

Trinity Western University
Undergraduate Course Syllabus
Psychology 354
Brain and Behaviour
Summer 2017

Co-requisites or Pre-requisites: PSYC 105, 106; 201.

Semester Hours: 3

Instructor: Judith Toronchuk, Ph.D.

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Office Hours: via email; phone appointment may be set up by email

Course Description:

An overview of the relationship between the nervous system and behaviour. Human behaviour and clinical problems. Biological bases of emotion, learning, memory, sexual behaviour, and some homeostatic motivations. Biochemical theories of schizophrenia, autism, and mood disorders.

Course Objectives:

1. To provide the student with an introduction to the physiological, anatomical, developmental and functional bases of mental experience and behaviour i.e. to explore the relationship between the brain, behaviour and mental experience.
2. To encourage development of scientific thinking about the connection between the mind and brain.
3. To provide a basis for the student to understand that biological, psychological and social aspects of the human being all work together to produce personality and behaviour.
4. To introduce the student to basic research methods used in studying the nervous system and behavior.
5. To provide an understanding of basic brain anatomy and basic neuron functioning.
6. To explore some common mental disorders associated with abnormalities in neural or biochemical function.

Required Texts and Materials:

- 1) Kalat, James W. (2016). *Biological Psychology, 12th ed.* N.Y, N.Y: Brooks/Cole.
The study guide that accompanies the textbook is also a great resource that I recommend.
- 2) Jeeves, M. (2013). *Minds, brains, souls and gods: A Conversation on faith, psychology and neuroscience.* Downer's Grove, IL: InterVarsity.

Supplementary neuroscience articles will be posted for you on the website. The posted material is intended to help you formulate your online postings and help with term papers.

A few other books I especially recommend for psychology undergraduates include:

Brown, W.S. & Strawn, B.D. (2012). *The physical nature of Christian life: Neuroscience, psychology and the church*. NY: Cambridge University Press.

Jeeves, M. & Brown, W.S. (2009). *Neuroscience, psychology, and religion: illusions, delusions, and realities about human nature*. West Conshohocken: Templeton Foundation Press.

Markham, Paul N. (2007). *Rewired: Exploring religious conversion*. Eugene, OR: Pickwick.

Course Activities/Requirements:

ONLINE FORUMS —Must be completed every week

Because this is an online course, participation in the online discussions is required. I will provide questions intended to address some of the more interesting topics/applications in each chapter. You will usually have a choice of topics and you are expected to comment in about 300 words on the topic using the supplementary material and other journal articles that you find in order to make your points. Your grade will be based on accuracy and relevance of your posts. The postings must include factual content but may also include personal reaction and reflection. *Cite your sources*. You are also required to comment each week on at least two other postings from other students by giving your reaction to their post or additional discussion.

QUIZZES AND EXAMS

Short (10 questions) multiple choice quizzes on the Kalat chapter material will be put on the course website for each chapter. Quizzes and exams will be **time-limited**. The midterm will include material from Kalat chapters 1-5 plus extra pages, the entire Jeeves book, and my lecture notes. Don't neglect the posted material. The final exam will cover all chapters and the notes that I post (with stress on units 7-12), as well as integrative questions from the Jeeves book.

RESEARCH PAPER (about 2200 words **not including** bibliography and cover page which are extra)

I would like you to start with the book by Jeeves and focus on some aspect of neuroscience presented there—social neuroscience, altruism, free will, placebo, religious experience etc. Try to explore in detail the interaction of the brain (physiology, biochemistry and/or anatomy) with experience and/or behaviour. Your goal should be to show me that you are able to think analytically and in-depth. If none of those topics catch your interest you may ask for permission to write on a topic of your choice.

Carry out some additional research on the topic using Pub Med, Academic Search Premier, etc. and the books and articles I have recommended. **You must use high quality relevant academic sources (i.e. peer reviewed journals NOT newspapers or popular magazines or non-academic internet sources)** in your discussion (approximately 10 primary sources). You may include in this number articles that I post on the class website.

You may, if you choose, also include your own reactions, how the authors' views fit (or not) with your understanding, how the supporting evidence used by the authors fits (or doesn't fit) with other topics from this or other courses, or the scientific literature. What do you think are potential problems with the material you researched? Did the material answer any questions you may have had, or did it leave you with more questions? Is the viewpoint presented compatible with a Christian worldview? Why or why not? Of course there are other questions you may try to answer, but they should be relevant to the course. Be sure you can rationally justify your ideas and that you include scientific discussion. The paper is, however, primarily meant to be a scholarly discussion of the research, not an opinion piece.

Please proofread your paper for correct grammar, punctuation, spelling, etc. I take grammar, spelling and style into account when assigning your grade. Cite **all** your sources. **Do not forget to cite journal articles and books as journals or books, not merely as URLs.**

Cite secondary sources (ones you did not read yourself) as **secondary sources** (e.g. Jones, 1999, cited in Brown, 2005) not as if they were primary sources which you actually read. If you cite material that you haven't read (a secondary source) as if you have read it (i.e. as a primary source), you are being less than honest in padding your bibliography. *Internet citations should have an author and/or institution, title, and date as well as the URL.* **Plagiarism and indiscriminate close paraphrasing are unacceptable! Anything longer than 6 words should be considered a quote.**

Proposed Course Outline:

The following is meant to help you schedule your reading of the text and notes. Aim to complete one unit per week. Notes posted on the internet will include explanations of the text book material plus my own lecture material. You will be tested on the online notes as well as the readings from both texts.

May 1-7	Introduction	Kalat Introduction, plus pp. 103-116, and Jeeves ch. 1-4 and 9.
May 8-14	Nerve Cells and Impulses	Kalat ch. 1
May 15-21	Synapses & Drugs	Kalat ch. 2; plus 202-7; 466-9; and Jeeves 16
May 22-28	Anatomy of the Nervous System	Kalat ch. 3; Jeeves ch. 10-13
M 29- June 4	Development and Plasticity	Kalat ch. 4; plus 170-3; 179-180; and 499-500.
June 5-11	Mind, Brain and Soul	Kalat 247-8; 448-9, posted notes and Jeeves 5-8 and 14-19.

June 12-18 study for midterm

Midterm test must be written on or before June 19--includes up to ch 4 in Kalat plus extra pages, plus my notes (especially those from unit 6) plus the readings from the Jeeves book.

June 20-25	Wakefulness and Sleep	Kalat ch. 8
Ju 26-July 2	Reproductive Behaviours	Kalat ch. 10; 220-221

July 3-9	Emotional Behaviours and Stress	Kalat ch. 11
July 10-16	Learning & Memory	Kalat ch.12
July 17-23	Cognitive Functions	Kalat ch. 13
July 24-30	Mood Disorders & Schizophrenia	Kalat ch. 14; plus 252-257; 317-320

Term Paper due on or before August 4

Final exam must be written on or before August 8 --includes all assigned material from notes, Kalat and Jeeves with primary emphasis on Kalat ch 8 -14

Evaluation:

Quizzes (11 quizzes @ 1%)	11 %
Online postings (11 @ 2%; plus responses to other postings 3%)	25 %
Research Paper	19 %
Midterm test	15 %
Final Exam	30 %

Policies:

LATE ASSIGNMENT POLICY

Late term papers and forum postings will be reduced by 3% per day. It is particularly important to post your forum responses in a timely manner so that other students may discuss them and the instructor may provide feedback that will be accessible to all students.

ACADEMIC INTEGRITY AND AVOIDING PLAGIARISM AT TWU

As Christian scholars pursuing higher education, academic integrity is a core value of the entire TWU community. Students are invited into this scholarly culture and required to abide by the principles of sound academic scholarship at TWU. This includes, but is not limited to, avoiding all forms of plagiarism and cheating in scholarly work. TWU has a strict policy on plagiarism. Learning what constitutes plagiarism and avoiding it is the student's responsibility. An excellent resource describing plagiarism and how to avoid it has been prepared by TWU Librarian William Badke and is freely available for download (PPT file) or used as flash (self running) tutorials of varying lengths from:

- <http://acts.twu.ca/library/plagiarism.ppt>
- <http://acts.twu.ca/library/Plagiarism.swf> (14 minute flash tutorial)
- http://acts.twu.ca/library/Plagiarism_Short.swf (8 minute flash tutorial)

CAMPUS CLOSURE AND CLASS CANCELLATION POLICY

In the event of deteriorating weather conditions or other emergency situations, every effort will be made to communicate information regarding the cancellation of classes to the following radio stations CKNW (980 AM), CKWX (1130 AM), STAR FM (107.1 FM), PRAISE (106.5 FM) and KARI (550 AM). As well, an announcement will be placed on the University's campus closure notification message box (604.513.2147) and on the front page of the University's website

(<http://www.twu.ca> – also see <http://www.twu.ca/campus/campus-notification.html> for more details).

An initial announcement regarding the status of the campus and cancellation of classes is made at 6:00 AM and covers all classes beginning before 1:00PM. A second announcement is made at 11:00AM that covers all classes which begin between 1:00PM and 5:00PM. A third announcement is made at 3:00PM and covers those classes which begin after 5:00PM.

STUDENTS WITH DISABILITIES

Students with a disability who need assistance are encouraged to contact the Equity of Access Office upon admission to TWU to discuss their specific needs. All disabilities must be recently documented by an appropriately certified professional and include the educational impact of the disability along with recommended accommodations. Within the first two weeks of the semester, students must meet with their professors to agree on accommodations appropriate to each class. Students should follow the steps detailed by the Equity of Access Office outlined on the TWU website at <http://twu.ca/life/wellness/learningresources/disabilities-and-equity-of-access/steps-to-attaining-disability-services.html>.

UNIVERSITY GRADING SYSTEM

[If your department or course deviates from the standard, include the grading system here]

Letter Grade	Percentage	Grade Point
A+	90-100	4.3
A	85-89	4.0
A-	80-84	3.7
B+	77-79	3.3
B	73-76	3.0
B-	70-72	2.7
C+	67-69	2.3
C	63-66	2.0
C-	60-62	1.7
D+	57-59	1.3
D	53-56	1.0
D-	50-52	0.7
F	Below 50	0