

LSC Use Only Proposal No:
LSC Action-Date:

UWUCC Use Only Proposal No:
UWUCC Action-Date:

Senate Action Date:

11-670
App 2/28/12
App - 4/17/12

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

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Proposing Department/Unit Psychology	Phone 724-357-7912

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or program proposal.

1. Course Proposals (check all that apply)

- | | | |
|--|--|---|
| ☒ New Course | ☐ Course Prefix Change | ☐ Course Deletion |
| ☐ Course Revision | ☐ Course Number and/or Title Change | ☐ Catalog Description Change |

Current course prefix, number and full title:

Proposed course prefix, number and full title, if changing: **PSYC 360 Sensory Perception**

2. Liberal Studies Course Designations, as appropriate

This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

- | | | | |
|--|---|---|---|
| ☐ Learning Skills | ☐ Knowledge Area | ☐ Global and Multicultural Awareness | ☐ Writing Across the Curriculum (W Course) |
| ☐ Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one) | | | |
| ☐ Global Citizenship | ☐ Information Literacy | ☐ Oral Communication | |
| ☐ Quantitative Reasoning | ☐ Scientific Literacy | ☐ Technological Literacy | |

3. Other Designations, as appropriate

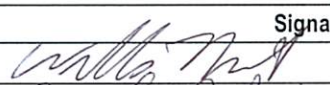
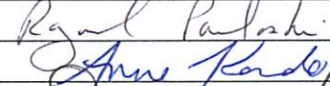
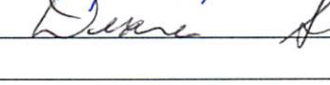
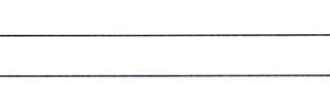
- | | |
|--|---|
| ☐ Honors College Course | ☐ Other: (e.g. Women's Studies, Pan African) |
|--|---|

4. Program Proposals

- | | | | |
|---|--|--|------------------------------------|
| ☐ Catalog Description Change | ☐ Program Revision | ☐ Program Title Change | ☐ New Track |
| ☐ New Degree Program | ☐ New Minor Program | ☐ Liberal Studies Requirement Changes | ☐ Other |

Current program name:

Proposed program name, if changing:

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)		
Department Chairperson(s)		
College Curriculum Committee Chair		11/29/11
College Dean		12/9/11
Director of Liberal Studies (as needed)		
Director of Honors College (as needed)		
Provost (as needed)		
Additional signature (with title) as appropriate		
UWUCC Co-Chairs		2/28/12

Received

FEB 20 2012

Liberal Studies

Received

DEC 9 2011

Liberal Studies

I. Catalog Description

PSYC 360 Sensory Perception

3c-01-3cr

Prerequisite: PSYC 101

Introduces the biological and psychological processes that determine our perceptions and their relationships to physical properties of the environment. May receive credit towards the Psychology major or minor for only one of PSYC 360 or 359.

II. Course Outcomes

Students completing this course will be able to:

1. Explain the central ideas underlying methods of perceptual measurement, and how these methods are used to understand the relation of the physical world to perception;
2. Describe the biological structures of each sensory system covered in the course and explain the roles of these structures in perception, and the adaptive values of perceptual mechanisms;
3. Articulate the unique contributions of a biological perspective to understanding perception; and
4. Demonstrate a working knowledge of the major theories and paradigms of perception and be able to evaluate critically the quality of these theories.

III. Detailed Course Outline

A. Principles of Perceptual Measurement (3 hours)

1. Scientific Basis of Perceptual Measurement
2. Classical Psychophysics
3. Modern Psychophysics

B. Biological Foundations of Sensory Perception (3 hours)

1. Organization of the nervous system
2. Brain function at the cellular level
3. Techniques for studying brain function.

C. The somatosensory system: Touch, Feeling, and Pain (3 hours)

1. Neural basis of somatosensory perception
2. Perceptual aspects of tactile sensation
3. Proprioception and kinesthesia
4. Nociception and pain.

Examination 1. (1 hour)

D. The Chemosensory Systems: Taste and Smell (3 hours)

1. The Gustatory System – Biological Mechanisms
2. The Gustatory System – Perceptual Characteristics
3. The Olfactory System – Biological Mechanisms
4. The Olfactory System – Perceptual Characteristics

E. The Auditory System: Sound and the Ear (3 hours)

1. The Physics of Sound
2. Auditory Processing of Sound – Physical Characteristics
3. Auditory Processing of Sound – Biological Mechanisms
4. Auditory Dysfunction

F. The Auditory System: Perceptual Aspects of Hearing (3 hours)

1. Intensity and loudness
2. Frequency and pitch
3. Auditory space perception

G. The Auditory System: Music and speech perception. (3 hours)

1. Music Perception

2. Speech Perception

Examination 2. (1 hour)

H. The Visual System: Light, optics, and the eye (3 hours)

1. The nature of light
2. The human eye
3. Optical disorders of the eye.

I. The Visual System: Retinal processing and early vision (3 hours)

1. The photoreceptor array
2. Neural processing in the retina
3. Perceptual aspects of retinal function

J. The Visual System: Cortical processing and object perception (3 hours)

1. The retinal projection to the brain
2. The primary visual cortex
3. Higher cortical functions and object perception

Examination 3. (1 hour)

K. The Visual System: Color perception (3 hours)

1. Color science
2. Biological aspects of color vision
3. Perceptual aspects of color

L. The visual system : Depth Perception and Stereopsis (3 hours)

1. Extrapersonal space
2. Monocular depth perception
3. Binocular depth perception.

M. The visual system: Motion perception, Eye Movements, and Action (3 hours)

1. Fundamental aspects of motion processing
2. Perceptual aspects of motion
3. Eye movements
4. Action and perception.

**Culminating Examination. (Administered according to university final examination schedule)
(2 hours)**

IV. Evaluation Methods

Performance in this course will be evaluated on four exams, including the culminating exam, and on brief quizzes that are administered on a roughly weekly basis. Question types appropriate to the material will be utilized on both exams and quizzes; these include multiple choice, short answer, short essay, fill-in-the-blank, and diagram-based questions. All exams (including the final) make equal contributions to the final grade, and all quizzes will make equal contributions. The exams will contribute a total of 75% to the final grade, and quizzes will contribute 20%. The final component of the grade is based on attendance and appropriate participation in class. Attendance and participation tallies will be used to quantify this component of the grade. All quizzes and exams will be administered in the classroom according to the schedule given above.

V. Example Grading Scale

The course grade will be based on the grading scheme 90-100%: A; 80-89%: B; 70-79%: C; 60-69%: D; and <60%: F.

VI. Undergraduate Course Attendance Policy

The attendance policy described in the Undergraduate Catalog will be enforced.

VII. Required Textbook

Chaudhuri, A. (2011). *Fundamentals of sensory perception*. New York: Oxford University Press.

VIII. Special Resource Requirements

No special materials or equipment are needed for this course, and there is no lab fee. Quizzes might include interactions using a personal computer. Computers are available in the Psychology Department labs in Uhler Hall and in other campus locations.

IX. Bibliography

Arnheim, R. (2004). *Art and visual perception: A psychology of the creative eye (Fiftieth Anniversary Printing)*. Berkeley: University of California Press.

Blodgett, B. (2010). *Remembering smell: A memoir of losing - and discovering - the primal sense*. New York: Houghton Mifflin Harcourt.

Burr, C. (2004). *The emperor of scent: A true story of perfume and obsession*. New York: Random House.

Cytowic, R. E., and Eagleman, D. M. (2009). *Wednesday is indigo blue: Discovering the brain of synesthesia*. Boston, MA: MIT Press.

Enns, J. T. (2004). *The thinking eye, the seeing brain: Explorations in visual cognition*. New York: W. W. Norton.

Foley, H. J., and Matlin, M. (2009). *Sensation and perception (Fifth edition)*. Boston, MA: Allyn and Bacon.

Gelfand, S. A. (2009). *Hearing: An introduction to psychological and physiological acoustics (Fifth edition)*. New York: Informa Healthcare.

Goldstein, E. B. (2009). *Sensation and perception*. Belmont, CA: Cengage Learning.

Kingdom, F. A. A., and Prins, N. (2010). *Psychophysics: A practical introduction*. Burlington, MA: Academic Press.

McMahon, S. B., and Koltzenburg, M. (2005). *Wall and Melzack's textbook of pain*. Philadelphia: Churchill Livingstone.

McNicol, D. (2004). *A primer of signal detection theory*. London: Psychology Press.

Sacks, O. (2008). *Musicophilia: Tales of music and the brain (Revised and expanded edition)*. New York: Vintage Books.

Snowden, R., Thompson, P., and Troscianko, T. (2006). *Basic vision: An introduction to visual perception*. New York: Oxford University Press.

Turin, L. (2007). *The secret of scent: Adventures in perfume and the science of smell*. New York: Harper Perennial.

Zeki, S. (1993). *A vision of the brain*. Boston, MA: Blackwell Scientific Publications.

Course Analysis Questionnaire

Section A: Details of the Course

- A1** How does this course fit into the programs of the department? For what students is the course designed? (majors, students in other majors, liberal studies). Explain why this content cannot be incorporated into an existing course.

The proposed course will meet a core area requirement for psychology majors. Four courses are listed as fulfilling the biological core area requirement - PSYC 350 Physiological Psychology, PSYC 356 Biopsychology, PSYC 355 Comparative Psychology, and PSYC 359 Sensation and Perception. However, PSYC 355 has not been offered for several years, and it is unlikely that it will be offered in the near future. PSYC 356 covers the same material as PSYC 350 but only PSYC 350 includes a lab. PSYC 356 therefore accommodates more students in each section (35-45 versus 16), and is frequently taken by psychology majors as an elective and by non-majors who are interested in the biological bases of behavior. The proposed course is designed to fulfill a similar function to PSYC 356, but with a specific focus on sensation and perception rather than a broad focus on brain and behavior. The proposed course would cover the same material as PSYC 359 but would not include a lab. It would therefore accommodate more students than PSYC 359 and would likely be taken by majors as an elective and by non-majors who are interested in perception.

- A2** Does this course require changes in the content of existing courses or requirements for a program? If catalog descriptions of other courses or department programs must be changed as a result of the adoption of this course, please submit as separate proposals all other changes in courses and/or program requirements.

The proposed course does not require changes in the content of existing courses or requirements for a program. However, a student will be able to count only one of PSYC 359 or the proposed course toward the psychology major. A change in the catalog description for PSYC 359 is submitted as a separate proposal.

- A3** Has this course ever been offered at IUP on a trial basis (e.g. as a special topic) If so, explain the details of the offering (semester/year and number of students).

As indicated above, the course content has been taught for many years in PSYC 359. Much of the same content has been offered as PSYC 481 Special Topics in Summer, 2010 (18 students), Fall, 2010 (30 students), and Summer, 2011 (10 students). Because this course is needed for all of our majors to complete the biological area requirement, permission to offer PSYC 481 for a fourth time in the Fall, 2011 semester was granted by the Provost (27 students).

- A4** Is this course to be a dual-level course? If so, please note that the graduate approval occurs after the undergraduate.

The proposed course will not be dual-level.

- A5** If this course may be taken for variable credit, what criteria will be used to relate the credits to the learning experience of each student? Who will make this determination and by what procedures?

The course will not be taken for variable credit.

- A6 Do other higher education institutions currently offer this course? If so, please list examples (institution, course title).**

Clarion University: PSY 458 Sensation and Perception
East Stroudsburg University: PSY 301 Sensation and Perception
Kutztown University: PSY 312 Sensation and Perception
Lock Haven University: PSY 402 Sensation and Perception
Millersville University: PSYC 315 Sensation and Perception
Pennsylvania State University: PSYCH 453 Sensation and Perception
Shippensburg University: PSY 430 Sensation and Perception

- A7 Is the content, or are the skills, of the proposed course recommended or required by a professional society, accrediting authority, law or other external agency? If so, please provide documentation.**

None of the course content or skills is required by an external agency.

Section B: Interdisciplinary Implications

- B1 Will this course be taught by instructors from more than one department? If so, explain the teaching plan, its rationale, and how the team will adhere to the syllabus of record.**

Only instructors from the Department of Psychology will teach the proposed course.

- B2 What is the relationship between the content of this course and the content of courses offered by other departments? Summarize your discussions (with other departments) concerning the proposed changes and indicate how any conflicts have been resolved. Please attach relevant memoranda from these departments that clarify their attitudes toward the proposed change(s).**

The proposed course is not related to courses taught in other departments. As indicated above, the content is the same as PSYC 359 but the proposed course does not include a lab.

- B3 Will this course be cross-listed with other departments? If so, please summarize the department representatives' discussions concerning the course and indicate how consistency will be maintained across departments.**

The proposed course will not be cross-listed with other departments.

Section C: Implementation

- C1 Are faculty resources adequate? If you are not requesting or have not been authorized to hire additional faculty, demonstrate how this course will fit into the schedule(s) of current faculty. What will be taught less frequently or in fewer sections to make this possible? Please specify how preparation and equated workload will be assigned for this course.**

Faculty resources are adequate. PSYC 359 has been taught at least three times in each academic year for the past decade, and a very similar course offered as a special topic (PSYC 481) has been offered four times between Summer 2010 and Fall 2011.

- C2 What other resources will be needed to teach this course and how adequate are the current resources? If not adequate, what plans exist for achieving adequacy? Reply in terms of the following:**

Current classroom space (Uhler 113 or 114) can accommodate 35 students in each section of this course and it can also be offered in Weyandt 201 (capacity 60 students) where some larger sections of other Psychology 300-level courses are now being taught. Equipment for classroom visualizations and demonstrations is the same as for PSYC 359 and is owned by the Department of Psychology. No additional supplies or consumable goods are required. No travel funds are required. Library materials are adequate.

- C3 Are any of the resources for this course funded by a grant? If so, what provisions have been made to continue support for this course once the grant has expired? (Attach letters of support from Dean, Provost, etc.)**

No resources for the proposed course are funded by a grant.

- C4 How frequently do you expect this course to be offered? Is this course particularly designed for or restricted to certain seasonal semesters?**

It is expected that this course will be offered at least once per academic year and may also be offered during a Summer session each year.

- C5 How many sections of this course do you anticipate offering in any single semester?**

One section will be offered in a single semester.

- C6 How many students do you plan to accommodate in a section of this course? What is the justification for this planned number of students?**

Other 300-level courses offered in our department have enrollments that range from 35-45 students. The expectation is that we can accommodate a number of students in this range in the proposed course. In the Fall, 2010 semester 30 students enrolled and were easily accommodated.

- C7 Does any professional society recommend enrollment limits or parameters for a course of this nature? If they do, please quote from the appropriate documents.**

There are no enrollment guidelines provided by any relevant professional society.

- C8 If this course is a distance education course, see the Implementation of Distance Education Agreement and the Undergraduate Distance Education Review Form in Appendix D and respond to the questions listed.**

It is not a distance education course.

Section D: Miscellaneous

Include any additional information valuable to those reviewing this new course proposal.

Students who major in Psychology are required to complete a minimum of one course from each of six core areas, two of which must be content labs. The proposed course would be included in Area E: Biological. The primary motivation for the proposed course is to make this area more accessible to the increasing number of psychology majors and minors, and to some other students who take 300-level psychology courses. We have been accommodating our increasing enrollments by offering a Special Topics course. The proposed course would make an additional non-lab course available both during a regular semester and during Summer sessions.

It will be noted that PSYC 290 is a prerequisite for PSYC 350 and for PSYC 359. This is appropriate, as the skills learned in PSYC 290 serve as an introduction to the laboratory component of both of these courses. However, courses that cover the same material as these courses – PSYC 356 and PSYC 360 – but which do not include a laboratory, do not require that students first complete a course in Research Design and Analysis (PSYC 290). That is why PSYC 356 does not have PSYC 290 as a prerequisite and why the present course PSYC 360 also does not have PSYC 290 as a prerequisite.