



DEPARTMENT: Humanities and Social Sciences
COURSE OUTLINE – SPRING, 2024

PY1040 (A4): BASIC PSYCHOLOGICAL PROCESSES – 3 (3-0-0) 45 Hours for 4 Weeks

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OFFICE

HOURS: Monday to Thursday, 8:00 to 8:50; Friday mornings, 8:00 to 11:30

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

CALENDAR DESCRIPTION: This first introductory course in psychology gives students an understanding of themselves and other people through the study of basic concepts, principles, theories, and methods used in the scientific study of behaviour. The course covers research methods in psychology, the biological bases of behaviour, neurophysiology, sensation, perception, learning, states of consciousness, memory, and cognition.

PREREQUISITE(S)/COREQUISITE: None

RECOMMENDED TEXT/RESOURCE MATERIALS:

Chapters of the open-sourced textbook are posted to the D2L site for this course. However, as I shall not be testing you on this one particular textbook, any good introductory psychology text will suffice.

DELIVERY MODE(S): Lecture/Discussion

COURSE OBJECTIVES: As a result of taking this course in Introductory Psychology, students will gain the abilities to define, explain, and give examples through short summary paragraphs the following basic concepts of psychology:

1. The Scientific Perspective: formal thinking skills, determinism, mechanism/monism (Dates covered in lecture: May 6)
2. The genetic determinism of behaviour (Nature): Wilson's Sociobiology, evolutionary psychology, genetic transference and variability, natural selection, evolution, reflexes, fixed action patterns, animal parallels (May 6-7).
3. The environmental determinism of behaviour through Behaviourism (Nurture): learning, Pavlov's Classical Conditioning, conditioned and unconditioned stimuli and response, associations, acquisition, extinction, stimulus generalization, and discrimination (May 7).
4. Skinner's Operant Conditioning: The three term contingency, reinforcement and punishment, extinction, stimulus control, generalization and discrimination, positive and negative contingencies (May 7-8).
5. Nature with Nurture determinism: Evolutionary psychology, Epling & Pierce's Biobehaviourism, natural selection of learning potential, enabling and constraining influences of biology, species-specific learning differences (May 9).
6. Cognitive determinism: Bandura's Social Learning theory, latent learning, internal symbolic representation, Tolman's cognitive maps, observational learning (May 9-14).
7. Critical thinking and the scientific perspective: Theories versus opinions, evidence, evaluation of theories, operational definitions, measurement, description, correlation, controlled experimentation, quasi-experimental designs, statistics, hypothesis testing (May 14-15).
8. Neurophysiological determinism: The brain, the biological basis of behaviour, emotion, and cognition, structures and functions, lateralization and specialization, biological rhythms, dreams, and drugs (May 16 & 21).

9. Sensation: Vision, audition, transduction, discrimination of quantity and quality of environmental energies, neural coding, psychophysics, feature detection (May 21 - 22).
10. Perception: Feature Analysis, Perceptual Organization, Gestalt, Constructivism, prototypes (May 22).
11. Atkinson and Shiffrin's Information Processing model: Cognitive determinism, intelligence, sensory, short, and long term storages, modelling structures and processes, metacognition (May 23 & 28).
12. Craik and Lockhart's Levels of Processing: Principles of semantic encoding (May 28).
13. Schema theory: Categories/prototypes, stereotypes, frames, story schemas, scripts, narratives, person schemas, self-schemas, formal and informal/irrational thought, intelligence (May 28 - 29).

***Please note that the above objectives are also the course schedule and its tentative timelines.**

LEARNING OUTCOMES: GENERAL GOALS: This course may be different from any other course you have ever taken. There will be no memorizing lists of facts or definitions; students must learn the material, organize it for themselves so that they understand it, and apply it to their own lives such that they can reflect upon how these principles have been at work creating the people that they are now. Further, students are required to develop the skills of discussing, both through written and verbal communication, their knowledge of course material.

Please be aware that your normal strategies for passing classes may not work here and new strategies may have to be developed; do so quickly. We will not follow the text chapter by chapter. Thirteen major theories and perspectives of human behaviour and cognitive processes will be introduced in the lectures moving from the simplest to the most complex; students are expected to find and read the topics in the text using the Index as a guide. Extra readings will be recognized; going beyond lecture material will be rewarded.

EVALUATION: Assessment will be based on four exams: the first weighted at 20%, the second and third weighted at 25%, and the final exam worth 30%. Below, you will see four sets of fifteen questions; each of the four exams will consist of a randomly chosen five questions from those lists. The final exam will also include the essay on the causes of Human and Animal

Behaviour. Following the final grade assignments, students will be subjectively assessed for bonus points on the basis of their involvement in and contributions to the class, and attendance.

BEHAVIOURAL OBJECTIVES: As a result of taking this course, students will gain the abilities to show the following behaviours:

EXAM ONE: Monday, May 13th.

- 1.1. Define and explain what psychological theories study, what questions they try to answer while doing so, and how they do it.
- 1.2. List and explain what the differences are between formal and informal thinking in deciding what is true, worthwhile, and good.
- 1.3. Define and explain the scientific perspectives of mechanism and monism as they are applied to human and animal behaviour.
- 1.4. Explain the mechanisms of genetic determinism; how do genes cause behaviour?
- 1.5. Explain why our species has the genes we have; what is the process by which we acquire them?
- 1.6. From the perspective of evolutionary psychology, explain altruism and aggression in our species using the concept of tribalism.
- 1.7. Define Learning from the Behaviourist perspective and explain why it's defined that way.
- 1.8. Define, explain, and give examples of the Classical Conditioning processes of acquisition and extinction.
- 1.9. Define, explain, and give examples of the Classical Conditioning processes of generalization and discrimination.
- 1.10. Define, explain, and give examples of the Operant Conditioning processes of how the consequences of behaviour determine future behaviour.
- 1.11. Define, explain, and give examples of the Operant Conditioning process of stimulus control.
- 1.12. Define, explain, and give examples of the Operant Conditioning processes of positive and negative reinforcement and punishment.
- 1.13. Define and discuss how Operant Conditioning explains the concept of "free will."

- 1.14. Define and explain the four basic schedules of reinforcement.
- 1.15. Differentiate between and give examples of primary and secondary reinforcers.

EXAM TWO: Monday, May 20th.

- 2.1. Explain how scientific theories are created and how they are modified according to Hegel and Kuhn.
- 2.2. Explain the major empirical (research-based) criticisms of Behaviourism from the Biobehavioural perspective.
- 2.3. Explain the major empirical (research-based) criticisms of Behaviourism from the Cognitive perspective.
- 2.4. Explain the contribution of “nature” from the “nurture WITH nature” perspective, as defined by Biobehaviourism.
- 2.5. Explain the concept of “internal symbolic representation” that is at the basis of Social Learning Theory.
- 2.6. Explain how Bandura uses principles of Operant and Classical Conditioning in his Social Learning Theory.
- 2.7. Explain the process of observational learning from Social Learning Theory.
- 2.8. Explain why science purposefully takes the perspective that “people are all the same” rather than “everyone’s different.”
- 2.9. Summarize, define, and explain the four basic types of research designs.
- 2.10. Explain what an operational definition is and what it means for an operational definition to be valid, reliable, normed, and standardized.
- 2.11. Explain why a “testimonial” is not considered to be “evidence” by research psychologists.
- 2.12. Explain the process of random sampling; how it is done and why it is done.
- 2.13. Explain what a correlation is and what it shows.
- 2.14. Explain what it means to “isolate the independent variable” in controlled laboratory experimentation; what does this mean, how is it done, and why is it desirable to do so?
- 2.15. Explain the differences between true and quasi experimental designs.

EXAM THREE: Monday, May 27th .

- 3.1. Define and explain what is meant by referring to the brain and nervous system as the neurological substrate of the human experience.
- 3.2. Draw and label the essential components of a nerve cell.
- 3.3. Explain what transmitters are, what they do, and how they do it.
- 3.4. Explain the functions of any or all of the following: Brain stem, cerebellum, hypothalamus, pituitary gland, thalamus, amygdala, hippocampus, and basal ganglia. (I will choose two for the exam.)
- 3.5. Discuss the following issue: do different hemispheres do different things (localization of function) or do different hemispheres do things differently (hemispheric specialization)?
- 3.6. Explain the process of transduction and what it accomplishes.
- 3.7. Explain what is meant by the quality and quantity of light waves and how they are differentially encoded in the nervous system.
- 3.8. Define and explain the field of psychophysics and what it attempts to do.
- 3.9. Define and explain the two kinds of sensory thresholds and how they are measured.
- 3.10. Explain how the Helmholtz-Hering theories account for colour vision.
- 3.11. Explain how the Hubel and Wiesel Feature Detection theory accounts for shape vision.
- 3.12. Explain how the Selfridge and Biederman Feature Analysis theories account for object perception.
- 3.13. Explain the concept of a Hoffding step, that is, the idea of perceptual organization in indirect perception.
- 3.14. Explain how we see depth.
- 3.15. Explain what prototypes are and what they have to do with perception.
- 3.16. Explain perception from the perspective of Constructivism.

EXAM FOUR (FINAL): Thursday, May 30th.

- 4.1. Explain the uses of models and metaphors in Cognitive Psychology and why they are used. How are they formed?
- 4.2. What is Information Processing's definition of intelligence? Explain why computers are and are not intelligent, how they are similar to and different from Human Intelligence.
- 4.3. Define and explain what Atkinson and Shiffrin mean by structures and processes of intelligence. Then give examples.
- 4.4. Explain why the Information Processing model postulates three stores in memory.
- 4.5. Define and explain awareness (consciousness) and agency (metacognition).
- 4.6. Explain in general terms what is meant by semantic encoding of verbal material.
- 4.7. Explain what is meant by "thesis" and "context" of academic knowledge.
- 4.8. Explain what is meant by elaborative rehearsal of verbal material.
- 4.9. Explain how Schema Theory defines knowledge.
- 4.10. Define, explain, and give examples of the three types of scripts.
- 4.11. Define, explain, and give examples of types of narratives.
- 4.12. Explain how Schema Theory explains recovered or reconstructed memory.
- 4.13. Explain how Schema Theory is an example of a nurture with nature theory.

ESSAY TOPIC: The Causes of Human and Animal Behaviour: Types of Determinism

TRANSFERABILITY: UA, UC, UL, AU, GMU, BU, CUE, KUC

***Warning:** Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities.** Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide at <http://transferalberta.alberta.ca/transfer-alberta-search/#/audienceTypeStep>

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

Research psychology recognizes the authority of, and bases its judgements on, carefully collected data as opposed to opinion, tradition, authority, or feelings. In keeping with this philosophy, rather than me imposing my authority on you and telling you what you need to know and then arbitrarily assigning cut-off points according to the arbitrary judgements based upon non-standardized tests, you as a class will inform me of what you are capable of, through my measurement of your performance. Students will be assessed according to their relative position within the class. This will be explained fully in the first class period; handouts are available for those who wish to understand this more fully.

GRADING CRITERIA:

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	2%	C+	2.3	16%
A	4.0	3%	C	2.0	13%
A-	3.7	7%	C-	1.7	9%
B+	3.3	9%	D+	1.3	7%
B	3.0	13%	D	1.0	3%
B-	2.7	16%	F	0.0	2%

COURSE SCHEDULE/TENTATIVE TIMELINE:**LECTURES:**

The Scientific Perspective: May 6

The genetic determinism of behaviour (Nature): May 6-7

Pavlovian Classical Conditioning and Behaviourism's environmental determinism of behaviour (Nurture): May 7

Skinner's Operant Conditioning: May 8

Nature with Nurture determinism: May 9

Cognitive determinism: May 9 & 14

Critical thinking and the scientific perspective: May 14 - 15

Neurophysiological determinism: May 16 & 21

Sensation: May 21-22

Perception: May 22

Atkinson and Shiffrin's Information Processing model: May 23

Craik and Lockhart's Levels of Processing: May 28

Schema theory: May 28-29

EXAMS:

May 13th - 20%

May 20th - 25%

May 27th - 25%

May 30th - 30%

STUDENT RESPONSIBILITIES: This is adult education. You will be treated as such and are expected to behave accordingly. It is expected that all students will display a professional attitude and behaviour in the classroom. This includes reliability, respect for and cooperation with your fellow students and the instructor, attention to fellow students' questions and instructors' responses, determination to achieve first-class work, effective time management, and constructive response to criticism. Engaging in cell phone behaviour will result in you being asked to leave the classroom.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the section on Plagiarism and Cheating in the College policy titled Student Misconduct: Academic and Non-Academic at (<https://www.gprc.ab.ca/about/administration/policies/fetch.php?ID=68>).

Instructors reserve the right to use electronic plagiarism detection services on written assignments. **Instructors also reserve the right to ban the use of any form of electronics (cell phones, Blackberries, iPods, tablets, scanning pens, electronic dictionaries, etc.) during class and during exams.**

**Note: all Academic and Administrative policies are available at <https://www.gprc.ab.ca/about/administration/policies/>

GENERAL COMMENTS:

There is so much more to learn than we can cover in our limited class time. Make the most of your college experience by reading the text and other sources beyond what is called for in the papers. It will also make your exam answers all the more insightful.

My preferred teaching style is interactive lecture, derived from the teaching philosophy that little is learned until responses are made (either verbally or written).

I am extremely available for student consultation, and I will be happy to proof students' rough drafts of exam answers and to further discuss course material.

Missing three or more lectures or coming in late without being excused will result in you being barred from writing the final exam.