



ARIZONA STATE UNIVERSITY  
GENERAL STUDIES COURSE PROPOSAL COVER FORM

**Course information:**

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

Academic Unit College of Liberal Arts & Sciences Department Psychology  
 Subject PSY Number 394 Title Special Topics: Neuroeconomics 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 \_\_\_\_\_  
 Course description:

This course will provide the conceptual and empirical foundations of neuroeconomics. The course will focus on the psychological and neural basis of choice and valuation, and their implications for policy.

**Requested designation:** Social and Behavioral Sciences-SB

*Note- a separate proposal is required for each designation requested*

**Eligibility:**

Permanent numbered courses must have completed the university's review and approval process.  
 For the rules governing approval of omnibus courses, contact the General Studies Program Office at (480) 965-0739.

**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 awareness 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, Fine Arts and Design core courses (HU)
- Social and Behavioral Sciences core courses (SB)
- Natural Sciences core courses (SQ/SG)
- Global Awareness courses (G)
- Historical Awareness courses (H)
- Cultural Diversity in the United States courses (C)


**A complete proposal should include:**

- Signed General Studies Program Course Proposal Cover Form
- Criteria Checklist for the area
- Course Syllabus
- Table of Contents from the textbook, and/or lists of course materials

**Contact information:**

Name Cindy Theisman Phone (480) 965-9376  
 Mail code 1104 E-mail: cindy.theisman@asu.edu

**Department Chair/Director approval: (Required)**

Chair/Director name (Typed): Dr. Clark Presson, Director of Undergraduate Studies Date: 9/12/13  
 Chair/Director (Signature): 

Arizona State University Criteria Checklist for

**SOCIAL AND BEHAVIORAL SCIENCES [SB]**

**Rationale and Objectives**

The importance of the social and behavioral sciences is evident in both the increasing number of scientific inquiries into human behavior and the amount of attention paid to those inquiries. In both private and public sectors people rely on social scientific findings to assess the social consequences of large-scale economic, technological, scientific, and cultural changes.

Social scientists' observations about human behavior and their unique perspectives on human events make an important contribution to civic dialogue. Today, those insights are particularly crucial due to the growing economic and political interdependence among nations.

Courses proposed for General Studies designation in the Social and Behavioral Sciences area must demonstrate emphases on: **(1)** social scientific theories and principles, **(2)** the methods used to acquire knowledge about cultural or social events and processes, and **(3)** the impact of social scientific understanding on the world.

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

| <b>ASU--[SB] CRITERIA</b>  |                          |  |                                  |
|--|--------------------------|--|----------------------------------|
| A SOCIAL AND BEHAVIORAL SCIENCE [SB] course should meet all of the following criteria. If not, a rationale for exclusion should be provided. |                          |  |                                  |
| YES  | NO                       |  | Identify Documentation Submitted |
| <input checked="" type="checkbox"/>  | <input type="checkbox"/> | 1. Course is designed to advance basic understanding and knowledge about human interaction.  | syllabus                         |
| <input checked="" type="checkbox"/>  | <input type="checkbox"/> | 2. Course content emphasizes the study of social behavior such as that found in:<br><ul style="list-style-type: none"> <li>• ANTHROPOLOGY</li> <li>• ECONOMICS</li> <li>• CULTURAL GEOGRAPHY</li> <li>• HISTORY</li> </ul> <div style="margin-left: 150px;">Psychology</div>                               | syllabus                         |
| <input checked="" type="checkbox"/>  | <input type="checkbox"/> | 3. Course emphasizes:<br>a. the distinct knowledge base of the social and behavioral sciences (e.g., sociological anthropological).<br><div style="text-align: center;"><b>OR</b></div> b. the distinct methods of inquiry of the social and behavioral sciences (e.g., ethnography, historical analysis). | syllabus, course schedule        |
| <input checked="" type="checkbox"/>  | <input type="checkbox"/> | 4. Course illustrates use of social and behavioral science perspectives and data.  | syllabus                         |
|  |                          | <b>THE FOLLOWING TYPES OF COURSES ARE EXCLUDED FROM THE [SB] AREA EVEN THOUGH THEY MIGHT GIVE SOME CONSIDERATION TO SOCIAL AND BEHAVIORAL SCIENCE CONCERNS:</b>  |                                  |
|  |                          | • Courses with primarily fine arts, humanities, literary, or philosophical content.  |                                  |
|  |                          | • Courses with primarily natural or physical science content.  |                                  |
|  |                          | • Courses with predominantly applied orientation for professional skills or training purposes.   |                                  |
|  |                          | • Courses emphasizing primarily oral, quantitative, or written skills.   |                                  |

| Course Prefix | Number | Title                          | Designation |
|---------------|--------|--------------------------------|-------------|
| PSY           | 394    | Special Topics: Neuroeconomics | SB          |

Explain in detail which student activities correspond to the specific designation criteria. Please use the following organizer to explain how the criteria are being met.

| Criteria (from checksheet) | How course meets spirit (contextualize specific examples in next column)                     | Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)                                |
|----------------------------|--|--|
| 1                          | Students will read and discuss about the neural and psychological basis of economic activity | See syllabus. Readings will provide an understanding of neural and psychological basis of choice and valuation         |
| 2                          | Course content emphasizes the study of economic choice and valuation                         | See syllabus. Readings will provide relevant material. Essays are intended to emphasize implications for public policy |
| 3                          | Course includes material on the methods of economics and experimental psychology             | See Course Schedule, "Methodology", and "Analysis and Models"  |

## PSY 394 Neuroeconomics Syllabus - Spring 2014

Room: CC 227  
Time: Tu 4:30 – 7:15 pm  
Email: [Federico.Sanabria@asu.edu](mailto:Federico.Sanabria@asu.edu)

Instructor: Federico Sanabria  
Office Hours (PSY 216A): Tu 1-4, Fr 4-5

### Text Book

Glimcher, P. W. (2011). *Foundations of Neuroeconomic Analysis*. New York, NY: Oxford University Press.

Glimcher, P. W. & Fehr, E. (2013). *Neuroeconomics: Decision Making and the Brain (2<sup>nd</sup> Ed.)* London: Academic Press.

### Course Description

Neuroeconomics is a new interdisciplinary field of experimental research aimed at explaining how individuals allocate finite resources, on the basis of our current understanding of brain and behavior. It combines theories and methods from behavioral and cognitive neuroscience, experimental analysis of behavior, cognitive psychology, and behavioral economics. This course will cover the main conceptual, theoretical, and methodological issues associated with neuroeconomic research, with a focus on their implications for policy.

### Goals

At the end of this course you should understand:

- The conceptual and philosophical problems associated with neuroeconomic research.
- The basic experimental and analytic methods of neuroeconomic research.
- The fundamental neurobiology of choice and valuation.
- The economic and behavioral models of choice and valuation.
- The implications of neuroeconomic findings on policy making.

### Requirement and Expectations

Your presence and attention is expected at EVERY class meeting. If you miss a class, you are responsible for getting the notes and assignments from your classmates. Competence in written and oral discourse will be evaluated. You are expected to read all assigned material prior to the scheduled class discussion, and to identify contents that need clarification. You may be evaluated on this material even if it was not directly discussed in class. Basic quantitative skills (i.e., high-school algebra) are expected.

### Participation

Your participation in class, through appropriate comments and/or questions, is required. Class discussions are an integral part of the course. I expect to hear you formulate a question, an

answer, or an idea at least once a week—if I don't, your grade will suffer. I do not take attendance, but I do regularly call names at random to ask questions. If your name is called and you are not there, participation points will be taken off.

### **Weekly Questions**

Each Monday before noon you will upload to Blackboard one question for each reading assigned to that week. The question must be on the topic that was least clear to you in the reading. Your question should reflect the amount of thought you put in trying to answer it yourself. Simply asking, for instance, "what are the basal ganglia?" does not count as a valid question. You must explain what is it you understood, what sources you consulted (Google, Wiki, other textbooks, etc.) Typically, a valid question is articulated in a short paragraph. You are allowed to skip 2 assignments. Bring a copy of your question to class.

### **Essays**

You will upload two essays to Blackboard, one on March 4<sup>th</sup> and one on the day of the final exam. The topic of the essays will be the potential practical implications of the material read in the first half (first essay) and second half (second essay) of the semester. The essay should reflect your understanding of the material and your capacity to apply it to practical issues not contemplated in the course.

Essays will be formatted as Microsoft Word documents. They will be 3 pages long, double-spaced, 1-inch margin.

### **Punctuality**

Late assignments WILL NOT be accepted. Problems accessing Blackboard, copying files, printing, etc., are not valid excuses for late assignments. Assignments sent by e-mail will only be accepted with previous authorization of the instructor. If you foresee any difficulties in complying with a due date, contact the instructor immediately.

### **Grading**

Participation in class: 33%    Weekly questions: 33%    Essays: 34%

Letter grades will not be assigned for individual tests or assignments. Percents will be provided to help you estimate your final grade outcome. Final Course grades will be assigned as follows:

|   |               |   |              |   |        |
|---|---------------|---|--------------|---|--------|
| A | 90% and above | B | 80-89%       | C | 70-79% |
| D | 60-69%        | F | 59% or below |   |        |

"Borderline" scores (<2%) will be pushed up ONLY when outstanding class attendance and participation has been demonstrated.

## **Disability Resources for Students**

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Resource Center at 480-965-1234 (Voice), 480-965-9000 (TDD), or Disability-Q@asu.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and with a DRC Disability Access Consultant.

## Course Schedule

FNA = Foundations of Neuroeconomic Analysis

NDMB = Neuroeconomics: Decision Making and the Brain

| <b>Day</b> | <b>Topic</b>                | <b>Assignment</b>                      |
|------------|-----------------------------|--|
| 1/14       | Introduction and Syllabus   |  |
| 1/21       | Conceptual Issues 1         | Read FNA Ch. 1, 2                      |
| 1/28       | Conceptual Issues 2         | Read FNA Ch. 3, 4                      |
| 2/4        | Conceptual Issues 3         | Read FNA Ch. 5, 6                      |
| 2/11       | Methodology                 | Read NDMB Ch. 1, 2, 6                  |
| 2/18       | Analysis and Models 1       | Read NDMB Ch. 3, 4                     |
| 2/25       | Neuroscience and Choice     | Read NDMB Ch. 5, FNA Ch. 7             |
| 3/4        | Fundamentals of Choice 1    | Read FNA Ch. 8, 9; Turn in First Essay |
| 3/11       | NO CLASS: SPRING BREAK      |  |
| 3/18       | Fundamentals of Choice 2    | Read FNA Ch. 10, 11                    |
| 3/25       | Neurobiology of Choice 1    | Read NDMB Ch. 19, 21                   |
| 4/1        | Neurobiology of Choice 2    | Read NDMB Ch. 22, 23, 25               |
| 4/8        | Fundamentals of Valuation   | Read FNA Ch. 12, NDMB Ch. 8, 9         |
| 4/15       | Neurobiology of Valuation 1 | Read FNA Ch. 13, 14, NDMB Ch. 15       |
| 4/22       | Neurobiology of Valuation 2 | Read NDMB Ch. 17, 20, 24               |
| 4/29       | Implications for Policy     | Read FNA Ch. 15, 16, 17                |
| TBD        |                             | Turn in Second Essay                   |



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# Foundations of Neuroeconomic Analysis

Paul W. Glimcher

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24 November 2010  
488 Pages | 128  
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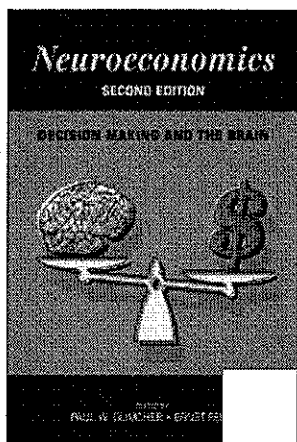
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## Neuroeconomics, 2nd Edition Decision Making and the Brain



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Dimensions: 276 X 216

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