DEPARTMENT: Humanities and Social Sciences

COURSE OUTLINE: Fall, 2022

PY1040 (B2): BASIC PSYCHOLOGICAL PROCESSES – 3 (3-0-0) 45 Hours for 15 Weeks

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.

INSTRUCTOR: **PHONE: 780-539-2994**
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(he/him)

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OFFICE HOURS: Tues, Thurs: 8:00-10:00, Fri 10-11:30

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

REQUIRED 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): In person, on campus 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 essays the following basic concepts of psychology:

1. The Scientific Perspective: formal thinking skills, determinism, mechanism/monism (Dates covered in lecture: Sep 9)

2. The genetic determinism of behaviour (Nature): Wilson's Sociobiology, evolutionary psychology, behavioural genetics, genetic transference and variability, natural selection, evolution, reflexes, fixed action patterns, animal parallels (Sep 9-12).

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 (Sep 16).

4. Skinner's Operant Conditioning: The three term contingency, reinforcement and punishment, extinction, stimulus control, generalization and discrimination, positive and negative contingencies (Sep 19-23).

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 (Sept 26-Oct 7).

6. Cognitive determinism: Bandura's Social Learning theory, latent learning, internal symbolic representation, Tolman's cognitive maps, observational learning (Oct 7-17).

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 (Oct 21-24).

8. Neurophysiological determinism: The brain, the biological basis of behaviour, emotion, and cognition, structures and functions, lateralization and specialization, biological rhythms, dreams, and drugs (Oct 28-Nov 7).

9. Sensation: Vision, audition, transduction, discrimination of quantity and quality of environmental energies, neural coding, psychophysics, feature detection (Nov 14-18).

10. Perception: Feature Analysis, Perceptual Organization, Gestalt, Constructivism, prototypes (Nov 21).

11. Atkinson and Shiffrin's Information Processing model: Cognitive determinism, intelligence, sensory, short, and long term storages, modelling structures and processes, metacognition (Nov 25-Dec 2).

12. Craik and Lockhart's Levels of Processing: Principles of semantic encoding (Dec 5).

13. Schema theory: Categories/prototypes, stereotypes, frames, story schemas, scripts, narratives, person schemas, self-schemas, formal and informal/irrational thought, intelligence (Dec 9-12).

***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.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page http://www.transferalberta.ca.

** 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**

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 an essay from the list of "Summary" questions. 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:

1.1. Define and explain what psychological theories study and what questions they try to answer while doing so.

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:

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 contribution of "nature" from the "nurture WITH nature" perspective, as defined by Biobehaviourism.

2.4. Explain why dogs can easily learn to sit and beg for treats but cats can't.

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:

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):

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.

SUMMARY:

Present the thesis, perspectival context, and major principles of the following theories:

1. Sociobiology.
2. Classical Conditioning.
3. Operant Conditioning.
4. Biobehaviourism.
5. Social Learning Theory.
6. Constructivism.
7. Information Processing.
8. Schema Theory.
9. Psychology as a Science
10. Types of Determinism
11. Theories of Learning.

GRADING CRITERIA: (The following criteria may be changed to suite the particular course/instructor)

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62

B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

LECTURES:

The Scientific Perspective: Sep 9
The genetic determinism of behaviour (Nature): Sep 9-12
Pavlovian Classical Conditioning and Behaviourism's environmental determinism of behaviour (Nurture): Sep 16
Skinner's Operant Conditioning: Sep 19-23
Nature with Nurture determinism: Sep 26 – Oct 7
Cognitive determinism: Oct 7-17
Critical thinking and the scientific perspective: Oct 21-24
Neurophysiological determinism: Oct 28 – Nov 7
Sensation: Nov 14-18
Perception: Nov 21
Atkinson and Shiffrin's Information Processing model: Nov 25-Dec 2
Craik and Lockhart's Levels of Processing: Dec 5
Schema theory: Dec 9-12

EXAMS:

Oct 3rd - 20%
Oct 31st – 25%
Nov 28th - 25%
TBA Exam week – 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 bone spurs on the back of your skull and 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 Student Conduct section of the Northwestern Polytechnic Calendar at https://www.nwpolytech.ca/programs/calendar/ or the Student Rights and Responsibilities policy which can be found at https://www.nwpolytech.ca/about/administration/policies/index.html.

**Note: all Academic and Administrative policies are available on the same page.

If you cheat in any way, penalties will be pursued, potentially including a zero for the paper, an "F" for the term, and suspension from the institution.

Additional Information: 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. If you are unsure whether you have understood a question, prewrite your answer and submit it to me at least 48 hours before the exam date and I will give you feedback. Please append your prewrites in Word to my e-mail address. DO NOT use Brightspace, Google, Clouds, Sharepoint, pdf files, or anything else.

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