PSY390H1 S LEC0101 20231:Behavioural Genetics

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PSY390: Behavioral Genetics Room: SS2110

Description: An examination of how genes contribute to the production of behaviors, either as structural elements or direct participants in behavioral regulation. Covers molecular genetics, natural selection, and genetic methods followed by specific examples of congenic disorders that affect behavior and studies of normal behaviors in human and animal models.

Textbook (optional): Knopik, V.S., Neiderhiser, J.M., DeFries, J. C., Plomin, R. (2016). Behavioral Genetics (7th ed). New York, NY: Worth Publishers.

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Course website: Quercus for PSY390

Attendance: Your attendance is not tracked, and you will not receive credit for it. That said, attending lectures is a really good idea. In certain cases, lectures will include content that is not present in the downloadable lecture slides. Lecture slides will be posted before the class.
Etiquette: To be considerate of your peers (and your instructor), all phones must be turned off or set to vibrate.

Missed tests: Except for some official reason for missing a test such as documented family emergency and documented illness, there will be no re-scheduled or make-up tests.
Accordingly, missed or unexcused tests will be treated as zeros for the given exam.

Grading Criteria
Term test 1: 40%
Term test 2 : 40%
Take-home written assessment (due by last lecture): 20%

Course Schedule

Jan 10 L1: Introducing Behavioral Genetics, the Basis of Genetics. **Chapters 1, 2, 4**
Jan 17 L2: Genetic variations, GWAS, Neurophysiology. **Chapters 9**
Jan 24 L3: Inheritance of complex traits, QTLs, QTL mapping. **Chapters 3, 5**
Jan 31 L4: Heritability, Review session. **Chapters 7**
Feb 7 Term test 1
Feb14 L5: Mouse Genetic Engineering, Genetic Dissection of Neural Circuits I
Feb 21 No Class; Reading Break
Feb 28 L6: Genetic Dissection of Neural Circuits II, Behavioral phenotyping strategies for mutant mice
Mar 7 L7: Normal Behavioral Development, Primary Cognitive Disorders. **Chapters 11, 12**
Mar 14 L8: Psychiatric Disorders with a Cognitive Component, Disorders of Mood, Anxiety, and Personality. **Chapters 13, 14, 15, 16**
Mar 21 Term test 2
Mar 28 L9: Epigenetics. **Chapters 10**
April 4 L10: Sex chromosomes. **Chapters 12**

Term tests: Graded tests will be returned within two weeks from the test.
Any complaint about exam grading should be made in writing to the course e-mail address within two weeks of receiving the graded exams.

Written assignment: Literature Review Assignment
Purpose: The aim of the written assignment is to review literature on one of the topics that are covered in lecture 9 and 10. A literature review is a descriptive summary of previous studies on a topic, so the goal is to inform readers of the knowledge and ideas on the topic. Choose three to four research articles (not review articles) and use the information you have read to find connections/contradictions among the articles and emerging ideas. You can research some review articles if you want a model to follow.
Format: The assignment should be typed in 12 point Times New Roman, single-spaced, 1 inch margins, with proper grammar, spelling and punctuation. It should be 5 full pages (minimum) to 6 (maximum) pages of text, excluding the reference list. You should have at least 10 scholarly references and they must be cited according to APA standards. A title page should include your title, name, course on the page. The assignment file must be submitted via Turnitin as a single pdf file in the Quercus.

The following criteria will be used to grade your literature review

- At least three articles were selected to summarize - 20%.
- The findings/results of each article were properly summarized - 30%.
- The findings/results of articles were compared and connected to each other - 40%.
- The references were cited using APA style - 10%.

Changes in the syllabus: The course content, grading policies, and schedule may be changed to accommodate class needs. Any changes to the syllabus will be announced in class.

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