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| Course Proposal: Modify |   |  |
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| CID and Name:**10021904----Markworth, Norman** |  |  |  |  |  |
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| 1. Course: **PHY 118 Musical Acoustics** |  |  |  |  |  |
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| 2. Term/Year: **Fall 2014** |  |  |  |  |  |
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| 3. CIP CODE/10 Digit Program Code: **4008090002** |  |  |  |  |  |
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| 4. Current Course Title: **Musical Acoustics** |  |  |  |  |  |
|    Modified Course Title: **Acoustical Physics** |  |  |  |  |  |
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| 5. What is the primary reason you are modifying this course: |  |  |  |  |  |
|   **To prepare for a resubmission to the core curriculum committee. The committee thought that the course target audience was not broad enough. We are changing the emphasis to make it of broader appeal. Acoustics is the physics of sound. Sound is a wave phenomenon, necessitating the study of the properties of waves (amplitude, velocity, frequency, wavelength, beats, etc.). It is also a perceived phenomenon, requiring an understanding of hearing, room acoustics, and the action of the brain on sound.** |
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| 6. Enter course description exactly as it will appear in the general/graduation bulletin:  |  |  |  |  |  |
|   **Waves, resonance, frequency, pitch, waveform, hearing, intervals, scales, strings, air columns, rods, plates, vocal apparatus, instruments. Lecture and laboratory grades are computed into one grade and the same grade is recorded for both lecture and lab. Prerequisite: Ability to read music. Corequisite: PHY 118L.** |
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| 7. Enter modified course description exactly as it will appear in the general/graduation bulletin:  |  |  |  |  |  |
|   **Waves, resonance, frequency, pitch, waveform, hearing, intervals, scales, strings, air columns, rods, plates, and room acoustics. Corequisite: PHY 118L.** |
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| 8. Current Prerequisites:  |  |  |  |  |  |
|   **Ability to read music** |
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| 9. Modified Prerequisites:  |  |  |  |  |  |
|   **None** |
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| 10. College: **College of Science/Mathematics** |  |  |  |  |  |
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| 11. Department Teaching Course: **Physics & Astronomy** |  |  |  |  |  |
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| 12. Instruction Type: **N/A** |  |  |  |  |  |
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| 13. Modified Credit Hours Maximum: **N/A** |  |  |  |  |  |
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|     Credit Hours Minimum: **N/A** |  |  |  |  |  |
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|     Maximum Hours counted toward degree: **N/A** |  |  |  |  |  |
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| 14. Maximum contact hours each week Fall Semester: **N/A** |  |  |  |  |  |
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| 15. May this course be taken more than one time each semester? **N/A** |  |  |  |  |  |
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| 16. Grade Type: **N/A** |  |  |  |  |  |
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| 17. Describe the place of the modified course within your current curriculum. (Will it be elective or required? Part of a major or a minor?) |  |  |  |  |  |
|   **NA** |
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| 18. How does the modified course differ from similar courses being offered at Stephen F. Austin? |  |  |  |  |  |
|   **The course was originally targeted to music majors (particularly those in Sound Recording Technology), but we are changing the emphasis to make it of broad appeal. A previously required term paper is being dropped in the modified course.** |
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| 19. Syllabus: Course Learning Goals List course objectives; describe what students who complete the course will now or be able to do. |  |  |  |  |  |
|   **Demonstrate basic familiarity with the physics of vibrating systems. Describe the concepts of auditory perception. Describe the basics of room acoustics. Demonstrate skills developed in critical thinking, communication (oral and visual), empirical and quantitative analysis, and teamwork.** |
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| 20. Syllabus: Course Outline List the topics that the proposed course will cover and indicate the approximate proposed amount of time to be devoted to each, either by percent of course time or number of weeks. Please indicate which topics will be required in all sections of the course and which may vary. |  |  |  |  |  |
|   **The Properties of Waves - 25% Vibrating Systems (one and two dimensional) - 25% Driven Oscillations and Room Acoustics - 25% Loudness, Pitch, Musical Scales, and Tuning Properties - 25%** |
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| 21. Any Other Information. |  |  |  |  |  |
|   **NA** |
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| **----Course Syllabus----****Must accurately reflect the course syllabus. (N/A is not acceptable response)** |  |  |  |  |  |
| 22. Program Learning Outcomes List the program learning outcomes addressed in this course as identified in the course matrix for your degree program. If your department requires a listing of all Program Learning Outcomes (PLOs) on the syllabus, please identify those that are directly taught in this course. If this is a general education core curriculum course and no PLOs are taught in this course then insert the following statement under this heading: *This is a general education core curriculum course and no specific program learning outcomes for this major are addressed in this course.* |  |  |  |  |  |
|   **This is a general education core curriculum course and no specific program learning outcomes for this major are addressed in this course.** |
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| 23. General Education Core Curriculum Objectives/Outcomes List the Exemplary Educational Objectives (EEOs) for this course if the course is included in the general education core curriculum. If you have reworded the EEOs as outcomes for your course, please be sure that the original intent of the EEO is retained. |  |  |  |  |  |
|   **Critical Thinking Skills - including creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information. Communication Skills - including effective development, interpretation and expression of ideas through written, oral and visual communication. Empirical and Quantitative Skills - including the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. Teamwork - including the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.** |
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| 24. Student Learning Outcomes List all student learning outcomes (SLOs) for this course including the course specific student learning outcomes that support the PLOs above. In general, SLOs in a course that support the PLOs are specific and include the exact knowledge, skill or behavior taught in the course that supports the more global PLOs. For additional information on meaningful and measurable learning outcomes see the assessment resource page [http://www.sfasu.edu/assessment/index](http://www.sfasu.edu/assessment/index.asp) |  |  |  |  |  |
|   **Demonstrate basic familiarity with the physics of vibrating systems. Describe the concepts of auditory perception. Describe the basics of room acoustics. Demonstrate skills developed in critical thinking, communication (oral and visual), empirical and quantitative analysis, and teamwork.** |
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| 25. Syllabus: Modified Textbook/Assigned Reading Materials for course: |  |  |  |  |  |
|   **The text is Fundamentals of Musical Acoutics, second, revised edition by Arthur H. Benade. The readings indicated in the Course Calendar correspond to chapters from this text. PHY 118L020, the Acoustical Physics Laboratory is a corequisite and a new edition of the lab manual is only available in local bookstores.** |
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| 26. Course Requirements Describe the major course requirements, assignments, examinations, projects. |  |  |  |  |  |
|   **There will be four major tests each covering a limited amount of material. The exams are scheduled during the lab period since that period is already committed in the student’s schedule.** |
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| 27. Course Calendar Create a tentative timeline for the course. At a minimum, list the topics that the course will cover and indicate the approximate amount of time to be devoted to each, either by percent of course time or number of weeks. The calendar should provide information for the maximum number of weeks scheduled for the course. |  |  |  |  |  |
|   **Week Title SLO Text Chapter 1 Preliminaries to a Study of Acoustics Lecture and assigned readings on CO 1 SLO 1 1 1 Impulsive Sounds, Alone and in Sequence Lecture and assigned readings on CO 2 SLO 1 2 2 Simple Relations of Sounds and Motions Lecture and assigned readings on CO 3 SLO 1 3 2 Characteristic Frequencies and the Decay of Composite Sounds Lecture and assigned readings on CO 4 SLO 1 4 3 Pitch: The Simplest Implication of Characteristic Oscillations SLO 1 5 4 The Modes of Oscillation of Simple and Composite Systems SLO 1 6 4 Exam 1 5 Introduction to Vibrational Recipes SLO 2 7 6 Broad and Soft Hammers and the Stiffness of Strings SLO 2 8 7 The Vibrations of 2-D Surfaces SLO 1 9 7 Exam 2 8 Sinusoidally Driven Oscillations SLO 1 10 9 Room Acoustics 1 SLO 3 11 10 Room Acoustics 2 SLO 3 12 11 Exam 3 11 The Loudness of Single and Combined Sounds SLO 2 13 12 The Acoustical Phenomena Governing Pitch SLO 2 14 13 Successive Tones and Musical Scales SLO 2 15 14 Temperaments SLO 2 16 15 Exam 4** |
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| 28. Grading Policy Describe how the grade for the course is determined. |  |  |  |  |  |
|   **Each major exam will be graded on a 100-point scale. No grade curving is done on any grade in this course. The grading scale is… A 90 – 100 B 80 – 89 C 70 – 79 D 60 – 69 F < 60** |
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| 29. Attendance Policy State your attendance policy. |  |  |  |  |  |
|   **The lecture course in online and attendance is tracked through D2L. Weekly check points will be established and students will need to report their work.** |
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| 30. Academic Integrity (A-9.1) Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. Definition of Academic DishonestyAcademic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.Please read the complete policy at <http://www.sfasu.edu/policies/academic_integrity.asp> |  |  |  |  |  |
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| 31. Withheld Grades Semester Grades Policy (A-54) Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. |  |  |  |  |  |
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| 32. Students with Disabilities To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to<http://www.sfasu.edu/disabilityservices>. |  |  |  |  |  |
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| Dept. Chair \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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| College Curriculum Chair \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
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