



**Department of Psychology**  
**Psych 363**  
**Evolutionary Perspectives on Mental Health and Illness**  
**Mondays & Wednesday 4:00pm – 5:20pm, EV2 2002**

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### **Instructor and T.A. Information**

**Instructor:** Dr. Paul Wehr

**Office:** PAS 4037

**Office Phone:** 519-888-4567, x35333

**Office Hours:** Mondays - Wednesday, 3:00pm - 4:00pm

**Email:** [pwehr@uwaterloo.ca](mailto:pwehr@uwaterloo.ca)

**TA** Daniel Todorovic

[d2todorovic@uwaterloo.ca](mailto:d2todorovic@uwaterloo.ca)

### **Course Description**

Although still underutilized, evolutionary approaches are increasingly gaining favour in the social sciences because they offer a unique and useful perspective on human cognition, emotion, and behaviour. When evolutionary theory is applied to mental and physical illness, however, an interesting question arises: Given that pathologies are heritable (there is a nontrivial underlying genetic component) and that they have a significant negative impact on fitness (decrease survival and reproduction) why do pathologies persist in the population? In other words, why has natural selection failed to remove genes that contribute to physical and mental disease? In addition to mental illness, this course will present a unique perspective on mental health: For instance, how can we use Darwinian theory to improve people's lives? And what kind of mistakes might psychologists (and others) make about mental health when they ignore evolutionary theory?

### **COURSE GOALS AND LEARNING OUTCOMES**

Upon completion of this course, students should be able to:

- A. Apply evolutionary theory to psychological constructs and recognize the difference between mechanistic and adaptationist explanations of phenomena.
- B. Read and critically evaluate research articles that take an evolutionary approach:
  1. Communicate their thoughts at an advanced level.
  2. Ask meaning questions and lead small group discussions.
  3. Evaluate their peers strengths and weaknesses.
- C. Gain greater insight into yourself, others, and the human condition:
  1. Apply core concepts to yourself and others.
  2. Recognize and value human diversity.

## Course Assessment

Unfortunately, given that large size of the class, it is a practical impossibility to evaluate students using paper submissions. Consequently, 90% of students' grades will be determined by examinations. Participating in class using *LearningCatalytics* is worth an additional 6%, and the last 4% of your grade will be based on participation in research (or the library option). There is also the potential to earn a bonus of +3% by engaging in extra research participation.

Assessment	Due	Weight
Article Presentation	Mondays	15%
Classroom Activity	Wednesdays	10%
Participation	Ongoing	15%
Reflection Paper	Feb 29 <sup>th</sup>	30%
Authentic Exam	Mar 30 <sup>th</sup>	30%
Research Experience Bonus	Apr 1 <sup>st</sup>	03%
Total		103%

## Classroom Activity

Each week beginning in week 3, a group of three students will create and deliver a warm-up exercise introducing that week's assigned article at the commencement of the Wednesday class. The activity should help students review the basic elements of the assigned reading, should take approximately 10 minutes to complete, and should involve active learning. Students should arrange to meet with the instructor beforehand to develop their activity, especially if this is a new experience for you. This activity will be graded by the student participants in the form of structured peer feedback.

## Article Presentation

Each week beginning in week 3, a group of three students will present a peer reviewed article of their own choosing to the rest of the class, summarizing it's main points. The article can be published in any discipline (you are not restricted to psychological journals), but should be related to that week's topic in some way. The article need not adopt an evolutionary perspective explicitly; one of your tasks as presenters is to relate the article to the course and expand the scope of the article to include an evolutionary perspective if one is not already provided.

Groups will have 10 minutes to present the article, which should then be concluded with a discussion question that stimulates meaningful dialogue for an additional 5 – 10 minutes. This activity will be graded by the Teaching Assistant.

## Participation

Discussion and exchange of ideas is an important part of learning. Discussion activities will be included during Wednesday classes beginning in week 3. To prepare for the discussion, students should read and reflect upon that week's assigned reading.

- READ the assigned article carefully and summarize in writing the major ideas, issues, and conclusions.
- REFLECT on the issues raised in the assigned reading, and on their implications for both future research and for mental health practices.
- PREPARE one deep, meaningful discussion question and post it on the LEARN discussion forum (this should be done at least 2 hours before the beginning of class).

Students who read, reflect, and prepare for each session should have plenty to share with the class during each session. Student participation will be assessed three ways:

- **CONTRIBUTIONS to the DISCUSSION:** Engaging in discussion is worth 1% each Wednesday; this includes both small and large discussion groups. After each session, the instructor will evaluate each student on their contributions using the following rubric:

Absent	Present but no Contribution	Limited Contribution	Satisfactory Contribution	Meaningful Contribution
0	.25	.50	.75	1.00

- **PREPARED DISCUSSION QUESTION:** Each student will prepare one meaningful discussion question based on that week’s assigned reading and post it on the LEARN Discussion Forum *two hours before* Wednesday’s class. Students who post an original, thoughtful question prior to the deadline will receive .25%. Questions posted later than two hours before class will not receive credit. If two students post the same question, then the student who posted first will receive credit. Some of these questions will be utilized in the lesson that day.
- **PEER EVALUATION:** Each student will be responsible for evaluating the warm-up activity in the form of structured peer feedback. For each session a student provides complete peer evaluation, they will receive .25%.

## Reflection Paper

The purpose of the reflection paper is to apply and evaluate one the applicability of course content to new topics. Students will first identify a maladaptive behaviour not included in the course. They should describe the behaviour and explain how it is maladaptive. You should then identify which evolutionary concepts might be useful in explaining the maladaptive behaviour, and briefly review any existing evolutionary explanations of the maladaptive behaviour. Finally, students should reflect and comment on the suitability of the evolutionary explanation; what aspects of the behaviour does it explain well and what aspects seem weak or lack evidence? More information on and a rubric for the reflection paper will be provided later in the term.

## Authentic Exam

An authentic assessment emulates real-world tasks and requires students to demonstrate meaningful application of essential knowledge and skills (Mueller, 2014). The exam will consist of three components and will be distributed along with two supplementary readings during week nine of the course. Each component is worth 10% of the final grade.

The first component will test students knowledge and comprehension of the assigned readings and will consist of 20 multiple-choice questions based on 12 articles assigned over the length of the course. Students will answer each question twice, once individually and once within a group using IF-AT cards. This component will take place during class time on March 28<sup>th</sup>.

The second component will ask students to answer one of two short-answer questions based on the first supplementary article. This component will test students’ ability to a) think critically and evaluate research, apply core concepts to themselves and others, and b) express their thoughts in written format. This component will be a take-home assignment which will be submitted to a dropbox on LEARN on or before March 28<sup>th</sup>. Students are encouraged to discuss the questions with classmates in preparing their responses, but each student must submit their own work.

The third component will ask students to create a warm-up activity and discussion questions for the second supplementary article. This component will test students' ability to apply core concepts to themselves and others, ask meaningful questions, and to plan a discussion based activity. Students will submit their activity to a LEARN dropbox on or before March 28<sup>th</sup>. Again, students are encouraged to share ideas with classmates to prepare their activity and questions, but each student must submit their own original report. More details regarding the authentic exam will be delivered later in the term.

**POLICY ON MISSED DEADLINES:** If an assessment is missed for a legitimate reason (e.g., illness or kidnapping), valid documentation (e.g., a verification of illness form or ransom note) is required in order to avoid receiving a zero. Accommodations will ONLY be provided for students with valid absences. Please submit your documentation to the instructor as soon as possible. Absence due to *religious holiday* is a valid excuse, but notify your instructor at the beginning of the course in the event of a conflict. Absences for varsity athletics, family obligations, co-op interviews or other similar engagements are NOT part of University policy and students should not assume that they will be accommodated. If you have a pressing issue that conflicts with an exam, you should discuss this with your instructor as soon as possible.

## **Grading**

In order to maintain equity among sections and conformity across University, faculty, department or school norms, students can expect a class average of approximately 70% before any extra credit is applied. It should also be noted that I do not respond to requests for a higher grade, although I do respond to students experiencing extenuating circumstances or to correct errors.

Results for each exam will be posted in the gradebook on LEARN. Following Exams 1 & 2, the instructor will announce the time and location of a 4-hour exam review session hosted by the TAs. Students are strongly encouraged to review their exams during this time, but may make an appointment with one of the TAs for an alternative time if unable to do so. Results for the LearningCatalytics and Research Participation will be posted on LEARN after classes end, but before the final exam (if possible).

## **Withdrawal Dates**

Withdrawal deadline and receive no penalty: January 22<sup>nd</sup>, 2016

Withdrawal deadline to receive "WD" on transcript: March 18<sup>th</sup>, 2016

Withdrawal deadline to receive "WF" on transcript: April 7<sup>th</sup>, 2016

## Research Experience Marks

Experiential learning is considered an integral part of the undergraduate program in Psychology. Research participation is one example of this and writing an article review is another.

Students can earn a bonus of **up to 3%** through research experience. The two options for earning research experience are described below. Students may combine these two options in any proportion.

### OPTION 1: Participation in Psychological Research

Research participation is coordinated by the Research Experiences Group (REG). Psychology students may volunteer as research participants in lab and/or online (web-based) studies conducted by students and faculty in the Department of Psychology. Participation enables students to learn first-hand about psychological research and related concepts. Many students report that participation in research is both an educational and interesting experience. Please be assured that all Psychological studies have undergone prior ethics review and clearance through a University of Waterloo Research Ethics Committee.

**Educational focus of participation in research:** To maximize the educational benefits of participating in research, students will receive feedback information following their participation in each study detailing the following elements:

- Purpose or objectives of the study and the expected results
- Dependent and independent variables
- References for at least two related research articles
- Provisions to ensure confidentiality of data
- Contact information of the researcher should the student have further questions about the study
- Contact information for the Director of the Office of Research Ethics should the student wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which s/he participated.

Participation in LAB studies is worth 0.5 participation credits (grade percentage points) for each 30-minutes of participation. Participation in ONLINE studies is worth .25 credits for each 15-minutes of participation. Researchers will record student's participation and will advise the course instructor of the total number of credits earned by each student at the end of the term.

#### **How to participate?**

Study scheduling, participation and grade assignment is managed using the SONA online system. All students enrolled in this course have been set up with a SONA account. You must get started early in the term.

#### **How to log in to Sona and sign up for studies:**

<https://uwaterloo.ca/research-experiences-group/participants/sona-information>

#### **More information regarding the Research Experience Group:**

<https://uwaterloo.ca/research-experiences-group/participants>

**\*\*\* Please do not ask the Course Instructor or REG Coordinator for information unless you have first thoroughly read the information provided on this website. \*\*\***

## **OPTION 2: Article Review**

*Students* are not required to participate in research, and not all students wish to do so. As an alternative, students may opt to gain research experience by writing short reviews of research articles (i.e., scientific journal articles). Each review article counts as one participation credit. Thus, up to 6 reviews should be submitted for full credits.

### **Guidelines:**

- The article must be a RESEARCH article (i.e., introduce new data) from the journal *Psychological Science*.
- Each review should be 1.5 – 2.0 pages, typed and double-spaced with a cover page. A copy of the original article must be attached.
- Content of the review should briefly summarize the research question, methods, variables, results, and implications of the study. In addition, you should indicate the pages in the textbook that are relevant to the article and critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-and-effect relationships, errors in reasoning, etc. Provide examples whenever possible. **DO NOT COPY WORD-FOR-WORD FROM THE ABSTRACT OR ANY OTHER PART OF THE ARTICLE!** Instead, you should paraphrase and cite from the source.
- A hard copy of the review(s) must be submitted to your instructor by e-mail before the last lecture in the course. Late submissions will **NOT** be accepted under **ANY** circumstances. If you are submitting multiple reviews, please do so all at once, rather than at separate times during the term.

## **Accommodation for Students with Disabilities**

The AccessAbility Services office, located on the first floor of the Needles Hall extension, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

<https://uwaterloo.ca/disability-services/>

## **Counselling & Psychological Services**

The Counselling & Psychological Services office at the University of Waterloo, located on the second floor of the Needles Hall extension, offers a variety of resources for those struggling with the challenges of university life, including coping skills seminars and workshops, peer support, group therapy, and clinical referrals. Their home page is:

<https://uwaterloo.ca/counselling-services/>

## **Student Success Office**

The Student Success Office at the University of Waterloo, located on the second floor of South Campus Hall, offers tutoring, workshops, success coaching, and a variety of other resources for students looking for guidance to be successful in university. Their home page is:

<https://uwaterloo.ca/student-success/>

## Writing Centre

The Writing Centre, located on the second floor of South Campus Hall, is available to help students with critical reading, synthesizing and integrating research, citing, organizing and structuring their paper, writing style, etc. The Centre offers appointments with an instructor, drop-in sessions, and workshops. Their home page is:

<https://uwaterloo.ca/writing-centre/>

## Concerns About the Course or Instructor (Informal Stage)

We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Dr. Myra Fernandes) is available for consultation and to mediate a resolution between the student and instructor. Dr. Fernandes' contact information is as follows: Email: [mafernan@uwaterloo.ca](mailto:mafernan@uwaterloo.ca), Phone: 519-888-4567, x32142. A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 and 71 below for further details.

## Academic Integrity

*Academic Integrity:* In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility.

*Discipline:* A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 – Student Discipline.

<https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71>

*Grievance:* A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 – Student Petitions and Grievances, Section 4.

<https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70>

*Appeals:* A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 – Student Appeals.

<https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-72>

*Other sources of information for students*

Academic Integrity (Arts): <https://uwaterloo.ca/arts/ethical-behavior>

Academic Integrity Office (uWaterloo): <https://uwaterloo.ca/academic-integrity/>

## Term Schedule

Week	Dates	Lecture Topics	Assigned Reading
1	Jan 04 & 06	Principles of Evolutionary Theory	Bridgeman, B. (2003). The evolution revolution. In <i>Psychology &amp; Evolution: The origins of mind</i> (pp. 1 – 39). London, UK: Sage
2	Jan 11 & 13	Causes of Disease & Psychopathology	Nesse, R. M. & Stearns, S. C. The great opportunity: Evolutionary applications to medicine and public health. <i>Evolutionary Applications</i> , 1, 28 – 48.
3	Jan 18 & 20	Autism	Baron-Cohen, S. (2002). The extreme male brain theory of autism. <i>TRENDS in Cognitive Sciences</i> , 6, 248 – 254.
4	Jan 25 & 27	Schizophrenia	Shaner, A., Miller, G. & Mintz, J. (2004). Schizophrenia as one extreme of a sexually selected fitness indicator. <i>Schizophrenia Research</i> , 70, 101 – 109.
5	Feb 01 & 03	Depression	Nesse, R. M. (2006). Evolutionary explanations for mood and mood disorders. In D. J. Stein, D. J. Kupfer and A. F. Schatzberg (Eds.), <i>American Psychiatric Publishing Textbook of Mood Disorders</i> (pp. 159 – 175). Washington, D.C.: American Psychiatric Publishing.
6	Feb 08 & 10	Anxiety	Poulton, R. & Menzies, R. G. (2002). Non-associative fear acquisition: a review of the evidence from retrospective and longitudinal research. <i>Behaviour Research and Therapy</i> , 40, 127 – 149.
	Feb 15 – 19	Reading Break	
7	Feb 22 & 24	Anorexia & Bulimia	
8	Feb 29 & Mar 02	Suicide & Self-harm	
9	Mar 07 & 09	Sexual Disorders	
10	Mar 14 & 16	Substance (Ab)use	
11	Mar 21 & 23	Alzheimer's/ Antisocial Personality	
12	Mar 28 & 30	Mental Health	

Note: Lecture topics BEGIN during the week they are scheduled, but will often spill over into the following week before completed.