

Biology 415/515 -- Darwin and the Origin of Species Course Syllabus

Course and Contact Information

Instructor: Dr. David Allard

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Office Hours: 9 -12 Tuesdays

Class Days/Time: Web Course

Place in the Biology Curriculum:

This course is an upper-division elective for undergraduate biology majors. For graduate students it can count in an emphasis area for the MSIS degree and in the science content area for those in the MS in Curriculum Studies Program with an emphasis in science.

Prerequisites:

Preferably a junior or senior biology major (or a graduate student with permission from the instructor) with a number of courses in biology such as genetics, cell biology and evolutionary biology.

Computer Skills Needed:

Basic computer skills and ability to use the internet are required. Students need to know how to post in the discussion board, upload files for the term paper assignment, and access internet sites.

Web Pages:

- Dr. Allard's Home Page
- Dr. Allard's Science Page

Course Description:

Biology 415/515 - Darwin and the Origin of Species: This course will focus on Darwin's hypotheses and compare his ideas with modern developments in the study of biological evolution.

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- Be able to discuss the main points in Darwin's theory of evolution
- Be able to compare and contrast Darwin's ideas with those of modern evolutionary thinkers.

Required Text:

- Darwin, C. 1859. On the Origin of Species By Means of Natural Selection, or, the Preservation of Favoured Races in the Struggle for Life. John Murray, Albemarle Street. London.
- Any copy of the First Edition is acceptable.
- There is also a free pdf available in blackboard for downloading.
- Available online for free at:
 - o <u>Darwin Online</u> or download from Blackboard or purchase from <u>Amazon</u>

Course Outline:

Module 1

Introduce yourself and upload a photo.

Take a self-assessment for your readiness for online learning. <u>Self Assessment</u>
Read Chapters 1 & 2 in the Origin: VARIATION UNDER DOMESTICATION and VARIATION
UNDER NATURE

- Also check these websites:
 - o What is the history of evolutionary theory?
 - American Museum of Natural History
 - o PBS Evolution Series
 - International Darwin Day
 - o Welcome to Evolution 101!
- Watch the Avoiding Plagiarism tutorial under Content/Term Paper Information.
- Post Reactions to Readings, websites and videos by Thursday Midnight. A good posting would be about 500 words. (that goes for the rest of the modules too.)
- Post Responses to Others Reactions by Sunday Midnight. A good response would be about 100 – 200 words. Respond to 3 or more others and then respond to the ones who responded to your post (that goes for the rest of the modules too).

For your postings, I suggest that you write them in your word processing program and save them on your hard drive. You can then copy and paste to the discussion board. That way you won't lose your work if something happens to your Internet connection.

Module 2

- Read Chapter 3 in the Origin: STRUGGLE FOR EXISTENCE.
- Check these websites:
 - The Alfred Russel Wallace Page
 - o Check the video on this page Darwin Live
 - Charles Darwin and the Racing Asparagus (Audio)
- Read Wallace's paper On the Tendency of Varieties to . . .
- Short video The forgotten story of Alfred Russel Wallace

- Watch the APA (6th Ed.) Research Paper Basics tutorial under Content/Term Paper Information. Note: Your paper is not a field or laboratory research project so it will not have sections like methods, materials, or results..
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 3

- Read Chapters 4 & 5 in the Origin: NATURAL SELECTION and LAWS OF VARIATION
- Look at presentation <u>God</u>, <u>Darwin</u>, <u>and Design</u>: <u>Lessons from the Dover Monkey Trial</u>
- To understand the time period during which the Origin was written check out the <u>Victorian</u> Web.
- Check this short video on artificial selection.
- <u>Darwin's Tree of Life Diagram</u> The only illustration in the Origin
- <u>Darwin's original Tree of Life</u> From his notes
- Darwin's Darkest Hour (Video)
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 4

- Read Chapter 6 in the Origin: DIFFICULTIES ON THEORY
- Read Darwin on Darwin (his autobiography) Look at the etext section on blackboard.
- The Joint Essay of Darwin and Wallace
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 5

- Read Chapters 7 and 8 in the Origin: INSTINCT and HYBRIDISM
- You may also want to read some of the Voyage of the Beagle by Darwin (eText on Blackboard)
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 6

- Read Chapter 9 in the Origin: ON THE IMPERFECTION OF THE GEOLOGICAL RECORD.
- Read Evolution: 24 myths and misconceptions
- Watch Facts of Evolution (1 hour) https://www.youtube.com/watch?v=K7tQIB4UdiY
- What is a theory in science? What is the importance of theory in science?
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 7

- Read Chapters 10 & 11 in the Origin: ON THE GEOLOGICAL SUCCESSION OF ORGANIC BEINGS and GEOGRAPHICAL DISTRIBUTION
- Here is something to think about. Watch these videos from TED
 - Dan Dennett
 - Susan Blackmore
- Post Reactions to Readings, websites and videos by Thursday Midnight

Post Responses to others Reactions by Sunday Midnight

Module 8

- Read Chapter 12 in the Origin: GEOGRAPHICAL DISTRIBUTION--continued.
- Watch Intelligent design on Trial.
- Check out the Vigil After Dover You can watch the 3 parts at <u>The Vigil After Dover</u>
- Watch this Ted Talks video Are we ready for neo-evolution? Harvey Fineberg
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 9

- Read Chapter 13 in the Origin: MUTUAL AFFINITIES OF ORGANIC BEINGS: MORPHOLOGY: EMBRYOLOGY: RUDIMENTARY ORGANS.
- Check out an interview with Francis Collins
- Watch "What Darwin Never Knew" (2 hour video)
- Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Module 10

- Read Chapter 14 in the Origin: RECAPITULATION AND CONCLUSION.
- Go to <u>A Moment in Science</u>. This will take you to a results page with a series of links to articles and audio podcasts that concern evolution from Indiana University. The results will have several pages, don't just stop at the first page. Click the links to go to a podcast webpage (some of the links will be text and not podcasts). Each podcast webpage includes the text and a link to play the audio. Listen and learn. This series has things which I think would be good for your students. Listen to at least 10 podcasts (they are only a couple of minutes long).
- · Post Reactions to Readings, websites and videos by Thursday Midnight
- Post Responses to others Reactions by Sunday Midnight

Methods of Evaluation:

The course grade will be based on a 5000 (3000 for undergraduates) word term paper valued at 100 points and your grade on your postings on the weekly discussion also valued at 100 points. The word count does not include your reference section. The discussion grade will be calculated as a total from the weekly discussion posting. The grades on these items will be averaged.

The research paper will be submitted electronically to Blackboard under assignments. It must be in Microsoft Word format. FYI, you can submit and resubmit your term paper to until the due date. It will mark mistakes and plagiarism. You could then correct them and resubmit.

The research paper topic will cover some topic on evolution and has to be approved by the instructor. It should follow CBE or APA style (<u>CBE Style Guide</u>). A paper written in CBE style is at <u>Baomes and Fisher</u>.

Material taken verbatim from your sources should be enclosed in quotations and citied. Material that is paraphrased should be cited but not placed in quotations. The paper should mostly be in your words and not a long series of quotations.

There will be a percentage deduction on your term paper grade depending on the degree of plagiarism found by the turnitin website.

Grading Scale:

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 0-59%

Classroom Protocol:

Students are responsible for beginning their participation on the FIRST CLASS DAY by logging on and completing assignments according to the COURSE MAP. Failure to submit online assignments between the first day of classes and the "university census date" (according to the university schedule) will result in an ADMINISTRATIVE DROP from the course. Your first assignment is to login to the discussion board and introduce yourself. Upload a photo...

Participation Policy: Participation in the course will include posting on the course discussion modules and interacting with other students on the discussion board.

Students who have federal loans and grants must be aware that participation is monitored in online courses. In the event a student withdraws from a course the student will be required to refund all federal funds prorated from the last date of participation. A student's last access to Blackboard would not suffice as participation. The required weekly activity could include a comment to a blog, a discussion board posting, a journal entry, a quiz or exam, a submitted assignment, or other measurable and tracked activity.

Course Etiquette:

Informal class participation is welcome. Please do not make comments that are off the subject or that impede the progress of the class.

Disability Accommodations:

Students with disabilities may request reasonable accommodations through the A&M-Texarkana Disability Services Office by calling 903-223-3062.

Academic Integrity:

Academic honesty is expected of students enrolled in this course. Cheating on examinations, unauthorized collaboration, falsification of research data, plagiarism, and undocumented use of materials from any source constitute academic dishonesty and may be grounds for a grade of 'F' in the course and/or disciplinary actions. For additional information, see the university catalog.

Honor Code:

Texas A&M University-Texarkana expects high standards that include academic honesty, personal integrity, and ethical, academic behavior of all its students. Reverence, relentless curiosity, and a willingness to participate are essential qualities of an emerging scholar, and the university encourages these qualities. A student's personal integrity, ethical behavior, and

sense of honor contribute to a respectful and positive academic climate allowing all students to develop as scholars and reach their greatest academic potential. Since students are responsible for maintaining an academic climate based on trust and respect, they should report any activity threatening a climate conducive to learning to an instructor or administrator.

Drop Policy:

To drop this course after the census date (see semester calendar), a student must complete the Drop/Withdrawal Request Form, located on the University website or obtained in the Registrar's Office. The student must submit the signed and completed form to the instructor of each course indicated on the form to be dropped for his/her signature. The signature is not an "approval" to drop, but rather confirmation that the student has discussed the drop/withdrawal with the faculty member. The form must be submitted to the Registrar's office for processing in person, email Registrar@tamut.edu, mail (7101 University Ave., Texarkana, TX 75503) or fax (903-223-3140). Drop/withdraw forms missing any of the required information will not be accepted by the Registrar's Office for processing. It is the student's responsibility to ensure that the form is completed properly before submission. If a student stops participating in class (attending and submitting assignments) but does not complete and submit the drop/withdrawal form, a final grade based on work completed as outlined in the syllabus will be assigned.

A&M-Texarkana Email Address:

Upon application to Texas A&M University-Texarkana an individual will be assigned an A&M-Texarkana email account. This email account will be used to deliver official university correspondence. Each individual is responsible for information sent and received via the university email account and is expected to check the official A&M-Texarkana email account on a frequent and consistent basis. Faculty and students are required to utilize the university email account when communicating about coursework.

Student Technology Assistance

- Solutions to common problems and FAQ's for your web-enhanced and web courses are found at this link: http://www.tamut.edu/Training/Student%20Training/index.html
- If you cannot find your resolution there, you can send in a support request detailing your specific problem here: http://www.tamut.edu/techde/support.htm
- Blackboard Helpdesk contacts (office hours are: Monday Friday, 8:00a to 5:00p)
 Julia Allen (main contact) 903-223-3154 <u>julia.allen@tamut.edu</u>
 Nikki Thomson (alternate) 903-223-3083 <u>nikki.thomson@tamut.edu</u>

Jayson Ferguson (alternate) 903-223-3105 jayson.ferguson@tamut.edu

Minimum Windows PC Requirements:

- Pentium IV 1.5GHz+ (preferred: Core Duo)
- 1 GB RAM minimum (preferred: 2 GB)
- 128MB Video Card minimum Sound Card is required for some courses

- 56K modem minimum (Cable or DSL required for some courses)
- Windows 2000, XP, Vista or 7
- Web browser (Internet Explorer 7.0+; Firefox 3.0+)
- Microsoft Word, minimum Office 97

Some courses will need plug-ins such as Flash player 10 +, QuickTime player 7.0+, Adobe Reader 9.0+, Java Runtime Environment (Java 1.6.0_15), Windows Media Player 10+, RealPlayer, and Macromedia/Adobe Shockwave.

Some online courses may also require a CD ROM (8x minimum, higher recommended)

Blackboard has certified the following browsers for computers running Windows Operating Systems:

- Internet Explorer 8 or 9 (IE is not supported on Windows XP)
- Mozilla Firefox 3.6+
- Google Chrome

Minimum Apple Macintosh Requirements:

- Intel Core 2.0GHz+
- 1 GB RAM (preferred: 2 GB)
- 128MB Video Card minimum Sound Card is required for some courses
- 56K modem minimum (Cable or DSL required for some courses)
- Web browser (Firefox 3.0+; Safari 3.0+)
- Microsoft Word, minimum Office 97

Some courses will need plug-ins such as Flash player 10+, QuickTime player 7.0+, Adobe Reader 9.0+, Java Runtime Environment, RealPlayer, and Macromedia/Adobe Shockwave.

Some online courses may also require a CD ROM (8x minimum, higher recommended)

Blackboard has certified the following browsers for computers running Macintosh Operating Systems:

- Mac OS 10.2 (Jaguar): (Safari 1 is compatible)
- Mac OS 10.3 (Panther): Safari 1.2 (Firefox 1.5 is compatible)
- Mac OS 10.4 (Tiger): Safari 2 and Firefox 1.5
- Mac OS 10.5 (Leopard): (Firefox 2.0 is compatible)

I-OS and Android Devices

These devices are currently supported using the Blackboard Mobile App, available for free from your App Store or scan the code below:



To access Texas A&M University - Texarkana, there is an individual license fee. This fee gives you access to the university from all your (same platform) devices; it is not necessary to pay the fee for each device you own.

The instructor reserves the right to make changes to this syllabus as necessary.

Rubric for Grading Discussion					
Category	Exceeds Expectations 9-10 points	Meets Expectations 7-8 points	Does Not Meet Expectations 0-6 points		
Communication	Makes substantial contributions to discussion, explicitly, openly, and frequently in a genuine manner. 2 points	Often contributes to the discussion in a genuine manner 1 point	Seldom contributes to the discussion or contributions minimal. 0 points		
Frequency	Frequently and on time = 4 or more contributions per week. 2 points	Often and on time = 2 to 3 times per week. 1 point	Posts not submitted on time. 0 points		
Informed discussion	Demonstrates informed knowledge, in-depth thinking, and quality questing of other students' contributions and of the topic under discussion. 2 points	Demonstrates some informed knowledge, thinking, and questioning of other students' contributions and of the topic under discussion. 1 point	Does not demonstrate or demonstrates little informed knowledge, thinking, and questioning of other students' contributions and of the topic under discussion. 0 points		
Resource contributions	Makes substantial resource contributions to the class in the form of related websites, email discussion groups of interest, current events, other publications, etc. 2 points	Makes some contributions to the class in the form of related websites, email discussion groups of interest, current events, other publications, etc. 1 point	Makes limited or no contributions to class resources. 0 points		
Netiquette	Observes netiquette when responding to others contributions. 2 points	Observes some netiquette when responding to others contributions. 1 point	Does not pay attention to netiquette when responding to others' contributions 0 points		

Term Paper Rubric	Poor	Good	Excellent
Format/Layout Presentation of the text Structuring of text Follows requirements of length, font and style Weight 15%	10.50 Follows poorly the requirements related to format and layout Length is significantly short.	12.75 Follows, for the most part, all the requirements related to format and layout. Some requirements are not followed. Length is short.	15.00 Closely follows all the requirements related to format and layout. Length is ok.
Organization/Information All elements of the tropic are addressed The information is technically sound Information based on careful research Coherence of Information Weight 50%	35.00 The paper is not objective and addresses poorly the issues referred to in the proposed topic. The provided information is not necessary or not sufficient to discuss the issues	42.50 The paper is objective and for the most part addresses with an in depth analysis most of the issues referred in the proposed topic. The provided information is, for the most part, necessary and sufficient to discuss these issues	50.00 The paper is objective and addresses with an in depth analysis all the issues referred to in the proposed topic. The provided information is necessary and sufficient to discuss these issues.

Quality of Writing

- Clarity of sentences and paragraphs
- No errors and spelling, grammar and use of English
- Organization and coherence of ideas
- · Length of paper.
- Use of quotations
- Weight 20%

14.00

The paper is not well written, and contains many spelling errors, and/or use of English errors. The paper is badly organized. Paper is not 5000 (3000 for undergrads) words (Reference list does not count). Paper contains too many long quotations from sources. Uses paraphrasing and citations given for source.

17.00

The paper is wellwritten for the most part, without spelling, grammar or use of English errors. The paper is, for the most part, well organized, clear and presents ideas in a coherent way. Paper is 5000 words or more. (Reference list does not count). Paper does not contain too many long quotations. Uses paraphrasing and citations given for

20.00

The paper is well written from the start to finish, without spelling, grammar or use of English errors. The paper is well organized, clear and presents ideas in a coherent way. Paper is 5000 words or more. (Reference list does not count). Paper does not contain many long quotations. Uses paraphrasing and citations given for source.

Citations and References

- Scholarly level of references
- How effective the references are used in the paper
- Soundness of references
- CBE or APA style in reference list and for citations
- Weight 15%

10.50 Most of the references used are not important, and/or not of good scholarly quality. There is not a minimum of 20 scholarly citations, and/or they are not used effectively in the paper. References are not correctly cited or correctly listed in the reference list according to CBE or APA style. source. 12.75 Most of the references used are important, and are of good scholarly quality. There is a minimum of 20 scholarly citations that are for the most part used effectively in the paper. Most of the references correctly cited and correctly listed in the reference list according to CBE or APA style.

15.00 All of the references used are important, and are of good/ scholarly quality. There is a minimum of 20 scholarly citations that are used effectively in the paper. All the references are correctly cited and correctly listed in the reference list according to CBE or APA style.

In addition, points will be deducted for papers that are too short, exhibit plagiarism, and 10 points a day for being turned in late.