

• AUTHORIZATION TO OFFER TOPICS COURSES FOR ACADEMIC CREDIT  
THROUGH EXTENDED STUDIES •

(Note: Extended Studies sections of topic classes for which the appropriate form E-T is not on file in the Office of Academic Programs will be removed from BANNER as periodic audits of course offerings are performed.)

**Note: Any proposed topic can only be offered two times before being converted to a non-topics course. Academic Programs will assign the appropriate suffix and edit the topic description provided.**

1. College of: Science & Mathematics                      2. Center/Program/Department: Physics
3. Instructor Allison Scheer-Cohen, Ph.D.  
(If more than one instructor will be teaching the course, list full name of the "instructor of record.")
4. Topic Abbreviation and Number: PHYS 490-~~1~~<sup>3</sup>EX    5. Grading Method Letter
6. Term Spring    7. Year 2012    8. Variable Units\* 3
9. Has this topic been offered previously?  Yes     No    If yes, indicate term(s) \_\_\_\_\_ Year \_\_\_\_\_
10. Topic Title: Speech and Hearing Science
11. **Topic Description:** Note: This part can be skipped if answer to part 9 is "yes." (NOTE: Please provide detailed information about the topic. Please type. You may also attach the topic description on a separate sheet if you do not have enough space.)
- This course provides a foundation in the physics of sound as applied to speech and hearing science with an emphasis on the clinical application. Students will learn the fundamental physical processes underlying the production and perception of speech and the physical and psychological aspects of sound and its measurement. Normal physical processes and principles underlying speech and hearing will serve as a framework for understanding abnormal functioning. Clinical applications will be used to demonstrate the importance of speech science to the clinician.
12. Does this topic have prerequisites? No
13. Does this topic have co-requisites? No
14. Does the topic require consent for enrollment?  Yes     No
- Faculty    \_\_\_\_\_ Credential Analyst    \_\_\_\_\_ Dean    \_\_\_\_\_ Program/Center/Department - Director/Chair
15. Is topic crosslisted:  Yes     No    If yes, indicate which course \_\_\_\_\_ and obtain signature in #18.
16. What resources are needed to offer this topic (including technology)?
17. Justification for offering this topic.

This course is being offered to fulfil a prerequisite requirement for the MA in Education, Option in Communicative Sciences and Disorders. It is a foundational course in all programs in the field and is a necessary prerequisite to entrance into any MA program in Communicative Sciences and Disorders/Speech-Language Pathology. PHYS 356, The Science of Sound and Music, has been required up until now, as it was the closest course to the required curriculum. However, the intended focus of PHYS 356 is different and the Physics Department is now developing a course that will specifically address the topics needed for the Communicative Sciences and Disorders Program. The present topics course is being offered as an interim measure, while the new course is under review.

\* Enter units only if this is a variable-units topic course.

18. Does this topic impact any other disciplines? Note: This number can be skipped if answer to part 9 is "yes."

Yes  No If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

Education See attached email from Suzanne Moineau, CoEHH  Support  Oppose  
Discipline Signature Date

Discipline Signature Date  Support  Oppose

19. Location (if topic not offered at main campus) \_\_\_\_\_

20. Is this course being offered on-line?  Yes  No

21. Is this a contract topic?  Yes  No

22. Enrollment Limit \_\_\_\_\_

23. Requested Bldg/Room \_\_\_\_\_

*Please call Extended Studies first to reserve the room.*

**Please note: A separate Form E-T must be submitted for each section offered.**

SIGNATURES

See attached signature form

1. Program/Center/Department – Director/Chair \_\_\_\_\_ Date \_\_\_\_\_

2. College Dean (or Designee) \_\_\_\_\_ Date \_\_\_\_\_

The academic credentials of the instructor listed above are known to the Program/Center/Department (either regular faculty, or adjunct faculty with a curriculum vitae on file in the Program/Center/Department Office). The instructor is qualified to deliver the topic as described in part 9 (or on a previous Form T or Form E-T in the case of a topic that has already been offered).

3. Dean of Extended Studies (or Designee) \_\_\_\_\_ Date \_\_\_\_\_

Completed form received in the Office of Extended Studies

4. Associate Vice President for Academic Affairs – Academic Programs \_\_\_\_\_ Date \_\_\_\_\_

18. Does this topic impact any other disciplines? Note: This number can be skipped if answer to part 9 is "yes." (If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.)

Yes  No If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

Education  
Discipline

Please see attached email  
Signature \_\_\_\_\_ Date \_\_\_\_\_

Support \_\_\_\_\_ Oppose \_\_\_\_\_

Discipline

Signature \_\_\_\_\_ Date \_\_\_\_\_

Support \_\_\_\_\_ Oppose \_\_\_\_\_

1. MICHAEL J. BURAIN 12/15/11  
Originator (Please Print) Date

4. K. Kautang 12/16/2011  
Dean of College (or Designee) Date

2. [Signature] 12/15/2011  
Program/Center/Department - Director/Chair Date

5. [Signature] 1/3/2011  
Associate VP Academic Programs Date

3. [Signature] 12/19/2011  
College Curriculum Comm. Rep. Date

**CALIFORNIA STATE UNIVERSITY, SAN MARCOS**  
**College of Education Health and Human Services**

**PHYS 490-T**  
**Speech and Hearing Science**  
**Course location, days and time**  
**Semester/Date**

**Professor: Allison Scheer-Cohen, Ph.D., CCC/SLP**

**Phone: 760-750-**

**E-Mail:**

**Office: TBD**

**Office Hours:TBD**

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**COURSE DESCRIPTION**

This course provides a foundation in physics speech and hearing with an emphasis on clinical application. Students will learn the fundamental processes underlying the production and perception of sound waves as it applies to speech. The physical and psychological aspects of sound and its measurement will be covered. Normal physical processes and principles underlying speech and hearing will serve as a framework for understanding abnormal functioning. Clinical applications will be used to demonstrate the importance of speech science to the clinician.

**Course Prerequisites** Permission from instructor

**Course Objectives:** The students will be able to understand and apply the following:

1. principles of sound waves;
2. physical quantities used to measure and describe sound;
3. principles of sound production;
4. physical quantities used to measure and describe speech;
5. relationship between acoustics and speech production;
6. theories of auditory perception;
7. how speech production and perception are affected by breakdown in the various systems;
8. instrumentation used in the collection of data in clinical populations; and
9. the aforementioned content in the diagnosis and treatment of individuals who exhibit speech and hearing disorders

### **Required Texts**

Ferrard, C. (2007). *Speech Science: An integrated approach to theory and clinical practice* (2<sup>nd</sup> Edition). MA: Allyn & Bacon.

### **STUDENT LEARNING OUTCOMES**

Knowledge and Skills required by the American Speech Language and Hearing Association (ASHA).

1. Standard III-A. The applicant must have prerequisite knowledge of the biological sciences, physical sciences, mathematics and the social/behavioral sciences.
2. Standard III-B. The applicant must demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental/lifespan, and linguistic and cultural bases.
3. Standard III-C. The applicant must demonstrate knowledge of the nature of speech, language, hearing, and communication disorders and differences and swallowing disorders, including their etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates.
4. Standard III-D: The applicant must possess knowledge of the principles and methods of prevention, assessment, and intervention for people with communication and swallowing disorders, including consideration of anatomical/physiological, psychological, developmental, and linguistic and cultural correlates of the disorders.
5. Standard IV-G: Skill outcomes. Conduct screenings: Speech/Hearing. Select and administer appropriate evaluation procedures, nonstandardized and standardized tests, and instrumental procedures.

### **Students with Disabilities Requiring Reasonable Accommodations**

Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disable Student Services (DSS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

### **Topics**

1. Process of sound generation and transmission
2. Periodic and aperiodic sound waves
3. Characterizing of sound waves in terms of amplitude, frequency, and time
4. Magnitude of sound using the decibel notation
5. Concepts of impedance and acoustic resonance
6. Major uses of basic electroacoustic instrumentation for measurement and analysis of sound
7. Classic and adaptive procedures for measurement of psychological response to sound

8. Basic psychological responses to acoustic stimulation and acoustic characteristics of speech and the cues important to speech perception
9. Production of all manners of speech sounds (e.g. posives, semivowels, fricatives)
10. Assimilation & coarticulation/feedback mechanisms
11. Review of respiratory, phonatory, velopharyngeal and articulatory systems and overview of neurophysiology of each
12. Theories of speech perception and speech production
13. Clinical application throughout

### **Course Requirements**

Project: Article Research Paper	Total 100 points
2 Exams (100 points each)	Total 200 points

### **Grading Standards**

**Grading Scale: In percentage of final points**

- A** = 90 -100 points
- B** = 80 - 89 points
- C** = 70 - 79 points
- D** = 60 - 69 points

**Submission Schedule:** No late work will be accepted. NO EXCEPTIONS! If you have to miss class, you have until the start of that class session to get me an electronic copy of your assignment. That means, by 12pm on the due date, you need to have emailed me a copy of your work, if you will be unable to attend class.

**Grading Emphasis:** Each written assignment will be graded approximately 80% on content (detail, logic, synthesis of information, depth of analysis, etc.), and 20% on mechanics (grammar, syntax, spelling, format, uniformity of citation, etc.).

### **All University Writing Requirement**

The university writing requirement will be met through a formal paper that must be completed for course credit. Students will also be required to write article summaries in class in response to writing prompts provided by the instructor.

### **CSUSM Academic Honesty Policy**

“Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All written work and oral presentation assignments must be original work. All ideas/materials that are borrowed from other sources

must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated with quotation marks.

Students are responsible for honest completion of their work including examinations. There will be no tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty in accordance with the general rules and regulations of the university. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class as a whole."

Incidents of Academic Dishonesty will be reported to the Dean of Students. Sanctions at the University level may include suspension or expulsion from the University.

### **Plagiarism:**

As an educator, it is expected that each student will do his/her own work, and contribute equally to group projects and processes. Plagiarism or cheating is unacceptable under any circumstances. If you are in doubt about whether your work is paraphrased or plagiarized see the Plagiarism Prevention for Students website <http://library.csusm.edu/plagiarism/index.html>. If there are questions about academic honesty, please consult the University catalog.

### **Electronic Communication Protocol:**

Electronic correspondence is a part of your professional interactions. If you need to contact the instructor, e-mail is often the easiest way to do so. It is my intention to respond to all received e-mails in a timely manner. Please be reminded that e-mail and on-line discussions are a very specific form of communication, with their own nuances and etiquette. For instance, electronic messages sent in all upper case (or lower case) letters, major typos, or slang, often communicate more than the sender originally intended. With that said, please be mindful of all e-mail and on-line discussion messages you send to your colleagues, to faculty members in the School of Education, or to persons within the greater educational community. All electronic messages should be crafted with professionalism and care.

Things to consider:

- Would I say in person what this electronic message specifically says?
- How could this message be misconstrued?
- Does this message represent my highest self?
- Am I sending this electronic message to avoid a face-to-face conversation?

In addition, if there is ever a concern with an electronic message sent to you, please talk with the author in person in order to correct any confusion.

## Laurie Schmelzer

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**From:** Suzanne Moineau  
**Sent:** Wednesday, December 14, 2011 2:19 PM  
**To:** Laurie Schmelzer  
**Cc:** Graham Oberem  
**Subject:** Re: PHYS Extended Learning topics course

Hi Laurie,

It works fine for me. Thank you, Laurie!

Graham: many thanks. Alison was asking if she was cleared to teach it as I think she will need to prepare over the break. We need to see if we will have enough enrolled, otherwise, we can wait for the new course to be approved through a C-form?

Best,  
Sue

Suzanne Moineau, Ph.D., CCC/SLP  
Assistant Professor/Director, Program in Communicative Sciences and Disorders  
California State University San Marcos  
333 S. Twin Oaks Valley Road  
San Marcos, CA 92096  
760.750.8505  
[smoineau@csusm.edu](mailto:smoineau@csusm.edu)  
<http://www.csusm.edu/el/degreeprograms/csd/index.html>

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**From:** Laurie Schmelzer <[lschmelz@csusm.edu](mailto:lschmelz@csusm.edu)>  
**Date:** Wed, 14 Dec 2011 14:12:39 -0800  
**To:** IITS Administrator <[smoineau@csusm.edu](mailto:smoineau@csusm.edu)>  
**Subject:** PHYS Extended Learning topics course

Hello,

Graham Oberem asked that I send the attached topics form to you for review. If you approve of this course, please email and let me know. We can use that as our documentation in place of a signature, unless you are available. I will be out of the office for the rest of the afternoon at Defensive Driver's Training but will be here in the morning and can run it to your office.

Please let me know how you would like to handle this or if you have any questions.

Thank you,  
Laurie

Laurie Schmelzer  
Student Services Professional  
Dean's Office  
College of Science & Mathematics  
P (760)750-7201 | [www.csusm.edu/csm](http://www.csusm.edu/csm)