7700 Practice Performance (3) Prereq.: MUS 3710 or successful passing of the Music History Diagnostic Examination. May be taken 3 times for credit; maximum for MM and DMA combined is 18 sem. hrs.

7797 Individual Projects in Music (1-3) Prereq.: consent of department faculty and dean of the School of Music. May be repeated for credit as follows: for master’s degree, maximum of 9 hrs. for doctoral degree, and the master’s or a total of 9 hrs. if both master’s and doctoral totals included.

7798 Special Topics in Music (2-3) May be taken for a max. of 9 hrs. of credit when topics vary. Advanced studies in individual subject areas of music. 

9000 Thesis Research (1-5 sem.) S’76” grading. 

9001 Doctoral Solo Recital (1-3) May be repeated twice (max. of 6 sem. hrs. of credit). Students specializing in organ may repeat four times (max. of 12 sem. hrs. of credit). 

9002 Seminar in Music Theory (1-3) 

9003 Doctoral Lecture Recital (1-3) Does not fulfill final project requirement for DMA (MUS 9010). 

9141 Seminar in Wind Conducting (1) 

9180 Conductors Seminar (1-2) 

9279 Practicum in Orchestra (1-3) 

9320 Advanced Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA or PhD. Independent study of the techniques required to conduct all styles of choral music with emphasis on score analysis and performance practice. 

9757, 9774 Advanced Band Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA and/or PhD. Independent study of the techniques required to conduct all styles of wind music with emphasis on score analysis and performance function. 

9775, 9776 Advanced Choral Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA and/or PhD. Independent study of the techniques required to conduct all styles of vocal music with emphasis on score analysis and performance practice. 

9777, 9778 Advanced Keyboard Literature I, II, (3,3) Prereq.: MUS 4757, 4758; or equivalent. Each course may be taken twice: once for the MM and once for the DMA. 

9797 Master’s Pedagogy Project (2) 

9798 Master’s Recital (1-3) Prereq.: MUS 4797 or equivalent. 

9799 Advanced Coaching in Applied Music (2) May be repeated for credit. Maximum amount of credit applicable toward a degree is determined by student’s advisory committee.

1000 Introduction to Research in Music (3) Required of all doctoral students; recommended for master’s students who will write a thesis or dissertation. Research skills including knowledge of research resources and materials; use of library facilities; practice in a clear and logical writing style; use of wide variety of methodologies and modes of inquiry.

8010 Psychology of Music (3) Physical and psychological bases of music perception and production, including physical aspects of sound production, transmission, reception, and perception; affective, physiological, and cognitive responses to musical stimuli; and learning theories as related to musical education practice. Examine important contexts from which effective teachers make informed decisions.

7767 Experimental Research in Music (3) Prereq.: ELRC 4006 and MUS 7693. Primarily for doctoral students in music. Systematic investigation of musical behavior and music learning; collection, quantification, and treatment of data; current research.

7771, 7772 Advanced Choral Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA or PhD. Independent study of the techniques required to conduct all styles of choral music with emphasis on score analysis and performance practice.

7773, 7774 Advanced Band Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA and/or PhD. Independent study of the techniques required to conduct all styles of wind music with emphasis on score analysis and performance practice.

7775, 7776 Advanced Choral Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA and/or PhD. Independent study of the techniques required to conduct all styles of vocal music with emphasis on score analysis and performance practice.

7777, 7778 Advanced Keyboard Literature I, II, (3,3) Prereq.: MUS 4757, 4758; or equivalent. Each course may be taken twice: once for the MM and once for the DMA. 

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1000 Introduction to Research in Music (3) Required of all doctoral students; recommended for master’s students who will write a thesis or dissertation. Research skills including knowledge of research resources and materials; use of library facilities; practice in a clear and logical writing style; use of wide variety of methodologies and modes of inquiry.

8010 Psychology of Music (3) Physical and psychological bases of music perception and production, including physical aspects of sound production, transmission, reception, and perception; affective, physiological, and cognitive responses to musical stimuli; and learning theories as related to musical development, ability, and preference.

9001 Composition (1-3) Individual instruction for graduate composition. Participation in the Composer’s Forum is considered part of the course work and is, therefore, required. May be repeated for credit.

9703, 9704 Seminar in Music History (2-3,3) Prereq.: MUS 3710 or successful passing of the Music History Diagnostic Examination. Each course may be taken 3 times for credit when topics vary. Only 6 sem. hrs. applicable to the MM and/or PhD, maximum of 12 additional sem. hrs. applicable to the MM and/or PhD. 

9705, 9706 Seminar in Music Education (2-4,3) Each course may be taken once for credit when topics vary. Only 6 sem. hrs. applicable to the MMEd degree; only 12 additional sem. hrs. applicable to the MM and/or PhD.

9721 Seminar in Music Theory (3) Prereq.: MUS 3703 and 3704 or successful passing of the Music Theory Diagnostic Examination. May be taken 3 times for credit when topics vary. Maximum for MM and PhD combined is 18 sem. hrs. of credit.

7928, 7929 Seminar in Choral Repertoire (3) Each course may be taken once for credit when topics vary. Only 6 sem. hrs. applicable to the MM degree; only 12 additional sem. hrs. applicable to the DMA degree; maximum for MM and PhD combined is 18 sem. hrs. of credit.

7797 Individual Projects in Music (1-3) Prereq.: consent of department faculty and dean of the School of Music. May be repeated for credit as follows: for master’s degree, maximum of 9 hrs. for doctoral degree, and the master’s or a total of 9 hrs. if both master’s and doctoral totals included.

7798 Special Topics in Music (2-3) May be taken for a max. of 9 hrs. of credit when topics vary. Advanced studies in individual subject areas of music. 

9000 Thesis Research (1-5 sem.) S’76” grading. 

9001 Doctoral Solo Recital (1-3) May be repeated twice (max. of 6 sem. hrs. of credit). Students specializing in organ may repeat four times (max. of 12 sem. hrs. of credit). 

9002 Seminar in Music Theory (1-3) 

9003 Doctoral Lecture Recital (1-3) Does not fulfill final project requirement for DMA (MUS 9010). 

9141 Seminar in Wind Conducting (1) 

9180 Conductors Seminar (1-2) 

9279 Practicum in Orchestra (1-3) 

9320 Advanced Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA or PhD. Independent study of the techniques required to conduct all styles of wind music with emphasis on score analysis and performance function. 

9775, 9776 Advanced Choral Conducting (3,3) Prereq.: previous study of conducting. Each course may be taken once for the DMA and/or PhD. Independent study of the techniques required to conduct all styles of vocal music with emphasis on score analysis and performance practice.

9777, 9778 Advanced Keyboard Literature I, II, (3,3) Prereq.: MUS 4757, 4758; or equivalent. Each course may be taken twice: once for the MM and once for the DMA. 

9797 Master’s Pedagogy Project (2) 

9798 Master’s Recital (1-3) Prereq.: MUS 4797 or equivalent. 

9799 Advanced Coaching in Applied Music (2) May be repeated for credit. Maximum amount of credit applicable toward a degree is determined by student’s advisory committee.

1000 Introduction to Research in Music (3) Required of all doctoral students; recommended for master’s students who will write a thesis or dissertation. Research skills including knowledge of research resources and materials; use of library facilities; practice in a clear and logical writing style; use of wide variety of methodologies and modes of inquiry.

8010 Psychology of Music (3) Physical and psychological bases of music perception and production, including physical aspects of sound production, transmission, reception, and perception; affective, physiological, and cognitive responses to musical stimuli; and learning theories as related to musical development, ability, and preference.

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9721 Seminar in Music Theory (3) Prereq.: MUS 3703 and 3704 or successful passing of the Music Theory Diagnostic Examination. May be taken 3 times for credit when topics vary. Maximum for MM and PhD combined is 18 sem. hrs. of credit.

7928, 7929 Seminar in Choral Repertoire (3) Each course may be taken once for credit when topics vary. Only 6 sem. hrs. applicable to the MM degree; only 12 additional sem. hrs. applicable to the DMA degree; maximum for MM and PhD combined is 18 sem. hrs. of credit.
primary productivity and related to successional patterns of estuarine and associated fauna.

4052 Physiology (4) Prereq.: BIOL 1202 and 1209. 2 hrs. lecture; 4 hrs. lab. See BIOL 4052.

4090 Marine and Environmental Microbiology (3) F-O Prereq.: BIOL 2051 or equivalent. 3 hrs. lecture; discussion. Students should have had previous training in bacterial identification, culture technique, and use of electron microscope. Prerequisites: BIOL 2051, 4165.

4090 Characterization and ecology of estuarine, open-ocean, and terrestrial microbiomes and the role these microbes play in carbon cycling. Prerequisites: BIOL 101, 102, 1209, and 1211. Prerequisites: BIOL 101, 1209, and 1211.

4095 Marine and Environmental Microbiology (3) F-O Prereq.: BIOL 2051 or equivalent. 3 hrs. lecture; discussion. Students should have had previous training in bacterial identification, culture technique, and use of electron microscope. Prerequisites: BIOL 2051, 4165.

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estuaries, turbidity and mixing in estuaries, seiches, storm surges, internal waves, salt balance, and inlet flows.

7126 Marine Geology in Coastal Waters (3) V Prereq.: OCS 4170. Mechanics of circulation in coastal currents; buoyancy driving, wind driving, coastal jets, longshore drift, tide-dominated conditions, controlling conditions, hypoxia; classification of coastal currents; mixing and dispersion of pollutants and oil slicks for environmental management.

7127 Dynamics and Sedimentary Response Features of Coastal Environments (3) Su-O S-U. Interactions between major dynamic processes; interaction related to climate change.

7130 Marine Isotope Biogeochecmy (3) F Prereq.: graduate standing or consent of instructor. Concepts and laboratory principles for stable and isotopic analyses, first-hand experience interpreting isotopic data, modern applications in oceanography and biogeochecmy.

7131 Marine Geochecmy (3) S Geochecmical processes in the modeling water column, biogeochemistry, pore water processes and interactions across sediment-water interface, and early diagenses; emphasis on understanding process series radionuclide applications in marine geochecmy.

7132 Coastal Physical/Chemical Systems: Analytical Methods for Marine and Estuarine Systems (3) F Prereq.: consent of instructor. 2 hrs. lecture; 3 hrs. lab. Sampling techniques; proper handling and preservation of samples; sample processing for analysis; applied statistical methods and computer generated data analysis.

7176 Biogeochecmy of Wetland Soils and Sediments (3) S-O Same as AGRO 7165. Microbial and redox chemistry processes in freshwater, estuarine, and contaminated wetlands; understanding substrate bioavailability and changes affecting the transformations of nutrients and toxic materials.

7177 Satellite Oceanography (3) F Prereq.: OCS 4170 or equivalent. Oceanographic measurements and observations using satellite-borne sensor systems; radiation-ocean-atmosphere interactions, satellite systems, sensor design, and data types; analysis of infrared, visible, and microwave data for deep ocean, coastal, and estuarine phenomena.

7181 Marine and Estuarine Plankton (3) F Prereq.: consent of instructor. 2 hrs. lecture; 3 hrs. lab. Sampling techniques; proper handling and preservation of samples; sample processing for analysis; applied statistical methods and computer generated data analysis.

7202 Pathobiological Sciences Research Techniques (1-4) V May be taken for a max. of 6 hrs. of credit. Specialized research techniques related to a specific discipline of pathobiological sciences.

7203 Special Topics in Pathobiological Sciences (1-4) V Prereq.: consent of instructor. May be taken for a max. of 8 hrs. of credit. Topics of current interest in pathobiological sciences.

7204 Current Literature in Pathobiological Sciences (1) V May be taken for a maximum of 6 hrs. of credit. Passt/fail grading. Reviewing the literature in areas of pathobiological sciences which are not covered by regular course work.

7301, 7302 Principles and Methods of Epidemiology and Disease Control I, II (4, 4) 7301 offered F; 7302 offered S Prereq.: consent of instructor. 3 hrs. lecture; 2 hrs. lab. Ecological and epidemiological concepts used in studying diseases in populations; epidemiological methods, with laboratory exercises solving; equity bio- logical principles applied to disease control; planning, administration, and evaluation of disease-control programs.

7310 Zonotic Infectious and Parasitic Diseases (3) F-E Prereq.: BIOL 4121 and 4122 or equivalent. Epidemiology, ecology, and control of major infectious and parasitic diseases.

7312 Epidemiological Study Design (4) F Introduction to the basic concepts of epidemiology with emphasis on the appropriate use and interpretation of epidemiological methods.

7404 Pathogenic Mechanisms of Bacteria (3) V Prereq.: BIOL 4094, 4121, and 4122 or equivalent. Relation of bacterial virulence factors to disease; virulence factors, mechanisms of host-parasite interaction; vaccine strategies.

7410 Biochemistry of Virus (3) S-E Prereq.: BIOL 4094 or equivalent. See BIOL 7289.

7411 Molecular Mechanisms of Viral Pathogenesis (3) S-E Prereq.: BIOL 7410 or equivalent. Virus-host interactions in disease induction emphasizing virus receptors and cell tropism, persistence and latency, oncogenicity and host-induced immune suppression, and adverse responses of the host.

7413 Techniques in Flow Cytometry (1) F-O Prereq.: credit or registration in PBS 7423 or equivalent. 2 hrs. lab. Instruction and laboratory practices in principles and applications of flow cytometry; topics include cell processing and staining with fluorescent probes as a measurement of immunophenotyping, DNA, and functional assays as well as computer generated data analysis.

7415 Current Trends in Methods in Parasitology (1-4) F-O Prereq.: a course in parasitology or equivalent. 2-8 hrs. lab. May be taken for a max. of 4 sem. hrs. when animal groups vary. Specialized laboratory methods used to produce experimental infections, diagnose parasitism and recover and identify protozoan and helminth parasites of ruminants, horses, pigs, and companion animals.

7416 Mechanisms of Cellular Immunology and Immunopathology (3) S Prereq.: BIOL 4121 or equivalent. Mechanisms involved in the development of protective and pathologic immune responses; emphasis on the humoral and cellular components of inflammation and immune response to microbial infection.

7417 Pathogenesis of Infectious and Parasitic Agents (4) S-E Prereq.: introductory course in immunology. Introduction to the cellular and molecular mechanisms that host and pathogen utilize to interact in vivo, and of the consequences of these interactions.

7419 Population Dynamics and Ecology of Parasitic and Vector-Borne Diseases (3) S-O Prereq.: course in parasitology or equivalent. Population regulation and distribution of parasitic and vector-borne diseases of veterinary and medical significance; disease risk in populations and control strategies based on population models, transmission dynamics, climate, nutrition, immunity, geographic information systems, and herd health programs.

7423 Cellular and Molecular Immunology (3) F-O Prereq.: BIOL 4121 or equivalent. Cellular and molecular basis for the immune response; emphasis on microbial structure and function of antibodies and other receptors; role of lymphocyte subsets and cytokines in regulation of immune responses.

7424 Diseases of Aquatic Animals (3) F-E Prereq.: consent of instructor. Basic microbiology and/or parasitology strongly recommended. 2 hrs. lecture; 2 hrs. lab. Same as RNR 7424.

7501 Veterinary Cellular Pathology (3) F Prereq.: credit or registration in PBS 7243 or equivalent. 2 hrs. lab. Introduction to histology, microscopy, and correlation with clinical and histopathological findings. Prereq.: DVM degree or equivalent and PBS 7516. 1 hr. lecture; 2 hrs. lab. Histopathological evaluation of integumentary system, tissue response, and diseases of various animal species of veterinary importance.

7516 Advanced Diagnostic Pathology of Animals (1-2) V Prereq.: DVM degree or equivalent. May be taken for a max. of 6 sem. hrs. of credit when topics vary. Necropsy of various animals submitted for diagnostic evaluation: gross, light, and electron microscopy; and immunohistochecmy; correlation and synthesis of clinical information, laboratory data, and other ancillary laboratory results, for an accurate determination of disease diagnosis and pathogenesis.

7521 Advanced Veterinary Clinical Pathology (1-2) V Prereq.: credit or registration in PBS 7516 or equivalent. Consent of instructor. Biology, husbandry, diseases, medical care, regulations, and experimental uses of the commonly used laboratory animal species; courses need not be taken in sequence.

PETROLEUM ENGINEERING • PETE

1010 Introduction to Petroleum Engineering (2) F Prereq.: MATH 1012. Scientific bases of petroleum geology and chemistry, exploration, drilling, production, reservoir engineering, and refining.

1303 Reservoir Rock Properties (3) F Prereq.: MATH 1552, GEOL 1001 and PHYS 2101. Physical properties of reservoir rock related to the production of oil and gas. Prereq.: PETE 1031, 1032, 1033, Reservoir Fluid Properties, or credit or registration in PHYS 2102. Physical and chemical properties of petroleum reservoir fluids related to production of oil and gas.

2034 Rock and Fluid Properties Laboratory (1) S Prereq.: credit in PETE 2031 and/or 2032, and registration in the other course, 3 hrs. lab.

2060 Computational Methods in Petroleum Engineer- ing (2) F Prereq.: MATH 1552. 1 hr. lecture; 2 hrs. lab. Computing infrastructure, programming fundamentals, numerical methods, and petroleum engineering commercial software.

3002 Communicating Petroleum Engineering Technol- ogy (3) V Prereq.: ENGL 2000, junior standing in the College of Engineering, and permission of department. Communication skills including public speaking, group management, and computer usage applied to petroleum engineering topics.

3025 Economic Aspects of Petroleum Production (3) F Prereq.: ECON 2030, PETE 2060, and credit or registration in IE 3302. Mineral ownership and leasing in Louisiana; production decline curve analysis; profitability analysis; risk analysis; evaluation of scientific bases of petroleum reservoir fluids.

3036 Well Logging (3) F Prereq.: PETE 2031, and either EE 2950 or PHYS 2102. Qualitative and quantitative formation evaluation by means of electromagnetic, radioactive well logs.

3037 Petroleum Field Operations (1) F Prereq.: permission of department, 2 hrs. lab. Field operations associated with production engineering: field equipment and operation; pneumatic and electronic safety systems;