

# Evolutionary Psychology and Ethology

## (Psychology/Ecology and Evolutionary Biology 370)

**Time and Place:** Tu-Th (9:40-10:55) Austin Peay 203

**Instr:** Gordon M. Burghardt (Austin Peay 310A, off: 974-3300, lab: 974-0954), [gburghar@utk.edu](mailto:gburghar@utk.edu)

**Office Hours:** Tu. & Th., 11:10 - 12:00 (also by appointment if these times do not work)

**TA:** Melqui Gamba Rios (Hesler 103) [mgambari@vols.utk.edu](mailto:mgambari@vols.utk.edu)

**Office hours:** Mo. & We., 10:00-11:00 (also by appointment if these times do not work)

**BlackBoard:** syllabus, readings, assignments, grading, study guides, options, etc.

**Textbook and Readings:** **(Always bring books and assigned readings to class!)**

**(EP)** de Braak, Hans van (2013). *Evolutionary psychology*. Pearson: Harlow, England (e-text required)

**(DW)** de Waal, Frans (2016). *Are we smart enough to know how smart animals are?* W. W. Norton, New York, NY (required)

**(BB)** Readings assigned/available on Blackboard

**(DAB)** *The Discovery of Animal Behavior* selected parts of video series – required and shown in class.

**(NOTE – Please, no food in class. Also, TURN OFF ALL CELL PHONES OR SWITCH TO VIBRATE, but DO NOT ANSWER, TEXT, etc. during class. If you MUST answer or use the phone, leave the classroom to do so. You can use laptops or tablets to refer to the textbook and Blackboard reading assignment pdf files during appropriate class discussions and group work. Recent research has shown that written notes facilitate better learning than computer note-taking. Thus bring a notebook, good writing instruments, and take good notes during videos, lectures, and discussions. Exceptions made only for documented disabilities.**

**CLASS APPROACH – NOTE CAREFULLY:** Much information not in the readings is presented in class. There is considerable discussion in class, including bringing in current news and recent research. Websites and articles may be posted on Blackboard, so it is important to check e-mail regularly for announcements and updates to this syllabus. While some of the reading material will not be discussed in detail in class, clarification questions about the material can always be asked. Quizzes or group projects assuming familiarity with the readings may take place without advance notice. You are expected to tie diverse material together as you think deeply about evolution, behavior, and psychology.

This course covers diverse material in several areas, and thus a typical student should be prepared to study at least two hours for each hour of class. Furthermore, evolutionary psychology is controversial in some quarters, because it questions some firmly held beliefs or entrenched theories in various corners of psychology, politics, religion, gender studies, biology, humanities, etc. On many current issues the evidence is not conclusive, or is weighed differently, as is true of most areas of active science. If you are

not open to considering and evaluating material on such subjects, then do not take this course. Vigorous give and take is encouraged; criticism of one's views based on evidence or logic should not be dismissed as personal disrespect by either the instructors or other students.

This course supports the Psychology Department and Biology UG program objectives of facilitating scientific inquiry and critical thinking. More specifically, by the end of the course, students should be familiar with the application of evolutionary and ethological approaches to studying behavior and be able to evaluate current research findings, develop hypotheses, and evaluate research methods. The goal is to use scientific reasoning in conjunction with various methods of elucidating the origins, development, function, phenomenology, and evolution of human and non-human animal behavior.

**STUDY GUIDES FOR EXAMS AND READINGS:** Available on BB about a week before each exam and will guide your review of the readings and in-class presented material. It is your responsibility to take notes, read carefully, look for the major themes and concepts, and ask questions if confused or want to explore a topic further. If classes are missed you will need to obtain notes from other students.

**PLEASE CHECK BLACKBOARD (<http://www.online.utk.edu>) FOR ANNOUNCEMENTS, READINGS, SYLLABUS UPGRADES, GRADES, ETC. ON A REGULAR BASIS.**

Please be sure that you receive e-mail messages through Blackboard.

I expect that all students will visit me in my office at least once during the semester to discuss aspects(s) of the course and how you are doing. Please do so by April 6.

Filling out the online SAIS form is now a top administrative priority and I encourage you to do so.

Finally, it is your responsibility to know what constitutes plagiarism and cheating. Either can lead to failing the class, not just losing points. If in doubt as to what these are, please see the instructors.

**Course Calendar** Note: Required assignments are to be completed **before** the date at which they are listed, and reread with notes and any study guide afterwards. The calendar is updated as necessary.

| <u>DATE</u> | <u>TOPIC</u>  | <u>ASSIGNMENT</u>                    |
|-------------|---|--------------------------------------|
| Jan. 12     | Introduction: ethological analysis  | In class surveys                     |
| 17          | The twists and turns in trying to understand behavior: nature, nurture, and God | EP: Introduction<br>DW: Prologue     |
| 19          | Darwin, mental evolution, and instinct  | DAB 3 (in class)<br>DW: Ch. 1        |
| 24          | Natural selection, behavior, the tree (web?) of life, and human evolution       | EP: Ch. 1 (3-16), Ch. 3<br>DW: p. 75 |

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| 26      | The behaviorist challenge – conditioning, learning, objectivity  | EP: Ch.1 (pp 16-24)<br>DW: Ch. 2<br>DAB 4 (in class)  |
| 31      | Basic concepts in foundational ethology                          | BB: Behavior systems: pp 333-341<br>BB: Neural Circuits and instinct: pp:292-294                  |
| Feb. 2  | Instinct to Behavior Systems                                     | BB: Behavior systems: 341-347<br>BB: FiveAims/Play (pp 231-233)<br>DAB 5 (in class)               |
| 7       | Cognition and Ethology   | DW: Ch. 3   |
| 9       | Neuroscience perspectives  | EP: Ch. 1 (pp. 24-30), Ch. 8 (pp. 205-215)<br>Study guide 1                                       |
| 14      | Exam 1   |   |
| 16      | The diversity of evolutionary responses to behavioral demands    | EP: Ch. 2   |
| 21      | Communication and ritualization                                  | EP: Ch. 9 (pp. 235-240)<br>DAB 6 (in class)<br>DW: Ch. 4  |
| 23      | Sexual selection; basic tenets of evolutionary psychology        | EP: Ch. 4   |
| 28      | Courtship, mating, families                                      | EP: Ch. 5 (pp. 119-128)<br>BB: Romantic love  |
| Mar. 2  | Parenting behavior and mate choice                               | EP: Ch. 5 (pp. 128-147)   |
| 7       | Evolution and sociality  | EP: Ch. 6 (pp. 148-165)   |
| 9       | Cooperation and altruism   | EP: Ch. 6 (pp. 165-173)<br>DW: Ch. 6  |
| 14 & 16 | SPRING BREAK   |   |
| 21      | Captive or wild: a bat's perspective on avoiding danger (Melqui) | Field and lab (pp. 39-46)<br><b>Deadline for 1<sup>st</sup> 15 points of outside essay credit</b> |

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|---------------|---|---|
| 23            | Emotions, the brain, and evolution                      | EP: Ch. 7<br>BB: Behavior systems: pp. 354-356<br>Study guide 2   |
| 28            | Exam 2  |   |
| 30            | Apes, brains and human cognition                        | EP: Ch. 8 (pp. 216-231)<br>DW: Ch. 5  |
| April 4       | Consciousness and time travel                           | DW: Ch. 7   |
| 6             | Is language inexplicable?                               | EP: Ch. 9 (pp. 240-258)   |
| 11            | Culture and evolution                                   | EP: Ch. 10 (pp. 262-273)<br>BB: Honor cultures and modeling   |
| 13            | Gene-culture coevolution                                | EP: Ch. 10 (273-283)  |
| 18            | Evolution and behavioral disorders                      | EP: Ch. 11<br><b>Deadline for observational reports</b>   |
| 20            | Behavioral development and epigenesis – snakes and fear | EP: Ch. 12 (pp. 316-327)<br>BB: Behavior systems, pp. 356-357   |
| 25            | Play and its importance in evolution and religion       | EP: Ch. 12 (pp. 327-336)<br>BB: FiveAims/Play<br>Web: Peruse Current Biology Jan. 5, 2015 special issue<br><b>Deadline for outside essays</b> |
| 27            | Bringing it all back home                               | DW: Ch. 8, 9<br>Study guide 3   |
| May 4<br>(Th) | Final Exam<br>8:00 A.M. -10:00 A.M.)                    |   |

## EXAMS

All three exams are based on 80 points each and consist of a mix of objective and short essay questions. Only the two best exam grades will count. If an exam is missed for a documented acceptable reason and I am notified in advance, a makeup will be made available.

## IN-CLASS EXERCISES, UNANNOUNCED QUIZZES, ATTENDANCE, AND GROUP WORK

These are worth 2-10 points each. Although there is a limit to how many of these points can be accumulated toward your grade, points beyond this limit will be used in borderline situations. Missed in-class exercises or assignments cannot be made up, but more points will be available than the maximum allowed. It is a good idea to not only do assigned readings before class, but answer any relevant study questions at the end of the EP book chapters.

## OUTSIDE CLASS EVENTS

Periodically there will be campus events that I will announce as relevant to the class and send out over Blackboard and /or mention in class. Some of these should be attended and short essays that summarize/critique the event, preferably submitted within two weeks of the event, but no later than April 21. These will be worth 10 points each. Up to 30 points obtained this way count towards your grade. Additional points may help in borderline situations. Darwin Day talks this semester in February are particularly relevant. Details will be also posted on BB.

## RESEARCH/PAPERS

You will be expected to write a brief paper based on observations you make on humans or non-human animals on zoos or farms (not pets) testing an hypothesis derived from evolutionary psychology or ethology. This report should be no more than 1000 words and include at least one graph or table. More information and a list of suggested topics will be provided on BB. Drafts handed in at least two weeks before the deadline will be read and returned with comments and suggestions for improvement. Max points = 40.

## GRADING

The points that you accumulate over the semester will determine your final grade. A listing of how points will be accumulated and a grading scale will be available on BB.

## SPECIAL SERVICES

If you need course adaptations or accommodations because of a documented disability, please contact the Office of Disability Services at 2227 Dunford Hall (telephone/TTY 865-974-6087; [e-mailods@utk.edu](mailto:e-mailods@utk.edu)) ASAP. This will ensure that you are properly registered for services.