GENERAL STUDIES COURSE PROPOSAL COVER FORM

Course information:
Copy and paste current course information from Class Search/Course Catalog.

College/School  College of Liberal Arts and Sciences  Department  Psychology
Prefix  PSY  Number  432  Title  Embodied Cognition  Units: 3

Is this a cross-listed course?  No  If yes, please identify course(s)

Is this a shared course?  No  If so, list all academic units offering this course

Note- For courses that are crosslisted and/or shared, a letter of support from the chair/director of each department that offers the course is required for each designation requested. By submitting this letter of support, the chair/director agrees to ensure that all faculty teaching the course are aware of the General Studies designation(s) and will teach the course in a manner that meets the criteria for each approved designation.

Is this a permanent numbered course with topics? No

If yes, all topics under this permanent numbered course must be taught in a manner that meets the criteria for the approved designation(s). It is the responsibility of the chair/director to ensure that all faculty teaching the course are aware of the General Studies designation(s) and adhere to the above guidelines.

Course description: Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines make it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action, and emotion. We will explore this claim through readings, discussions, debates, and embodied interactions, and we will consider implications of embodied cognition across areas of psychology and applications in education.

Requested designation: Literacy and Critical Inquiry-L  Mandatory Review: (Choose one)

Note- a separate proposal is required for each designation.

Eligibility:
Permanent numbered courses must have completed the university’s review and approval process.
For the rules governing approval of omnibus courses, contact Phyllis.Lucie@asu.edu.

Submission deadlines dates are as follows:
For Fall 2016 Effective Date: October 1, 2015
For Spring 2017 Effective Date: March 10, 2016

Area(s) proposed course will serve:
A single course may be proposed for more than one core or awareness area. A course may satisfy a core area requirement and more than one area requirements concurrently, but may not satisfy requirements in two core areas simultaneously, even if approved for those areas. With departmental consent, an approved General Studies course may be counted toward both the General Studies requirement and the major program of study.

Checklists for general studies designations:
Complete and attach the appropriate checklist

- Literacy and Critical Inquiry core courses (L)
- Mathematics core courses (MA)
- Computer/statistics/quantitative applications core courses (CS)
- Humanities, Arts and Design core courses (HA)
- Social Behavioral Sciences core courses (SB)
- Natural Sciences core courses (NS/NG)
- Cultural Diversity in the United States courses (C)
- Global Awareness courses (G)
- Historical Awareness courses (H)

A complete proposal should include:
- Signed course proposal cover form
- Criteria checklist for General Studies designation(s) being requested
- Course catalog description
- Sample syllabus for the course
- Copy of table of contents from the textbook and list of required readings/books

It is respectfully requested that proposals are submitted electronically with all files compiled into one PDF.

Contact information:
Name  Amy Sannes  E-mail  Amy.sannes@asu.edu  Phone  480.965.7258

Department Chair/Director approval: (Required)

Rev. 4/2015
Rationale and Objectives

Literacy is here defined broadly as communicative competence—that is, competence in written and oral discourse. Critical inquiry involves the gathering, interpretation, and evaluation of evidence. Any field of university study may require unique critical skills that have little to do with language in the usual sense (words), but the analysis of written and spoken evidence pervades university study and everyday life. Thus, the General Studies requirements assume that all undergraduates should develop the ability to reason critically and communicate using the medium of language.

The requirement in Literacy and Critical Inquiry presumes, first, that training in literacy and critical inquiry must be sustained beyond traditional First Year English in order to create a habitual skill in every student; and, second, that the skill levels become more advanced, as well as more secure, as the student learns challenging subject matter. Thus, two courses beyond First Year English are required in order for students to meet the Literacy and Critical Inquiry requirement.

Most lower-level [L] courses are devoted primarily to the further development of critical skills in reading, writing, listening, speaking, or analysis of discourse. Upper-division [L] courses generally are courses in a particular discipline into which writing and critical thinking have been fully integrated as means of learning the content and, in most cases, demonstrating that it has been learned.

Notes:

1. ENG 101, 107 or ENG 105 must be prerequisites
2. Honors theses, XXX 493 meet [L] requirements
3. The list of criteria that must be satisfied for designation as a Literacy and Critical Inquiry [L] course is presented on the following page. This list will help you determine whether the current version of your course meets all of these requirements. If you decide to apply, please attach a current syllabus, or handouts, or other documentation that will provide sufficient information for the General Studies Council to make an informed decision regarding the status of your proposal.

Revised April 2014
Proposer: Please complete the following section and attach appropriate documentation.

## ASU - [L] CRITERIA

**TO QUALIFY FOR [L] DESIGNATION, THE COURSE DESIGN MUST PLACE A MAJOR EMPHASIS ON COMPLETING CRITICAL DISCOURSE—AS EVIDENCED BY THE FOLLOWING CRITERIA:**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Identify Documentation</th>
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<tbody>
<tr>
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<td>Submitted</td>
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### CRITERION 1:
At least 50 percent of the grade in the course should depend upon writing assignments (see Criterion 3). Group projects are acceptable only if each student gathers, interprets, and evaluates evidence, and prepares a summary report. *In-class essay exams may not be used for [L] designation.*

1. Please describe the assignments that are considered in the computation of course grades—and indicate the proportion of the final grade that is determined by each assignment.

2. Also:

   Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this

   **C-1**

### CRITERION 2:
The writing assignments should involve gathering, interpreting, and evaluating evidence. They should reflect critical inquiry, extending beyond opinion and/or reflection.

1. Please describe the way(s) in which this criterion is addressed in the course design.

2. Also:

   Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this

   **C-2**

### CRITERION 3:
The syllabus should include a minimum of two writing and/or speaking assignments that are substantial in depth, quality, and quantity. Substantial writing assignments entail sustained in-depth engagement with the material. Examples include research papers, reports, articles, essays, or speeches that reflect critical inquiry and evaluation. Assignments such as brief reaction papers, opinion pieces, reflections, discussion posts, and impromptu presentations are not considered substantial writing/speaking assignments.

1. Please provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements

2. Also:

   Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this

   **C-3**

The syllabus describes the assignments related to this criterion, and sections of the syllabus are reproduced on pages 4-6 of this form.
CRITERION 4: These substantial writing or speaking assignments should be arranged so that the students will get timely feedback from the instructor on each assignment in time to help them do better on subsequent assignments. Intervention at earlier stages in the writing process is especially welcomed.

1. Please describe the sequence of course assignments--and the nature of the feedback the current (or most recent) course instructor provides to help students do better on subsequent assignments.

2. Also:

   Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this.
<table>
<thead>
<tr>
<th>Criteria (from checksheet)</th>
<th>How course meets spirit (contextualize specific examples in next column)</th>
<th>Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1</td>
<td>Grades are based on weekly writing assignment (30%), a debate (20%), an individual (or small group) presentation of a research project (20%), and a final (individual) paper describing the research project (20%).</td>
<td>Page 2, area marked C-1 Students will achieve these goals through a combination of activities. The first is reading and discussing reports and analyses in the professional literature. The second is contributing to in-class debates. Finally, students will develop and present (both orally and in a paper) a potential new application of embodiment ideas. Grades will be based on a) posted comments on the readings, that is the QRCs (30%); b) contributions to in-class discussions (10%); c) student contributions to the debate (20%); d) application presentation (20%); and e) final paper on the application (20%). The percentages earned in each component will be added and final grades determined as follows: A: 90-100%; B: 80-89%; C: 65-79%; D: 50-64%; E: &lt; 50%.</td>
</tr>
<tr>
<td>C-2</td>
<td>The weekly assignment requires students to contrast the lecture material with assigned readings. The debate requires students to synthesize material from much of the course. The final application paper and presentation require a creative synthesis.</td>
<td>Page 2, description of QRC, debate, and application paper. QRC stands for Question, Response, Comment. It is a way of recording your reaction to the readings or commenting on another student’s reaction. It need not be more than one paragraph, but it is certainly acceptable for a QRC to be longer. A good QRC indicates that you have thought deeply about the issue. Thus, a comment such as “They should have used more subjects,” or “Did they counterbalance the order of presentation” is not worth much. Instead, a good QRC is along the lines of “They should have used more subjects because they are testing a critical effect that is likely to be small. The effect is critical because…” Good QRCs also relate one reading to another. For example, “X says A, but Y says B. Perhaps A and B are really the same because…” QRCs will be graded as 0-5, where 0 means not much of a contribution, 3-4 means a good contribution, 5 means a novel or insightful contribution.</td>
</tr>
<tr>
<td>C-3</td>
<td>The three &quot;substantial&quot; assignments are the debate (a group activity), the presentation of the application (one or two students), and the final application paper (individual).</td>
<td>Pages 2-3, marked C-3Debate. Students in the class have a formal debate with some students taking the Pro side of the question (e.g., Resolved: high-level cognition is thoroughly embodied) and others taking the Con side. Each side will have 10 minutes to present their position, 5 minutes to rebut the other side’s position, and then a final 5-minute summary. Application presentation and paper. Each student will...</td>
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present a NOVEL application of embodiment theory. The application can be a proposal for a new experiment, an educational application, a clinical application, a business/advertising application, and so on. Submit a written proposal to Glenberg by MONDAY, November 9. YOU MUST OBTAIN APPROVAL BY THURSDAY, NOVEMBER 12. Ten-minute oral presentations of applications and 5-minute discussions occur November 19 – December 3. Application final paper is due three days after your project presentation. The final paper is based on your presentation and feedback from your presentation. This paper should be approximately 10-15 double-spaced pages. All papers should begin with a brief (one or two paragraph) presentation of the problem and overview of the solution (e.g., an experiment or therapy). The next section should be a review of the relevant literature. Finally, the application should be presented in detail and related to the literature review. End with a discussion section. If your application is an experiment, then the discussion section should describe how to proceed if the experiment turns out as expected and how to proceed if it does not. If your application is for an educational intervention or a therapy, then the discussion section should present how your idea can be evaluated.

| C-4 | The weekly writing assignment (QRC) are graded each week; students receive feedback on their proposed application; students receive feedback on the oral presentation of the application, and grade on the final paper depends in part on incorporating the feedback. | Pages 2-3, areas marked C-4QRCs. QRC stands for Question, Response, Comment. It is the way of recording reactions to the readings or commenting on another student’s reaction. It need not be more than one paragraph, but it is certainly acceptable for a QRC to be longer. A good QRC indicates that the student thought deeply about the issue. Thus, a comment such as “They should have used more subjects,” or “Did they counterbalance the order of presentation” is not worth much. Instead, a good QRC is along the lines of “They should have used more subjects because they are testing a critical effect that is likely to be small. The effect is critical because...” Good QRCs also relate one reading to another. For example, “X says A, but Y says B. Perhaps A and B are really the same because...” QRCs will be graded as 0-5, where 0 means not much of a contribution, 3–4 means a good contribution, 5 means a novel or insightful contribution. QRCs are required during weeks indicated with an asterisk in the schedule below. The QRC is submitted to Blackboard and is due by 5 pm on Wednesday of the week assigned, that is, after the lecture on Tuesday and before the discussion on Thursday. For example, a QRC is due the week of August 25. It must be submitted by 5 pm on Wednesday, August 26. Debate. We will have a formal debate with some students taking the Pro side of the question (Resolved: high-level cognition is thoroughly embodied) and others taking the Con side. Each side will have 10 minutes to present their position, 5 minutes to rebut the other side’s position, and then a final 5-minute summary. |
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PSY 432
Embodied Cognition
Fall, 2015
12-1:15 T & Th, SS 205

Instructor: Arthur Glenberg, glenberg@asu.edu Office: PSY 215
Office Hours: 10:30 – 11:30, T & Th and by appointment (email)

***Please note: information in the syllabus, other than grade and absence policies, may be subject to change with reasonable advance notice.***

Course description

Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines makes it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action, and emotion. We will explore this claim through readings, discussions, debates, and embodied interactions, and we will consider implications of embodied cognition across areas of psychology and applications in education.

Course goals

The last 15 years have seen an explosion of theory and research connected by the term "embodiment." A typical claim of embodied theories is that many forms of cognition make use of perceptual/action/emotion systems. That is, cognition is not something that can be accomplished by the manipulation of abstract symbols by rules (e.g., the way a computer works). Instead, cognition requires a body that interacts with the world. Our main goals are to understand this claim, examine evidence regarding this claim across multiple areas of psychology and application, and to determine if there can be a coherent, unified, embodied approach to understanding behavior.

We will achieve these goals through a combination of activities. The first is reading and discussing reports and analyses in the professional literature. The second is contributing to in-class debates. Finally, you will develop and present (both orally and in a paper) a potential new application of embodiment ideas.

Learning Outcomes

- Become familiar with the scientific literature on embodied cognition
- Distinguish between embodied and non-embodied approaches
- Think critically about concepts of embodied cognition
- Apply concepts of embodied cognition to your areas of interest
Grading

Grades will be based on a) posted comments on the readings, that is your QRCs (30%); b) contributions to in-class discussions (10%); c) your contributions to the debate (20%); d) application presentation (20%); and e) final paper on the application (20%). The percentages earned in each component will be added and final grades determined as follows: A: 90-100%; B: 80-89%; C: 65-79%; D: 50-64%; E: < 50%.

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QRCs are required during weeks indicated with an asterisk in the schedule below. The QRC is submitted to Blackboard and is due by 5 pm on Wednesday of the week assigned, that is, after the lecture on Tuesday and before the discussion on Thursday. For example, a QRC is due the week of August 25. It must be submitted by 5 pm on Wednesday, August 26.

In-class discussion. Most weeks will have one-half to one day set aside for discussion of the lecture and readings. You can prepare for the discussion by carefully reading the material and writing a QRC. In-class discussion will be graded 0-5 just like the QRCs. Some people think that they learn more by listening and thinking than by talking. Nonetheless, the class is a joint activity that gets its value from individuals interacting, sharing ideas, and criticizing ideas. Your own learning will be enhanced by putting your ideas into an open forum for discussion. How should you overcome shyness or reticence? The answer is to be prepared: Read the assigned readings, prepare a QRC and develop a point of view that you wish to defend or explore. Then, apply that point of view to the ensuing discussion.

Debate. We will have a formal debate with some students taking the Pro side of the question (Resolved: high-level cognition is thoroughly embodied) and others taking the Con side. Each side will have 10 minutes to present their position, 5 minutes to rebut the other side's position, and then a final 5-minute summary.

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Absence Policy: Written assignments (e.g., QRC) need to be submitted on time. The debate and application presentations, by their nature, cannot be made up; talk to Glenberg about scheduling if there is a conflict. Similarly, discussion cannot be made up. If you must miss a discussion, talk to Glenberg before missing the discussion to arrange for an alternative activity.

Academic Honesty: Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions for academic dishonesty include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see http://provost.asu.edu/academicintegrity.

Occasionally students are not aware of the definition of plagiarism or its consequences. Plagiarism is copying someone else’s words or ideas without appropriate citation. Whenever you directly quote someone, that quotation must be in quotation marks (or set off by wider margins for a long quotation) and a citation provided. Whenever you repeat, refer to, or use someone’s ideas, you must provide appropriate citation. Some students believe that if they change a word or two in every sentence then it is not plagiarism. THAT BELIEF IS INCORRECT. Plagiarism is an extremely serious offense and may result in expulsion from the University. For more information and valuable advice go the Writing Center’s Writer’s Handbook (http://www.wisc.edu/writing/Handbook/index.html).

Disability Accommodations: Qualified students with disabilities who will require disability accommodations in this class are encouraged to make their requests to me at the beginning of the semester either during office hours or by appointment. Note: Prior to receiving disability accommodations, verification of eligibility from the Disability Resource Center (DRC) is required. Disability information is confidential.
Establishing Eligibility for Disability Accommodations: Students who feel they will need disability accommodations in this class but have not registered with the Disability Resource Center (DRC) should contact DRC immediately. Their office is located on the first floor of the Matthews Center Building. DRC staff can also be reached at: 480-965-1234 (V), 480-965-9000 (TTY). For additional information, visit: www.asu.edu/studentaffairs/ed/drc Their hours are 8:00 AM to 5:00 PM, Monday through Friday.

Courtesy

It's great to have your laptop to look up articles, definitions, and facts. But please be courteous to speakers: No email and no unrelated web-surfing while someone is presenting or leading a discussion.

Sometimes discussion can become heated. Please remember to keep your questions and comments helpful. Even when your comment is hard-headed and disputatious, it should always be directed at the science and never directed at the person.

Course/Instructor Evaluation

The course/instructor evaluation for this course will be conducted online 10-14 days before the last official day of classes. Your response(s) to the course/instructor are anonymous and will not be returned to your instructor until after grades have been submitted. The use of a course/instructor evaluation is an important process that allows our department to (1) help faculty improve their instruction, (2) help administrators evaluate instructional quality, (3) ensure high standards of teaching, and (4) ultimately improve instruction and student learning over time. Completion of the evaluation is not required for you to pass this class and will not affect your grade, but your cooperation and participation in this process is critical. About two weeks before the class finishes, watch for an e-mail with "Course Evaluations" in the subject heading. This email will be sent to your official ASU e-mail address, so make sure ASU has your current email address on file. You can check this online at the following URL: https://webapp4.asu.edu/ejo-web/forwarding.

Schedule and Readings

Week 1: August 20 - Introduction to theories of cognition

Class name mnemonics (Assignment for August 20!). Create a mnemonic for your name before the first class. We will practice the mnemonics during class.

The mnemonic should relate your name to an easily remembered, distinctive *physical* characteristic. Example 1: Glenberg has black and white hair like a wise, old king. The most famous king is King Arthur. So, when you look at Glenberg and see his hair, it reminds you that his name is Arthur. Example 2: A rather tall woman in one of my classes noted that her name, Michelle, had two tall letters, as in the word "tall." Looking at the woman and seeing that she is tall, reminds you of the letters in her name, Michelle.
Sometimes something silly or clever will work. Arezou is a woman from Iran; I thought it would be impossible to learn her name. But she said, “Some people like his zoo; some like her zoo; but everyone likes our zoo!”

Some people try to make up mnemonics like, “I am always smiling, ‘smiling’ starts with an ‘s’ so you know my name is Sonia.” Unfortunately, Sonia is NOT always smiling, so this doesn’t work too well. Or someone says, “You can’t see it, but I have a birthmark that looks like a lizard, so you know my name is Liz.” But, if we can’t see it, it doesn’t help too much!

Warning: This is a lot harder to do than it sounds. Take some time to work on it; ask friends for help.

Required Readings (one from each set)

Set 1: Embodiment


Set 2: Standard approach to cognition


Optional readings


doi:10.1002/ejsp.670

*Week 2: August 25-27*  Introduction to Embodiment: Does changing the body really change cognition?

**Required Readings: At least one of the following**


*Week 3: September 1-3*  Cognitive Development

**Required readings (at least one of the following):**

(Bruderer, Danielson, Kandhadai, & Werker, 2015)
Dahl, A., Campos, J. J., Anderson, D. I., Uchiyama, I., Witherington, D. C., Ueno, M., ...

*Week 4: September 8-10*  On the other hand (Note: no in-class meetings)
Required readings [read at least Lupker, Glenberg (2015a), Mahon, and Glenberg's response (2015b)]


Optional readings


*Week 5: September 15-17  Mirror neurons and simulation*

Required readings


Optional Readings


The Mirror Neuron Forum:


*Week 6: September 22-24 Motor system in high-level cognition: Language*

Required reading (at least one of the following):


Optional Readings:


*Week 7: September 29 – October 1 Perceptual systems in high-level cognition*

Required Reading (at least one of the following)


*Week 8 October 6-8: Embodiment and Social Cognition

Required Readings


AND one of these papers


http://doi.org/10.1177/0956797613492773


October 13 FALL BREAK NO CLASS

Week 9: October 15: Embodiment and Culture

Week 10: October 20-22 Debate!

Tuesday: Formulate question, make teams, prepare

Possible questions:
- Cognition is thoroughly embodied
- Abstract symbols are needed for cognition
- Consciousness proves that not all cognition is embodied

Thursday: Debate

*Week 11 October 27-29: Applied Embodiment - Education

Required reading (read at least one)


Optional readings


*Week 12 November 3-5: Applied Embodiment – Special populations Autism & Aging
Required readings (read at least one)


Week 13: November 10-12 Project meetings with Glenberg NOTE: KORNER ET AL (BELOW) PROVIDES HINTS ON HOW TO TEST EMBODIMENT CLAIMS.


**Week 14 November 17 NO CLASS; WORK ON PROJECTS**

November 19 PROJECT PRESENTATIONS

November 24 PROJECT PRESENTATIONS

**November 26 THANKSGIVING BREAK**

December 1 PROJECT PRESENTATIONS

December 3 PROJECT PRESENTATIONS
Final papers are due three days after your project presentation