

BMI 831 Cognitive Science for Brain-Mind Research

A Distance Learning Course

June 15 - August 2, 2013

<http://www.brain-mind-institute.org/>

Brain-Mind Institute (BMI)

Available via Internet

A survey of the psychological subjects, with an emphasis on cognitive science. Principles of animal learning and behavior, including habituation, sensitization, classical conditioning, instrumental conditioning, extinction, blocking, rehearsal, transfer, serial pattern learning, chunking, and language comprehension.

Lectures: Each lecture (video and ppt file) is available online hopefully by 9:00pm US Eastern Daylight Time (EDT), Monday to Friday, via Internet to registered applicants. Each course will be video recorded live from 9:00am-10:20am and 10:40am - noon, EDT, in Room 3105 Engineering Building, Michigan State University, East Lansing, MI 48824 USA. Those who prefer to attend the live classes please send an email to the instructor.

Instructor: Juyang (John) Weng

Course web: <http://www.brain-mind-institute.org/bmi-831.html>

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Prerequisites: A bachelor degree in any discipline is generally sufficient. Physical science and social science applicants are all encouraged. This course is self-contained for the course quizzes and exams.

Text: Mark A. Gluck, Eduardo Mercado, and Catherine Myers, *Learning and Memory: From Brain to Behavior*, 2nd edition, ISBN: 978-1429240147, Worth Publishers, New York, 2013.

Homework: There will be online homework assignments, administered through LON-CAPA, an integrated system for online learning and assessment, at <http://s10.lite.msu.edu>

Quizzes: Quizzes are short multiple-choice problems to be completed during each lecture.

Exams: Three exams, one for each Friday.

Grading: Composite score: 3 exams. Exam results are private and confidential. Those who successfully pass will receive a BMI 831 Certificate.

Time Schedule

- Day 1, Monday, 07/15/2013: Chapter 1 The Psychology of Learning and Memory
- Day 2, Tuesday, 07/16/2013: Chapter 2 The Neuroscience of Learning and Memory
- Day 3, Wednesday, 07/17/2013: Chapter 3 Habituation, Sensitization, and Familiarization: Learning about Repeated Events (I)

- Day 4, Thursday, 07/18/2013: Chapter 3 Habituation, Sensitization, and Familiarization: Learning about Repeated Events (II)
- Day 5, Friday, 07/19/2013: Chapter 4 Classical Conditioning: Learning to Predict Important Events
- Day 6, Monday, 07/22/2013: Chapter 5 Operant Conditioning: Learning the Outcome of Behaviors
- Day 7, Tuesday, 07/23/2013: Chapter 6 Generalization and Discrimination Learning (I)
- Day 8, Wednesday, 07/24/2013: Chapter 6 Generalization and Discrimination Learning (II)
- Day 9, Thursday, 07/25/2013: Chapter 7 Episodic and Semantic Memory: Memory for Facts and Events
- Day 10, Friday, 07/26/2013: Chapter 8 Skill Memory: Learning by Doing
- Day 11, Monday, 07/29/2013: Chapter 9 Working Memory and Cognitive Control
- Day 12, Tuesday, 07/30/2013: Chapter 10 Emotional Influences on Learning and Memory
- Day 13, Wednesday, 07/31/2013: Chapter 11 Social Learning and Memory: Observing, Interacting, and Reenacting
- Day 14, Thursday, 08/01/2013: Chapter 12 Development and Aging: Learning and Memory across the Lifespan (I)
- Day 15, Friday, 08/02/2013: Chapter 12 Development and Aging: Learning and Memory across the Lifespan (II)