TO: The Academic Senate

FROM: Committee on Instruction and Curriculum

SUBJECT: Application of Courses for GE Area B6

PURPOSE: For Action by the Academic Senate

ACTION REQUESTED: That the Academic Senate approve the application of the following courses for General Education (G.E.) for Area B6 for the 04-12 and earlier catalogs.

**PSYC 4220 Cognitive Processes**  
**PSYC 3500 Social Psychology**

BACKGROUND INFORMATION:  
These courses were approved by the G.E. Subcommittee in 05-06, but the courses got lost somewhere in the approval process.

CIC unanimously approved these courses for the G.E. area indicated above at its meeting on February 15, 2010.

All supporting documents (i.e., course syllabus, GE approval form) for these courses are available for review on the 2/15/10 CIC Sharepoint meeting workspace. The web link for this workspace is:  
Psychology 4220  Cognitive Processes

1. Students will demonstrate advanced and/or focused science content knowledge in a specific scientific field using appropriate vocabulary and referencing appropriate concepts (such as models, uncertainties, hypotheses, theories, and technologies).

Cognitive processes are the processes by which individuals acquire and use knowledge. Cognitive processes include perception, attention, memory, language, decision-making, and problem solving. Students prepare for almost all class meetings by using their textbook to prepare to respond aloud to known questions when called upon in class. This activity forces them to use vocabulary and describe concepts related to classical and current data and theories in cognitive psychology. In addition, at the end of the course, students are required to locate, read, summarize, and analyze the importance of original research articles from journals published by the two organizations most closely associated with cognitive processes (the American Psychological Association and the Psychonomic Society). This assignment requires the use of appropriate vocabulary, and relating the articles to models and theories discussed in the class.

2. Students will apply advanced quantitative skills (such as statistics, algebraic solutions, interpretation of graphical data) to scientific problems.

Students read about and discuss research methods during the first week of class. Throughout the course, students read summaries of research for which statistical data are presented numerically, in tables, and in graphs. Data presented include a variety of common statistical measures, such as means, correlation coefficients, and inferential statistics, plus many area-specific measures. Students cannot perform satisfactorily in class without comprehending these data in detail. In addition, one theoretical approach in cognitive psychology involves computer simulation; students must describe and evaluate simulations throughout the course. Finally, the paper assignment requires the students to interpret the results of original research articles, which are generally extremely challenging.

3. Students demonstrate understanding of the nature of science and scientific inquiry and the experimental and empirical methodologies utilized in science to investigate a scientific question or issue.

During the first meetings of the class, students answer questions about the historical development of the scientific study of cognitive processes, starting with the empiricism/rationalism dialectic in ancient Greece, moving through the controversies of the Middle Ages, the gradual acceptance of empirical approaches, and then the stumbling growth of scientific psychology. Throughout the course, students must report verbally on the methods used in research studies.

4. Students will critically analyze scientific claims and data.

Students must think critically about scientific claims to answer questions in class. Some questions which they must answer verbally require them to recognize how alternative explanations of early research give rise to more sophisticated work that clarifies some issues, but often raises other questions. Understanding why many questions in cognitive psychology remain unresolved requires recognition of the shortcomings of past research approaches.

5. Students will apply science content knowledge to contemporary scientific issues (e.g. global warming) and technologies (e.g. cloning), where appropriate.
The limitations of human cognitive processes are to blame for many of the social ills that have plagued humanity since history began. With urging, students perceive that well-known shortcomings of perception, attention, and memory explain many miscarriages of justice (as well as poor academic performance and auto and industrial accidents); that differences in language pragmatics can lead to miscommunication; that decision-making at the highest levels of government and business is flawed in predictable ways; that creative problem-solving requires lots of preparation and hard work; and that ever-higher-order thinking is being done more quickly and more accurately by computers than by human beings.

In addition, courses receiving upper division science approval must support students’ acquisition of advanced numeracy, information literacy, and critical thinking skills.

Advanced numeracy: Addressed in question #2.

Advanced literacy: At the end of the course, students are required to locate, read, summarize, and analyze the importance of original research papers from journals published by the two organizations most closely associated with cognitive processes (the American Psychological Association and the Psychonomic Society).

Critical thinking: Throughout the course, students are required to relate empirical evidence to scientific theories. It is in the nature of science to seek alternate explanations and question data/theory relationships rigorously, using inductive and deductive logic. These skills are practiced and polished at almost every class meeting.
Application for General Education Credit
for Upper Division Science (B6)

Course title: Social Psychology        Course number: PSYC 3500

Date: January 17, 2006

1. Students will demonstrate advanced and/or focused science content knowledge in a specific scientific field using appropriate vocabulary and referencing appropriate concepts (such as models, uncertainties, hypotheses, theories, and technologies).

Social Psychology is an upper division Psychology course that provides students with an overview of the scientific study of how people's thoughts, feelings, and behaviors are influenced by the social environment (other individuals or groups). In this course, students not only learn the major theories and findings in social psychology, but also the methodological issues behind the conduct of social psychological research. On page 1 of the syllabus, it states that students are expected "to learn the major scientific theories, ideas, and findings in social psychology," and "to become familiar with the current research approaches in social psychology." A significant part of the first couple of weeks is devoted to learning about different research methods and methodological issues, which students are expected to apply in class discussions and examinations. Also, the syllabus lists the major topics that are covered in the course (such as perceiving people, or helping behavior). Each topic has its own scientific theories, terms, testable hypotheses, and research findings. Students demonstrate such knowledge through class discussion, class exercises (such as in-class written assignments), and examinations.

2. Students will apply advanced quantitative skills (such as statistics, algebraic solutions, interpretation of graphical data) to scientific problems.

As mentioned above, a significant part of the first weeks is devoted to the learning of research methodology. This includes discussions on interpreting statistics and data. They are tested on this material. Also, throughout the course, the instructor periodically leads students in discussions on research findings presented in the textbook or lectures -- including discussions and interpretations of statistics and graphical data.

3. Students demonstrate understanding of the nature of science and scientific inquiry and the experimental and empirical methodologies utilized in science to investigate a scientific question or issue.
In the course, students are taught about the characteristics of scientific inquiry and the three primary research methods used in the scientific study of social behavior (descriptive, correlational, and experimental methods). They also learn the strengths and weaknesses (limitations) of each method, when to use each method, and how to interpret research findings based on each method. They are expected to demonstrate the above knowledge during class discussions and in tests. On page 1 of the syllabus, it states that students are expected to “become familiar with the current research approaches in social psychology.” In addition, throughout the course in class discussions, students are encouraged to generate new research questions based on the scientific theories and findings that they learn.

4. Students will critically analyze scientific claims and data.

Students are taught and encouraged to think critically about scientific data and information. On page 1 of the syllabus, it states that students are expected to “critically think about and apply” social psychological knowledge. Class discussions include examination of empirical findings and research conclusions, and consideration of alternative explanations and limitations to the conclusions provided based on the limitations of the methodology employed. Students are expected to demonstrate such skills during class discussions.

5. Students will apply science content knowledge to contemporary scientific issues (e.g. global warming) and technologies (e.g. cloning), where appropriate.

Again, on page 1 of the syllabus, it states that students are expected to “critically think about and apply” social psychological knowledge. Throughout the course, the instructor frequently brings up world events and asks students to apply scientific theories and findings they learned during class discussions and/or on examinations. For example, how might international conflicts escalate due to various psychological processes (cognitive, motivational, and/or emotional processes)? How might the presence of other people promote or hinder people from helping others in distress (such as in an emergency situation)?