   d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description:
   MARB 310. Introduction to Cell Biology. (3-3). Credit 4. Cellular structure/function; prokaryotic vs. eukaryotic cells; Examination of cellular membranes and membrane transport; Analysis of DNA replication, transcription, and protein translation (an extension of their treatment in MARB 301). Introduction to the components and genetics of immunology. Cell Biology should precede or be concurrent with enrollment in MARB 450. Prerequisites: BIOL 112, CHEM 228, MARB 301. Junior or senior classification or approval of instructor. MARS 360 is recommended but not required.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   MARB 310. Introduction to_Cell Biology. (3-3). Credit 4. Cellular structure/function; prokaryotic vs. eukaryotic cells; Examination of cellular membranes and membrane transport; Analysis of DNA replication, transcription, and protein translation (an extension of their treatment in MARB 301). Introduction to the components and genetics of immunology. Prerequisites: BIOL 112, CHEM 228, MARB 301. Junior or senior classification or approval of instructor. MARS 360 is recommended but not required.

7. a. As currently in course inventory:
   
   Prefix | Course # | Title (excluding punctuation) |
   ------ | -------- | ----------------------------- |
   MARB  | 310     | INTRO TO CELL BIOLOGY        |
   Lec.   | 03      | Lab. | 04 | SCH | 26 | 04 | 01 | 00 | 02 | 01 | 02 | 98 | 3 |
   
   b. Change to:
   
   Prefix | Course # | Title (excluding punctuation) |
   ------ | -------- | ----------------------------- |
         |         |                              |
   Lec.   | Lab.    | SCH. | CIP and Fund Code | Admin. Unit | Year | Level |
   00     | 02      | 00  | 01 | 02 | 98 | 3 |

   Approval recommended by:
   
   Department Head or Program Chair (Type Name & Sign) Date Chair, College Review Committee
   Date
   
   Department Head or Program Chair (Type Name & Sign) Date Dean, College
   Date
   
   Submitted to Coordinating Board by:
   
   Chair, GC or UCC Date
   
   Associate Director, Curricular Services Date

   Questions regarding this form should be directed to Sandra Williams at 845-8301 or sandra.williams@tamu.edu
Curricular Services – 02/11

RECEIVED FEB 19 2016
CURRICULAR SERVICES
Brief Supporting Statement

MARB 310 (Cell Biology): Removing sentence in course description because the suggested course is no longer offered or required for the MARB degree.

John R. Schwarz, Regents Professor and Head
Department of Marine Biology
Director, Seafood Safety Laboratory
Texas A&M University, Galveston Campus
P.O. Box 1675, OCSB Room 268
Galveston, Texas 77553-1675

(409) 740-4453 (voice)
(409) 740-5001 (fax)
schwarzj@tamug.edu
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
* Submit original form and attachments *

1. Request submitted by *(Department or Program Name):*
Department of Marine Biology

2. Course prefix, number and complete title of course:
MARB 408. Marine Botany

3. Change requested

<table>
<thead>
<tr>
<th>Attached supporting statement for changes made in items a, b, c, and d below.</th>
</tr>
</thead>
</table>

a. Prerequisite(s): From: BIOL 112. Curriculum sophomore, junior or senior classification or approval of instructor. To: BIOL 112. Junior or senior classification or approval of instructor.

b. Withdrawal (reason):

c. Cross-list with:

d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.

c. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description:
MARB 408. Marine Botany. (3-3). Credit 4. Morphology, systematics, ecology, and biochemistry of the representative algae, fungi, and submarine grasses. Prerequisites: BIOL 112. Curriculum sophomore, junior or senior classification or approval of instructor.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
MARB 408. Marine Botany. (3-3). Credit 4. Morphology, systematics, ecology, and biochemistry of the representative algae, fungi, and submarine grasses. Prerequisites: BIOL 112. Junior or senior classification or approval of instructor.

7. a. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARB</td>
<td>408</td>
<td>Marine Botany</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lect</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin Unit</th>
<th>BIC Code</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>260301</td>
<td>0100021805</td>
<td>0102984</td>
</tr>
</tbody>
</table>

b. Change to:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Lect</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin Unit</th>
<th>Acad. Year</th>
<th>BIC Code</th>
</tr>
</thead>
</table>

Approval recommended by:

Date

Department Head or Program Chair *(Type Name & Sign)*
Chair, College Review Committee

Date

Department Head or Program Chair *(Type Name & Sign)*
Chair, GC or UCC

Date

Submitted to Coordinating Board by:

Date

Associate Director, Curricular Services

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 02/11

RECEIVED
FEB 19 2016
CURRICULAR SERVICES
Brief Supporting Statement

MARB 408 (Marine Botany): Deleting sophomore status in order to align equally with MARB 430 since students have the option to take MARB 408 in spring or MARB 430 in the fall to satisfy their plant course requirement.

John R. Schwarz, Regents Professor and Head
Department of Marine Biology
Director, Seafood Safety Laboratory
Texas A&M University, Galveston Campus
P.O. Box 1675, OCSB Room 268
Galveston, Texas 77553-1675

(409) 740-4453 (voice)
(409) 740-5001 (fax)
schwarz@tamug.edu
Texas A&M University

Departmental Request for a Change in Course
Undergraduate • Graduate • Professional

1. Request submitted by (Department or Program Name):
   Department of Marine Biology
   MARB 425. Marine Ecology

2. Course prefix, number and complete title of course:
   MARB 425. Marine Ecology

3. Change requested:
   a. Prerequisite(s): From: MARB 315, 408, 435; or curriculum senior or approval of instructor. To: MARB 315; senior classification or approval of instructor.
   b. Withdrawal (reason):
   c. Cross-list with:
   d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description:
   Marine Ecology. (3-3). Credit 4. Relationship between various marine environments and their inhabitants; intra- and interspecific relationships between organisms; structure and function among marine communities. Laboratory emphasis on study of living material and natural habitat in the Gulf of Mexico. Prerequisites: MARB 315, 408, 435; curriculum senior or approval of instructor.

6. Complete proposed course title and proposed catalog course description (not to exceed 35 words):
   Marine Ecology. (3-3). Credit 4. Relationship between various marine environments and their inhabitants; intra- and interspecific relationships between organisms; structure and function among marine communities. Laboratory emphasis on study of living material and natural habitat in the Gulf of Mexico. Prerequisites: MARB 315; Senior classification or approval of instructor.

7. a. As currently in course inventory:
   Prefix: MARB
   Course #: 425
   Title (excluding punctuation): Marine Ecology
   Lect: 0
   Lab: 0
   SCH: 4
   CIF and Fund Code: 26130200021805010298
   Admin. Unit: 4
   EICP Code: 4

   b. Change to:
   Prefix: MARB
   Course #: 425
   Title (excluding punctuation):
   Lect: 0
   Lab: 0
   SCH: 4
   CIF and Fund Code: 26130200021805010298
   Admin. Unit: 4
   EICP Code: 4

   Approved recommended by:
   Department Head or Program Chair (Type Name & Sign) 
   Date 2/18/16

   Chair, College Review Committee
   Date 2/18/16

   Chair, Curriculum Services – 02/11

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@txam.net
Curricular Services – 02/11

RECEIVED CURRICULAR SERVICES
FEB 19 2016
Brief Supporting Statement

MARB 425 (Marine Ecology): Removing MARB 408 and 435 as a pre-requisite because most seniors take these courses during the same semester due to when the courses are offered.

John R. Schwarz, Regents Professor and Head
Department of Marine Biology
Director, Seafood Safety Laboratory
Texas A&M University, Galveston Campus
P.O. Box 1675, OCSB Room 268
Galveston, Texas 77553-1675

(409) 740-4453 (voice)
(409) 740-5001 (fax)
schwarz@tamug.edu