CSUH Psychology Department
Learning Outcomes and Assessment

Learning Outcomes

1. Develop scientific thinking and methodological skills
2. Master the content and theory of the field of psychology
3. Apply psychology and prepare for careers

Assessment of Learning Outcomes

Learning Outcome #1: Developing Scientific Thinking and Methodological Skills

Scientific thinking and methodological skills are assessed by pre-test given in the Psyc 3100 laboratory and post-tests given in one of the 4800-4808 laboratory courses.

Scientific thinking and methodological skills are also assessed in our content courses through exams, papers, other projects, and by oral presentations. For example, students who successfully complete a course in Developmental Psychology can apply some theories and the results of empirical results in that area to suggest possible explanations for characteristics of individuals. This skill is demonstrated on exams and papers.

In addition to exams and papers, courses that are aimed specifically at developing scientific thinking and methodological skills require students to produce products or perform tasks that display their current level of skill. Students in many classes, and especially the advanced labs, are required to display the following skills:

- Recognize, identify, and formulate a research hypothesis
- Identify and formulate properties of a sound research design
  - Independent and dependent variables
  - Characteristics of and distinctions among empirical approaches to studying behavior
  - Research design (e.g., single vs. multi-subject)
- Conduct a suitable literature search
- Identify and apply appropriate data collection methods
  - Selection of appropriate research materials
  - Formulating appropriate instructions
  - Following A.P.A. ethical guidelines
  - Pretesting and design review
  - Identifying and deriving reliable and valid measures of behavior
- Identify and apply appropriate procedures for analyzing collected data
  - Summary graphs and tables
  - Using appropriate statistical tools for the analysis of data
- Draw appropriate conclusions from collected data
- Communicate orally and in writing about the research.
Learning Outcome #2: Mastering the Content and Theory in Psychology

These are assessed through exams, papers, other projects, and by oral presentations in our content courses.

Learning Outcome #3: Applying Psychology and Preparing for Careers

Applying psychology and career preparation are assessed by a Survey of graduating seniors and by an Alumni Survey. This applies to both B.A. and B.S. majors.

Students in the B.S. Option in Industrial Psychology course should be able to knowledgeably engage in personnel selection and performance evaluation, applying quantitative methods to real-life workplace problems. These skills are assessed from the reports they prepare.

Students in the B.S. Option in Human Factors who successfully complete their internship course receive a satisfactory evaluation from their field site supervisor. For these students, the standard for satisfactory performance is successful completion of the duties and responsibilities articulated in the contract negotiated between the student and the field supervisor.
Student Learning Outcomes Mathematics and Computer Science

Undergraduate Mathematics (BS Mathematics)

Outcome 1: Students possess technical competence to solve problems in undergraduate mathematics; to develop and analyze models arising from mathematics, science, and engineering; and to read and create proofs.

Outcome 2: Students possess a fundamental understanding of mathematics theory including the role of precise definitions and proofs.

Outcome 3: Students are able to work effectively both individually and in groups.

Outcome 4: Students have an ability to communicate effectively, both in written and oral form.

Graduate Mathematics (MS Mathematics)

In addition to the student learning outcomes for undergraduate mathematics:

Outcome 5: Students have detailed knowledge of one or more areas of mathematics.

Outcome 6: Students are able to retrieve, read, and understand theoretical material in mathematics, including research papers in journals.

Undergraduate Computer Science (BS Computer Science)

Outcome 1: Students possess the technical competence to design and implement a computer program of reasonable size and complexity using accepted software engineering design principles.

Outcome 2: Students possess a fundamental understanding of computer science theory including principles underlying algorithm design and analysis, computer architecture, operating systems, and programming languages.

Outcome 3: Students possess the ability to work in teams and to communicate effectively with colleagues, both orally and in writing.

Outcome 4: Students are prepared for successful employment upon graduation, or for seeking advanced degrees, if that is their goal.
Graduate Computer Science (MS Computer Science)

In addition to the student learning outcomes for undergraduate computer science:

Outcome 5: Students have detailed knowledge of one or more areas of computer science.

Outcome 6: Students are able to retrieve, read, and understand theoretical material in computer science, including research papers in journals.

Graduate Telecommunication (MS Telecommunications Systems, Computer Technologies Options)

In addition to the student learning outcomes for undergraduate computer science:

Outcome 5: Students have detailed knowledge of one or more areas of computer science.

Outcome 6: Students are able to retrieve, read, and understand theoretical material in computer science, including research papers in journals.

Outcome 7: Students are able to design, analyze, and manage computer networks, both local and global.