Department of Exceptional Student Education
College of Education
Florida Atlantic University

Instructor: Dr. Charles Dukes
Phone: 561.297.1081
Office Hours:

Office: Boca, College of Education, 430
E-mail: cdukes@fau.edu
Class Day/Time:

COURSE NUMBER: EDG 1930 (3 CREDITS)

COURSE TITLE: EVOLUTION FOR EVERYONE

SEMESTER:

CATALOG DESCRIPTION:
Evolution for Everyone is a highly accessible course, for all majors, intended to explore human-related affairs from an evolutionary perspective. A number of human-related issues will be reconsidered in light of evolution. By examining the ultimate (evolutionary) origins of human behavior, students will gain a different perspective on common human behavior (e.g., language, parenting). Specifically, the following topics will be addressed: cooperation, mate choice, parenting, pair bonding, aggression, language, and culture. It is intended that students will be able to identify and evaluate solutions to human-related affairs using evolution as a point of reference.

WRITING ACROSS THE CURRICULUM
This course is writing intensive and will count toward fulfilling the Gordon Rule writing requirement. You must achieve a grade of "C" (not C-minus) or better to receive credit. Furthermore, this class meets the University-wide Writing Across the Curriculum (WAC) criteria, which expects you to improve your writing over the course of the term. The University's WAC program promotes the teaching of writing across all levels and all disciplines. Writing-to-learn activities have proven effective in developing critical thinking skills, learning discipline-specific content, and understanding and building competence in the modes of inquiry and writing for various disciplines and professions. A thorough explanation of all assignments can be found the course requirements section of the syllabus. Writing assignments will be completed outside of class, although some preliminary writing will be conducted in class. Drafts and initial attempts at writing will not be graded; grading will take place only after major revision and editing. Papers will be shared with peers to gain constructive comments, clarification, and provoke intellectual discussion. The instructor will provide substantive feedback on all written assignments.

Special note: *If this class is selected to participate in the university-wide WAC assessment program, you will be required to access the online assessment server,*

complete the consent form and survey, and submit electronically a first and final draft of a near-end-of-term paper.

PREREQUISITE or COREQUISITE: None

MATERIALS:
Required Texts: Wilson, D. S. (2007). *Evolution for everyone: How Darwin's theory can change the way we think about our lives.* New York: Bantam Dell.

SUPPLEMENTAL RESOURCES:
See the *Readings* column of *CONTENT OUTLINE & SCHEDULE.* These readings can all be accessed (full-text) from electronic journals via the FAU library's home page. Contact the library for further instructions (if needed).

TECHNOLOGY:
E-mail: Your FAU email address will be used.
Computer: Blackboard This course is web assisted through the FAU Blackboard site. Some handouts, forms, handbook and resources are available on the website. Go to the website: http://blackboard.fau.edu (Do not type www). Your username is the same as your FAUNet ID. Your initial password for Blackboard is your PIN (for students this is 2 zeros followed by your 2 digit DAY of birth and 2 digit YEAR of birth).

Videos: A number of videos will be shown during the course. A series of foundational videos will be used to help student orient to the content of the course. The Public Broadcasting System (PBS) has created a series that will serve students well to learn the basic principles of evolution. These videos can be accessed at-http://www.pbs.org/wgbh/evolution/educators/teachstuds/svideos.html. A number of other videos will be shown in support of other content.

COURSE OBJECTIVES:
1. Demonstrate the use of the scientific method to interpret and answer questions related to the living conditions (e.g., food, shelter, relationships, etc.) of human and nonhuman species.
2. Explain the meaning and application of theory in the natural sciences and differentiate theory from laws and principles.
3. Identify the basic principles of evolution as a means to answer questions related to the living conditions (e.g., food, shelter, relationships, etc.) of human and nonhuman species.
4. Apply the basic principles of evolution to human related affairs as a means to interpret and solve problems.
5. Evaluate the evidence supporting different interpretations of human behavior (e.g., cooperation, war, pair bonding, etc.)

6. Identify and apply basic statistical concepts as a means to evaluate the evidence for explanations of human behavior.
7. Evaluate the use of at least three social science approaches (e.g., research reviews, qualitative research, and survey) to investigate some aspect of human behavior from an evolutionary perspective by proposing an original experiment.
8. Compare and contrast proximate and ultimate explanations for the political, social, cultural, and economic structures of society using an evolutionary perspective.

TOPIC OUTLINE:

Basics of evolutionary theory
Evolutionary approaches to human behavior
Human evolution and its consequences
Cognition and emotion
Costly punishment across human societies
Cooperation and conflict
Personality
Beauty
Religion
Human emotion
Human sexual behavior
Human development
Human mate choice
Evolution of human family
Aggression
Art
Language
Family Violence
Education
Ethics

COURSE REQUIREMENTS:

1. **Reading and Class Discussions**
   Discourse can be a powerful tool to promote acquisition of knowledge and discuss different ways in which knowledge is generated and applied. Students will be introduced to several big ideas about evolution and its application to human affairs (moral development, parenting, etc.). Students will read a primary text (i.e., Wilson) as well as other materials (i.e., journal articles) that will serve as the basis for conversations about the basic principles of evolution and its application. Class discussions will include a summary of the content, introduction to novel concepts (e.g., punishment as helpful to human cooperation), application of the concept to humans, and implications for daily living.
   All students are expected to read ALL material assigned prior to coming to class. Discussions in class should reflect students' attempt to understand the material. Class

discussions should be dynamic and robust. All students will be held responsible for posing questions and engaging in discussions. It is expected that each student will contribute to each class discussion. Posing and answering questions in class makes a portion of the participation grade. Class discussions serve three purposes, to help students:

a. summarize the material.
b. understand the material.
c. draw conclusions about the material and evaluate the information using the basic conventions of science.

2. **Research Paper (Writing requirement-Research, compare, contrast, analyze, and conclude) 5-7 pages**
   This assignment requires students to write a paper that includes a proposal for an original experiment based on a question of interest. Specifically, students will design an experiment with the intent of investigating some aspect of the human condition using an evolutionary perspective. Students will not actually have to conduct the experiment, but it is expected that students will think, create, and write the experiment just as if they were (see **Appendix A** for details). In essence, this assignment is a research proposal. Students will demonstrate their understanding of key social science methods and theoretical foundations through this assignment. In accordance with the conventions of scholarly writing, students will be required to make several revisions to this paper based on instructor and peer feedback. Students will be required to make a 5-7 minute presentation based on the research paper. This assignment will be evaluated based on a rubric. The instructor will provide the rubric.

3. **Letter to the Editor (Writing requirement-Persuasion) 3-5 pages**
   For this assignment, students are expected to compose a letter to the editor of the Miami Herald. The purpose of the letter is to convince a typical educated citizen to continue or discontinue (depending on a random selection of a position) the inclusion of evolution in the public school curriculum. The letter must be between three and five pages (double-spaced). The letter must include references to support the arguments. Students may include powerful anecdotes, but these anecdotes cannot stand as support of the arguments in the letter alone. The letter should be persuasive and contain language that a person who may be unfamiliar with evolution can understand to grasp your position about inclusion or exclusion of evolution in the public school curriculum. This assignment will be evaluated based on the following criteria: (a) clear position on the inclusion or exclusion of evolution in the public school curriculum is identified and described, (b) two to three arguments supporting the chosen position, (c) two to three sources of evidence supporting the position chosen, and (d) inclusion of a simple, yet comprehensive explanation of evolution.

4. **Reaction papers (Writing assignment-Analysis, Form and defend your opinion) 1-2 pages**
   Students will write four one- or two-page reaction papers after reading and thinking critically about the material. The reaction papers must include a stated position on the

particular issue followed immediately by a justification for that position. It is recommended that students utilize information from the reading material to compose the reaction paper. The paper should be a minimum of 300 and a maximum of 600 words. The format for this paper and strategies to compose the paper will be discussed in class. Some reaction papers will be written in response to a particular reading, while others may be based on presentations from guest speakers. In each case, a central question will be posed and students will be required to respond to the question. These assignments will be evaluated based on the following criteria: (a) a position is identified and stated, (b) two to three arguments supporting the position are included in paper, and (c) the length is within limits (i.e., 300-600 words).

5. Reading Discussion Leader

As indicated above, class discussions will assist students in synthesizing the information presented in course readings. Some class sessions will be lead by a pair of Discussion Leaders; the content of the class discussion is based on assigned readings. Discussion Leaders are expected to lead the class discussion and pose questions related to the content contained in the assigned readings. The instructor, as well as the rest of the class, will assist the Discussion Leader to facilitate a robust discussion about the content. Each student will serve as discussion leader for one or more of the assigned readings. Students absent on the date(s) assigned, will forfeit the points associated with this assignment.

As discussion leader, students are expected to:

- **a.** Provide a 10-15 minute presentation, spending no more than 7 minutes on the *summary* of the reading(s). You may use a PowerPoint presentation to do this; however, PowerPoint is not required.
- **b.** Facilitate a discussion forum by providing *3-4 discussion questions* based on the reading(s). Students are not expected to know the correct answer to the questions, as there may not be a "correct" response to the questions posed, however, you are expected to guide/facilitate the ensuing conversation/discussion generated by the question.
- **c.** Include an *interactive component* (e.g. ways to engage the audience) by designing an activity that requires the audience (your classmates) to engage with each other. This can be a "hands-on" activity, a group activity, a simulation activity, etc.
- **d.** Create a *1-page (8.5"x 11") handout*, which **reflects the discussion from class around your article**. The handout should provide: (a) brief summary of the reading and (b) a brief summary of the salient features of the subsequent discussion, best organized around your discussion questions or interactive activity probes (see template provided by the instructor).
- **e.** Students must *email a copy of the handout* to the instructor for *approval,* no later than 24 hours after serving as discussion leader; upon approval, students must email the handout to the entire class.
- **f.** *Post a copy of the handout* (to the Discussion Board of the course web site) no later than the deadline described in the email.

6. **Writing a Children's Book on Evolution (Completed with Learning Communities) (Writing requirement-Analyze, Synthesize, Conclude, Form and Defend your Opinion) 12-14 pages**

Learning is often enhanced when one is able to take newly acquired ideas and present those ideas to other. Translating information into a form that is easily understood by others, particularly children can be a challenge, but promote deep understanding, as in order to help a child understand complex ideas, one must have a deep understanding of those ideas. For this assignment, students will create an illustrated children's book explaining one of the three major ideas underlying evolution. The book should be designed for children between 7 and 10 years old (roughly equivalent to first through third grade). Books should be 12 to 14 pages, with at least five illustrations (hand drawn or pictures from a source). The dialogue and/or explanation used in the book should help children understand one or more prominent figures in evolution (e.g., Charles Darwin) and the three major ideas underlying evolution (i.e., variation, selection, and heredity).

Keep in mind that all good stories contain the following elements:

Theme: A theme is an insight or viewpoint or concept that a story conveys.

Plot: Plot is normally built around a conflict involving the main character—for instance, with another character, or with circumstances, or within him- or herself. A story *may* succeed without conflict—especially if for preschoolers—but not without another device to hold attention. Conflict often takes the form of a problem the main character must resolve.

Story Structure: The structure of the story is conveyed through the organization of events (e.g., introduction, problem, resolution).

Characters: These are the people who are important to convey the main theme of the story.

Setting: The place and time that will be interesting or familiar and help convey the essential information.

Style and Tone: Write simply and directly, in short words, short sentences, short paragraphs. Use dialog wherever possible. Use direct quotes instead of indirect. (Example: "Go away!" instead of "He told her to go away.")

Watch the following short video, http://www.youtube.com/watch?v=cfC1acmRZCU. The video will help guide your construction of the book.

This assignment will be evaluated based on the following criteria: (a) a theme is identified and described, (b) one basic principle of evolution is identified and described, (c) language used in the book is appropriate for children between seven and 10 years old, (d) the conventions of story structure are followed so that the book includes a clear beginning, middle and end, (e) a minimum of five illustrations are included in the book and (f) the book does not exceed 15 pages.

7. **Concept Mapping**

A concept map is an intuitive graphical tool for organizing and representing knowledge (the *key concepts* of a topic and the specific *interrelationships* or propositions among them). It is possible to represent different types of knowledge, including *declarative or descriptive knowledge* as well as *procedural or "how to" knowledge*. In addition to different types of knowledge, concept maps can also be

used to represent different types of relationships. As this is a course on evolution, students will be asked to consider different types of knowledge and how this knowledge is related. For example, the basic tents of evolution can be conveyed using a declarative concept map. For this course, students will be required to create two maps at different times in the course, one at the beginning and one toward the end of the course. Early in the semester the instructor will model the construction of a practice map.

a. See *concept mapping description and instructional packe*t and other materials pertaining to concept mapping on the Blackboard course site.
b. Using a focus question, provided by the instructor, students will be asked to create two maps independently:
    i. Map #1: Using the focus question and *only* current independent background knowledge, create a map that appropriately responds to the question (10 points);
    ii. Map #2: Using the same focus question, independent knowledge, course materials, activities, discussions, and feedback from instructor regarding map #1, create a map that appropriately responds to the question. With map #2, you are to also write a (no more than) one page narrative describing your thought process as you developed your maps (40 points).
c. Other notable information:
    i. As indicated in the *concept mapping description and instructional packet,* students should sketch out the concept map using paper-pencil, then create an electronic format. Download free Cmap Tools software at http://cmap.ihmc.us (for constructing your maps electronically).

LEARNING COMMUNITIES

Learning communities (LCs) are formed by the instructor. Each community, consisting of four to five students will work cooperatively to complete special course assignments. These cooperative learning assignments are meant to be completed with your learning community. Each member of the Learning community is individually responsible for specific tasks. Additionally, there is a collective responsibility for the group's grade(s). Each member of the LC is responsible for engaging in discourse toward the completion of each assignment. The LC leader is to facilitate: discussion (face-to-face, online, etc.), completion of the first draft of the assignment based on said discussion, gather feedback on the draft, and oversee final submission of the final draft of the assignment. These cooperative learning communities will allow each student to be engaged in a learning process that builds upon individual strengths to form a collective of ideas that can be used to resolve practical application learning dilemmas and activities.

PARTICIPATION EXPECTATION

During the semester part of class time may include, but not limited to, reactions to videos, guest speakers, participating in small group activities, etc. Although obvious (but necessary to state), students must be present to participate in these activities. The instructor will describe parameters for written responses to these activities. Class discussion and participation is one of the ways in which students will be expected to

demonstrate their ability to communicate effectively. Part of student participation will be assessed based on active participation in class that requires students to read, think, and engage in conversation about the material. If students attend all sessions and actively participate in class by posing and answering questions and participating in all learning community activities, it is possible to earn an extra 10 participation points, for a total of 50 points.

TEACHING METHODOLOGIES
The course will be taught using a variety of methods of instruction to include: lectures, discussions, modeling, guided practice, group activities, presentations, and multi-media presentations, and case studies.

ASSESSMENT PROCEDURES:

Assignment	Points	% of Course Grade
Research Paper (1)	75	25%
Letter to the Editor (1)	20	6%
Reaction Papers (4)	40	13%
Concept Maps (2)	50	16%
Discussion Leader (1)	30	11%
Children's book (1)	20	6%
Participation	40(50)	13%
Final Exam	30	10%
TOTAL	305	100%

GRADING SCALE:
Activity scores are cumulative and the grade scale represents percentage of total points earned.

A =	93-100	A- =	90-92	B+=	87-89	B =	83-86
B-=	80-82	C+=	77-79	C =	73-76	C-=	70-72
D+=	67-69	D =	63-66	D-=	60-62	F =	Below 60

POLICIES AND PROCEDURES

ATTENDANCE:
According to University policy, "Students are expected to attend all of their scheduled University Classes and to satisfy all academic objectives as outlined by the instructor." Attendance includes meaningful, active involvement in all class sessions, class discussions, and class activities as well as professional, ethical, conduct in class. Reasonable accommodations are made for religious observances.

STUDENTS WITH DISABILITIES:
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute course work must register with the Office for Students with Disabilities (OSD) -- in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

ETIQUETTE POLICY:
University policy on the use of electronic devices states: "In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions."

CODE OF ACADEMIC INTEGRITY:
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see the Code of Academic Integrity in the University Regulations at http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf.

BIBLIOGRAPHY

Alcock, J. (2001). *The triumph of sociobiology*. New York: Oxford University Press.

Barash, D. P., & Lipton, J. E. (2001). *The myth of monogamy: Fidelity and infidelity in animals and people*. New York: Henry Holt and Company.

Bjorklund, D. F. (2007). *Why youth is not wasted on the young: Immaturity in human development*. Malden, MA: Blackwell Publishing.

Brown, D. E. (1991). *Human universals*. Boston, MA: McGraw-Hill.

De Waal, F. (2005). *Our inner ape*. New York: Penguin Group.

Shermer, M. (2008). *The mind of the market: Compassionate apes, competitive humans, and other tales from evolutionary economics.* New York: Henry Holt and Company.

Wilson, D. S. (2002). *Darwin's cathedral: Evolution, religion, and the nature of society*. Chicago, IL: University of Chicago Press.

Wilson, E. O. (1978). *On human nature*. Boston, MA: Harvard University Press.

Appendix A
Research Paper Development Activities

This assignment requires students to conceptualize an experiment intended to investigate one aspect of human nature. Students will need to search the literature, synthesize this information, and then conceive of an original experiment. Students will need to choose a topic, formulate a hypothesis, and then conceive of a way to test that hypothesis.
From an evolutionary perspective, human nature is understood as those qualities that define humans as a unique species. As each species faced unique selection pressures over time, a number of unique adaptive solutions have arisen and this is what will be investigated. For example, choosing a mate is a serious endeavor. According to parental investment theory, women are the choosy sex, as they invest more in child rearing. Based on this hypothesis, it is possible to then pose a research question, "what factors might women take into account to identify a suitable long-term mate?" This and other questions can be answered using different methods and sources of data (see Table 1 below).

Table 1 *Methods and Data Sources for testing Evolutionary Hypotheses*

Methods for Testing Evolutionary Hypotheses	**Sources of Data for Testing Evolutionary Hypotheses**
1. Compare different species	1. Archeological records
2. Compare males and females	2. Data from hunter-gather societies
3. Compare individuals within a species	3. Observations
4. Compare the same individuals in different contexts	4. Self-reports
5. Experimental methods	5. Life-history data and public records
	6. Human products

You will specifically demonstrate the use of social science investigative methods (e.g., research reviews, interviews, document reviews, etc.) by:
(a) designing a descriptive research question within a particular field of study,
(b) collecting data to answer the question,
(c) interpreting the findings, and hypothesize about the implications these findings may have on the treatment of individuals with disabilities in society.

1. Activity 1: Formulation of research question

The research process begins with a research question. The purpose of the **research question** is to define the phenomenon to be studied by posing a question that can be answered about the phenomenon. The research question appears toward the end of the introduction section. The purpose of the **introduction** is to help the reader understand how the current work fits in with similar work that has already been done. For example, if your project addresses altruistic punishment, then your introduction should discuss other studies or previous work that also deals with altruistic punishment. The introduction starts out broad and becomes more and more specific. For example, you might begin by defining relevant terms and then go on to highlight some important points from relevant literature.

General topic	Adaptive Problem	What selection pressures might influence this problem?	How might this adaptive problem been solved?

- Thinking like a evolutionist, I would like to know more about…
- The research question I intend to explore is…

2. Activity 2: Formulation of Introduction/Thesis

The introduction is intended to introduce the reader to previous studies that relate to the topic. The introduction includes three parts: opening statement, literature review, and study overview. At the end of the introduction, the research question should be explicitly stated. Here are some questions to help you the introduction:

- How do you describe the adaptive problem to be investigated?
- What brought you to this question?
- Why is this important?
- How have others described this same problem?
- What theory or theories have been proposed predicting solutions to the problem?
- Based on the previous questions, has my research question changed?

3. Activity 3: Formulation of Method

The method section is an overview of how the study is to be conducted. This section of the paper should provide readers with a detailed description of each step in the study. Recall that there are five different methods for testing evolutionary hypotheses and six different ways to collect data (see Table 1 below):

Table 1 *Methods and Data Sources for testing Evolutionary Hypotheses*

Methods for Testing Evolutionary Hypotheses	**Sources of Data for Testing Evolutionary Hypotheses**
1. Compare different species	1. Archeological records
2. Compare males and females	2. Data from hunter-gather societies
3. Compare individuals within a species	3. Observations
4. Compare the same individuals in different contexts	4. Self-reports
5. Experimental methods	5. Life-history data and public records
	6. Human products

- {Method} What is the best way to go about testing my hypothesis?
  - Should I use one or more methods for testing my hypothesis, if so which one(s)?
- {Participants} Who will participate in the study, how many, and how will they be selected.
  - Include any details that are relevant to the study (e.g., gender, age, ethnicity).
- {Design and Data Collection} The design of a study refers to the structure of the study and includes the data collection methods.
  - Should I use one or more data sources, if so which one(s)?
- {Procedure} Carefully summarize each step used to conduct of the experiment.
  - What are the steps I must use to conduct the experiment?

By completing activities 1-3 above, students should be able to formulate ideas for the first two sections of the research paper: introduction and method, including a coherent research question. Please note: the experiment should be written in future tense, as the experiment will not actually be conducted.