

Term Information

Effective Term Spring 2019
Previous Value Summer 2018

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Add an online section.

What is the rationale for the proposed change(s)?

Creating an online section will accommodate distance students and allow more flexibility in student scheduling.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

None.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Entomology
Fiscal Unit/Academic Org	Entomology - D1130
College/Academic Group	Food, Agric & Environ Science
Level/Career	Undergraduate
Course Number/Catalog	1350
Course Title	The Biology of Hope and Belief
Transcript Abbreviation	Biol Hope Belief
Course Description	The underlying premise of this course is that the human mind and human behaviors have been shaped by the force of natural selection. Some of these behaviors are complex, longstanding and present in every human culture ever studied. This course explores the biological basis for two of them: the human capacity for hope and the human desire to believe in a supernatural deity.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	Yes
Is any section of the course offered	100% at a distance
<i>Previous Value</i>	<i>No, 100% at a distance</i>
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites

Exclusions

Not open to students with credit for Biology 1350.

Electronically Enforced

Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code

26.0101

Subsidy Level

General Studies Course

Intended Rank

Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

General Education course:

Biological Science

Course Details

Course goals or learning objectives/outcomes

- Students understand the basic facts, principles, theories and methods of modern science.
- Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
- Students describe the inter-dependence of scientific and technological developments.
- Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Content Topic List

- Biology of Hope Take One: Several Views from History, Science
- The Nervous System and Science of Perception
- Structure of Central and Peripheral Nervous Systems
- How Neurons Communicate
- Biochemistry & Neurochemistry of Chemically-Induced Emotions
- Biology of Hope Revisited: Addiction Research and Hope
- Neurochemistry of Hope: Placebos and the Benedetti Experiments
- Serotonin and Artificial Hope
- Yin-Yang Relationship of Hope and Despair: Quantifying Hope
- Do Animals Have Hope?—Scientific Experiments
- Do Animals Have Hope?—Views from Natural History
- The Upright Ape: Evolution of the Human Brain and Bipedalism
- How Coming Down from the Trees Changed Human Society
- Moral Behavior in the Great Apes/Experiments with Primates and Other Animals
- The Moral Ape: Morality in Humans/Trolley Car Experiments
- Hope as a Progenitor of religion, Selective Advantage of a Sacred Narrative
- Evolution of religion: Four Mental Criteria for Acquiring Religion
- Evidence of Religious Practice Among Hunter-Gatherers
- Forming Beliefs and How it is Done
- From Causality to Supernatural Agency: The Princess Alice Experiments
- Don't Stop Believing: Receptivity to the Supernatural
- Do You Believe in Magic?
- Spiritual Beliefs in the Brain
- Is There a God Gene? The Heritability of Belief
- The Strange Case of Music: a portal to the Divine?
- Neurotheology

Sought Concurrence

No

Previous Value

Yes

Attachments

- FINAL_Entomology1350 GE Assessment Plan_ONLINE.docx: GE assessment plan
(GEC Course Assessment Plan. Owner: Welty, Celeste)
- Ent 1350 - Syllabus - Au18_v2.docx: Syllabus, on-line
(Syllabus. Owner: Welty, Celeste)
- Entomology1350_In-Person_Syllabus_v2.doc: Syllabus, in-person
(Syllabus. Owner: Welty, Celeste)
- ENTMGY 1350 QM Syllabus Review.xlsx: QM syllabus review
(Other Supporting Documentation. Owner: Welty, Celeste)
- ENTMLGY1350_syllabus_distance_postQM.pdf: Syllabus, post-review
(Syllabus. Owner: Welty, Celeste)

COURSE CHANGE REQUEST
1350 - Status: PENDING

Last Updated: Neal,Steven Michael
10/22/2018

Comments

- Please upload the QM review (see our email conversation in February / . March). *(by Vankeerbergen,Bernadette Chantal on 10/02/2018 02:46 PM)*
- revisions to syllabi requested via email on 8/20 *(by Meadows,Kendyl Ann on 08/20/2018 02:06 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Welty,Celeste	08/19/2018 03:51 PM	Submitted for Approval
Approved	Welty,Celeste	08/19/2018 03:52 PM	Unit Approval
Revision Requested	Meadows,Kendyl Ann	08/20/2018 02:06 PM	College Approval
Submitted	Welty,Celeste	08/20/2018 08:59 PM	Submitted for Approval
Approved	Welty,Celeste	08/20/2018 09:01 PM	Unit Approval
Approved	Neal,Steven Michael	08/29/2018 10:22 AM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	10/02/2018 02:46 PM	ASCCAO Approval
Submitted	Welty,Celeste	10/22/2018 11:36 AM	Submitted for Approval
Approved	Neal,Steven Michael	10/22/2018 11:39 AM	Unit Approval
Approved	Neal,Steven Michael	10/22/2018 11:39 AM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Oldroyd,Shelby Quinn Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler	10/22/2018 11:39 AM	ASCCAO Approval

Entomology 1350: The Biology of Hope and Belief
Fulfills the General Education Natural Science Requirement for the BA
3 Credit Hours
In Person Lecture Syllabus

Lecturers:

Megan Meuti (Meuti.1@osu.edu)
Assistant Professor
Department of Entomology

Susan Fisher (fisher.14@osu.edu)
Professor Emerita
Department of Entomology

Office Hours by Appointment

Instructional Assistant: DominiqueVacheresse
(vacheresse.7@buckeyemail.osu.edu)

Course Format:

Lectures/class sessions: 2, 80 minute lectures/ week
Reading from Book: 2 chapters per week
On-line Quiz—one per week, drop two lowest scores
Exploratory Exercise—1 per week, drop lowest score
Final Exam

Course Description: The underlying premise of this course is that the human mind and human behaviors have been shaped by the force of natural selection. That is, we are not born as blank slates waiting to be shaped by the environment and experience. Rather, we come into the world with predispositions, preferences and passions that evolved because they helped our ancestors survive. Some of these behaviors are complex, longstanding and present in every human culture ever studied. This course explores the biological basis for two of them: the human capacity for hope and the human desire to believe in a supernatural deity.

The course begins with an evaluation of hope. What is it and how is it different from optimism? Thereafter, we explore the nervous system, how it is structured and how it has evolved over time. Do we find evidence for hope among other species, including our

closest cousin, the chimpanzee? We will look at the neurobiology of hope and how that changes when one is in a state of hopelessness. We will ask whether it is possible to cheat death with hope and what data support this contention.

From there, the course takes on an issue that is intimately related to hope, i.e., the near universal human desire to believe in god. We will examine how causality is learned in young children and from that how beliefs are formed neurologically. We will study how malleable beliefs are once they are formed, how false beliefs are created and the neurobiological events that attend the changes. Thereafter, we will examine the neurobiology that underscores religious states such as reverie, mysticism and hallucination. We will learn how brain activity is studied using various types of brain scans and data from brain-injured subjects. We will evaluate data used to support different points of view about the reality of religious states.

Throughout the course, we will seek to understand how the force of natural selection might have led to both hope and religious faith. What were the selective advantages to our ancestors and what, if any, data support these contentions? The course, in short, explores the biological bases for qualities thought to be uniquely human: our capacity for hope and our relationship to a supernatural deity.

Goals and Expected Learning Outcomes for GE Natural Science-Biological Science:

Goals: Students understand the principles, theories and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world.

Expected Learning Outcomes:

Learning Outcome 1: Students understand the basic facts, principles, theories and methods of modern science.

Learning Outcome 2: Students understand key events in the development of science and recognize that science is an evolving body of knowledge.

Learning Outcome 3: Students describe the inter-dependence of scientific and technological developments.

Learning Objective 4: Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Prerequisites: None

Required Book:

Fisher, S.W. and M.L. Fisher (2015). The Biology of Hope and Belief. 277 pp.

YOU DO NOT NEED TO BUY THE BOOK. An electronic copy will be provided to you *gratis* on Canvas.

Lecture	Week	Date	Topics
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1	1	8/XX/18	Course Introduction and Administrivia (Chapter 1)
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2			Biology of Hope Take One: Several Views from History, Science (Chapter 2)
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Quiz 1 covering lectures and chapters 1 and 2 will open on 8/XX at 5:00 PM and close on 8/XX at 5:00 PM.

Exploratory Exercise 1 is assigned on 8/XX and due in the drop box on 8/XX by 5:00 PM.

3	2	8/XX/18	The Nervous System and Science of Perception (Chapter 3)
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4			Structure of Central and Peripheral Nervous Systems (Chapter 4)
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Quiz 2 covering lectures and chapters 3 and 4 will open on 8/XX at 5:00 PM and close on 9/XX at 5:00 PM

Exploratory Exercise 2 is assigned on 8/XX and due in drop box by 9/XX by 5:00 PM.

5	3	9/XX/18	How Neurons Communicate (Chapter 5)
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6			Biochemistry & Neurochemistry of Chemically-Induced Emotions (Chapter 6)
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Quiz 3 covering lectures and chapters 5 and 6 will open on 9/XX at 5:00 PM and close on 9/XX at 5:00 PM.

Exploratory Exercise 3 is assigned on 9/XX and due in drop box by 5:00 PM on 9/XX.

Quiz 13 covering lectures 26 and 27 will open on 11/XX at 5:00 PM and close on 12/XX at 5:00 PM.

Final Exam—The final exam will be scheduled during the university window.

EXPLORATORY EXERCISES

The exploratory exercises are designed to expand your thinking about the biology of hope and belief and provide you with the opportunity to think creatively---something that is hard to do on multiple choice quizzes. The information for each exploratory exercise will be available on line each week on Wednesday by 5:00 PM and each exercise will be due one week later by 5:00 PM. Exercises should be filed in the drop box on Carmen set up for each exercise. You will be able to drop your lowest exploratory exercise score.

Exploratory Exercise 1 — Understanding the Scientific Method & Hope from Several Points of View (Assigned 8/XX, Due in Drop box 8/XX).

Watch: Know the Difference: Hypothesis vs. Theory
YouTube

And Know the Difference—Science vs. Religion

Fill out—Form asking you to categorize different statements

Exploratory Exercise 2—How music can be used to convey hope. (Assigned 8/XX, Due in drop box 9/XX)

Listen—to 3 pieces on Youtube—**We shall Overcome** (Mahalia Jackson)
Egmont Overture (Beethoven)
The Hope Anthem (Scibilia)

Analyze—the compositions and the artists according to the guidelines on Exploratory Exercise 1 and the grading rubric.

Exploratory Exercise 3—Basic Neurobiology (Assigned 9/XX, Due in drop box 9/XX)

Watch—Three Videos on Youtube covering the following topics-

**The Resting Potential
Spiking an Action Potential
Transmission of Message across the Synapse**

Answer—questions about the nervous system

Exploratory Exercise 4—Understanding Evolution/Pesticide Resistance (Assigned 9/XX, Due in drop box 9/XX)

Do—worksheet on changing gene frequencies through natural selection.

Exploratory Exercise 5—blog on why American society has antipathy towards science. The class will be divided up into groups of approximately 40 students and you will blog about why Americans appear to be resistant to science. **(Assigned 9/XX, Comments due by 9/XX but can be made at any time during the week. In fact, we prefer that you make comments early and often)**

Exploratory Exercise 6—Read Loren Eiseley's *Judgment of the Birds* and answer questions about the essay. **(Assigned 9/XX, Due in drop box 10/XX)**

Exploratory Exercise 7—Evaluating major influences on human evolution. **(Assigned 10/XX, Due in drop box 10/XX)**

Do—worksheet on drivers of human evolution

Exploratory Exercise 8—Evidence of moral behavior in nonhuman primates. **(Assigned 10/XX, Due in drop box 10/XX).**

Watch and Analyze: *Clever Monkeys*, produced by Thirteen for NATURE

Exploratory Exercise 9—What are the critical things that make us, us? (Assigned 10/XX, Due in drop box 10/XX).

Watch and Analyze: *Becoming Human*, Shining Red Productions for NOVA, produced by Graham Townsley

Exploratory Exercise 10—Probing belief—Proof of Heaven? (Assigned 10/XX, due 11/XX)

Watch and Analyze: Interview with Neurosurgeon, Eben Alexander, author of *Proof of Heaven* with Oprah Winfrey

Exploratory Exercise 11—Can we reason faith away? Assigned 11/XX, Due in drop box 11/XX)

Watch and analyze—panel discussion with Michael Shermer, Executive Director of Skeptic Magazine, Karl Giberson, former director of BioLogos and Neal Conan, moderator.

DETERMINATION OF GRADES:

Your grade will be determined from the following distribution of points:

Weekly on-line quizzes, 40 points each except for quiz 8 which covers 3 chapters and is therefore worth 60 points. **You cannot drop quiz 8, so don't miss it.** Quizzes will include questions from both the lectures and text book. **You may drop 2 of the 40 point quizzes.**

	460 points
Final Exam (comprehensive)	200 points
Weekly Exploratory Exercises, 20 points each	200 points

Total Possible points:	860 points
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Extra Credit: Random Acts of Hope

You have the option of earning up to 20 points for practicing **Random Acts of Hope**. These can be almost anything. For instance, you might open the door for a person who is loaded down with packages. You might help a stranger find her lost dog. You might give a dollar to that hungry guy on the street. You might pick up an earthworm on the

sidewalk after it rains and return it to the grass. You can report anything you do that helps some other creature that requires selfless effort on your part. To get credit, you need to do two things: write down what you did **and** explain how it made you feel. For each Random Act, properly written up and sent to Dr. Fisher(fisher.14@osu.edu) by 5:00 PM on November 30, you will receive 2 points for each random act of hope, up to a total of 20 points. It can make a partial grade difference in your final score, so it is worth your time and effort. You can send them to me as you do them or you can keep a list and send them to me all at once as long as I receive them by the deadline.

Final Grades: Your final grade will be based on the percentage of 920 points that you earn during the course of the semester, as indicated below:

93-100%	A	80-82%	B-	67-69%	D+
90-92%	A-	77-79%	C+	60-66%	D
87-89%	B+	73-76%	C	<59%	E
83-86%	B	70-72%	C-		

FOR HELP:

For help with your password, university e-mail, Canvas, or any other technology issues, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** [614-688-8743](tel:614-688-8743)

Step-by-step guide for checking your course technology



Your computer and browser

- Current Mac (OS X, v10.7 or higher recommended) or PC (Windows Vista, or Windows 7 or 8 recommended)
- Stable high-speed internet connection (DSL or cable)
- Firefox web browser ([download](#) for free)
- Up-to-date Java, Flash, and Silverlight plugins installed (see the [Firefox plugin check](#))

☐ Carmen

- Recommendations for [supported browsers and systems](#), and [system check](#)
- Contact [8-HELP](#) for support

☐ CarmenConnect

- [Quick-Start Checklist](#) to set up and test your your system
- CarmenConnect [frequently asked questions](#)
- Contact [8-HELP](#) for support

Course Policies

Make up Assignments

Make up quizzes, final and exploratory exercises are given only in the case of documented illness.

Illness

If you are too ill to do an assignment, please contact Ms. Vacheresse, Dr. Meuti or Dr. Fisher **during the window the quiz or exploratory exercise is open**. You must be seen by and receive written documentation from a professional health care practitioner during that window in order for a make up to be given or a deadline to be extended. **The written documentation must come from a qualified health care official, be written on letterhead paper, be signed by someone who is not a relative and be presented either to course personnel during the time the window for the assignment is open.**

Deadline Extensions

All quizzes are opened on Thursday at 5:00 pm of the week that the material is presented and closed on Sunday at 5:00 pm. Neither the days nor the time of the quizzes change throughout the semester. As a result, we do not accept excuses such as “I thought the quiz was open until midnight on Sunday” as an excuse. The time and dates for exploratory exercises are also set and do not change. Make sure you know when these assignments are due.

Questions about Quiz Questions

To assist you in discerning why specific quiz answers are correct, we have included either explanatory material with each question and/ or citations to where the relevant material can be found in the book. If you still have questions, you may ask either Ms. Vacheresse, Dr. Meuti or Dr. Fisher for further explanation. **However, this must be done within one week of the quiz window closing.**

Grade Adjustments at Course End

If any errors are made in the calculation of your final score, we will, of course, correct those and make appropriate adjustments to your score. However, because we allow you to drop 2 quizzes and 1 exploratory exercise in addition to providing you the opportunity to earn 20 extra credit points during the semester, we do not make additional unearned adjustments to your score even if you are close to the next higher grade.

Academic Misconduct

OSU has a strict code of academic misconduct that requires us to report any and all cases of suspected misconduct (e.g. cheating on an examination, plagiarism in written assignments, using an examination proxy, failure to follow course policies etc.) to the OSU Committee on Academic Misconduct for adjudication. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term ‘academic misconduct’ includes all forms of students’ academic misconduct wherever committed: illustrated by, but not limited to, cases of plagiarism and dishonest practices in connections with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct: <http://studentlife.osu.edu/csc/>.

A NOTE ON PLAGIARISM: Students are expected to work alone on the exploratory exercises and quizzes except if otherwise noted. Our graders turn papers into a service that is designed to detect plagiarism. If you appropriate another’s work and represent it as your own, we will catch it. PLEASE, PLEASE don’t do this. The university takes this issue very seriously and leaves us very little discretion in dealing with it. So, do your own work and all will be well.

Accommodation of Special Needs; Disability Services: The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let Dr. Fisher know within the first two weeks of the semester so that we can privately discuss options. To establish reasonable accommodations, Dr. Fisher may request that you register with Student Life Disability Services. After registration, make arrangements with Dr. Fisher as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Sexual Harassment: Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu. Please report any concerns about questionable behavior to Dr. Fisher.

Entomology 1350: The Biology of Hope and Belief

Autumn 2018

Meeting Dates and Location: online, asynchronous, no fixed place or time.

Course Format: Distance Learning or DL designates courses completed 100% at distance

Instructor: [QM 1.8](#)

Dr. Susan Fisher, Instructor

fisher.14@osu.edu

Phone: 614-292-1617

Office hours: T, R, 1-2 PM

253 Kottman Hall

Instructional Assistant:

Dominique Vacheresse

vacheresse.7@osu.edu

Phone: 614-292-1617

Office hours: M,W,F, 9-10 AM

253 Kottman Hall

Credit Hours: 3 [QM 1.6](#)

Prerequisites: There are **no prerequisites** for this course [QM 1.6](#)

Textbooks/Readings: Fisher, S.W. and M.L. Fisher (2015). The Biology of Hope and Belief. ISBN: 978-0-9961672-6-0

The textbook is available at Barnes & Noble. **You will be responsible for the materials covered in both the modules and as well as the book on quizzes and Final Exam.**

[QM 4.3, 4.4, 4.6](#)

Optional Readings: none [QM 4.3, 4.4, 4.6](#)

Additional Required Materials: Exploratory Exercises, rubrics are provided each week on CarmenCanvas [QM 4.3, 4.4, 4.6](#)

Other Fees or Requirements: none

Course Description: The underlying premise of this course is that the human mind and human behaviors have been shaped by the force of natural selection. Some of these behaviors are complex, longstanding and present in every human culture ever studied. This course explores the biological basis for two of them: the human capacity for hope and the human desire to believe in a supernatural deity.

Scope of the Course: The course begins with an evaluation of hope. What is it and how is it different from optimism? Thereafter, we explore the nervous system, how it is structured and how it has evolved over time. Do we find evidence for hope among other species, including our closest cousin, the chimpanzee? We will look at the neurobiology of hope and how that changes when one is in a state of hopelessness. We will ask whether it is possible to cheat death with hope and what data support this contention.

From there, the course takes on an issue that is intimately related to hope, i.e., the near universal human desire to believe in god. We will examine how causality is learned in young children and from that how beliefs are formed neurologically. We will study how malleable beliefs are once they are formed; how false beliefs are created and the neurobiological events that attend the changes. Thereafter, we will examine the neurobiology that underscores religious states such as reverie, mysticism and hallucination. We will learn how brain activity is studied using various types of brain scans and data from brain-injured subjects. We will evaluate data used to support different points of view about the reality of religious states.

Throughout the course, we will seek to understand how the force of natural selection might have led to both hope and religious faith. What were the selective advantages to our ancestors and what, if any, data support these contentions? The course, in short, explores the biological bases for qualities thought to be uniquely human: our capacity for hope and our relationship to a supernatural deity [List how/where to start. QM 1.1, 1.2](#)

Course Goals: [QM 1.2](#) Students understand the principles, theories and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world

Course Learning Outcomes: [QM 3.1, 3.2, 3.3, 3.4 \(4.2\); QM 3.5](#)

- L1. Students understand the basic facts, principles, theories and methods of modern science.
- L2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
- L3. Students describe the inter-dependence of scientific and technological developments.
- L4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Fulfills the General Education Natural Science Requirement for the BA & BS

Read Me Read Me Read Me

How to Start & Be Successful in this Course:

The primary method for delivery of course material is in the form of video recordings, which are roughly equivalent to lectures in a standard course. The recordings are composed of smaller units called **chunks**. In most recordings, the chunks will be identified for you. You will be expected to complete approximately two recordings each week. These are identified on the syllabus. You will **access** the recordings by going to the **content section** of CarmenCanvas and downloading the recordings identified on the syllabus for that week. Each recording consists of a presentation that contains a PowerPoint file,

someone speaking (usually Dr. Fisher) and a variety of ancillary materials like videos or sound tracks. **You are advised to take notes on the presentations** although you will be able to watch as many times as you wish. For those of you who like to get their course material on the go, all of the videos for this course have been converted into YouTube videos which have been rendered into 5 minute chunks. These are available in addition to or instead of the full recordings.

You are not required to physically come to OSU to satisfy any of the requirements of the course. All of the material and assignments can be completed online at a location of your choosing. Dominique will be available to help you by email if you need assistance.

- **If this is your first online course please contact Dominique immediately! She will walk you through navigating the materials, uploading assignments, etc.**
- You will be able to find assignments under your “To Do Tasks” and/or the weekly module.
- If you need to have an adjusted schedule (e.g. military duty prevents you from opening or submitting assignments during posted window, etc.) please email Dominique directly (NOT using CarmenCanvas) at least 2 weeks prior to requested schedule changes.
- **Read ALL the course announcements posted.** Students are responsible for the information communicated.

This is a 100% online course, thus, making access to functioning technology a necessity. Please read the information below and take steps as appropriate to make sure that you have the necessary equipment and skills.

Course technology [QM1.5, 7.1](#)

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7. [QM7.1](#)

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

Baseline technical skills for online courses [QM 1.7, 6.3](#)

- Ability to navigate CarmenCanvas, the Course Management System
- Ability to compose English sentences
- Ability to perform calculations up to the level of Math 1151
- Ability to communicate via the internet with other students
- Ability to use simple programs such as Word Perfect, Powerpoint, Excel are useful but not necessarily required.

Technology skills necessary for this specific course [QM 1.5, 1.7, 6.3](#)

CarmenCanvas

- Recommendations for [supported browsers and systems](#), and [system check](#)
- **Contact [8-HELP](#)** for support

CarmenConnect

- [Quick-Start Checklist](#) to set up and test your your system
- CarmenConnect [frequently asked questions](#)
- Contact [8-HELP](#) for support

Required equipment [QM 1.7](#)

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone

Required software [QM 5.1, 6.3](#)

- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft’s Student Advantage program. Full instructions for downloading and installation is found <https://ocio.osu.edu/kb04733>.
- [Approved browsers](#): Mozilla Firefox; Google Chrome; Internet Explorer

Course Schedule: [QM 1.1](#)

Week and Dates	Module Learning Goals:	Module Topics/ Name of Video Recordings	Textbook Assignment
Week 1 8/20 – 8/26	Students will learn the basic components of evolutionary theory, its importance to modern biology and why hope is an evolutionary phenomenon consistent with Learning Outcome 1.	Syllabus Assessment – MUST TAKE IN ORDER TO ACCESS THE REST OF THE COURSE Dr. Fisher’s Introductory Video What is Hope? Several views from History, Literature and Science	READ SYLLABUS AND COURSE ANNOUNCEMENTS Chapters 1- 2
SYLLABUS ASSESSMENT – MUST TAKE IN ORDER TO ACCESS REST OF THE COURSE MATERIAL. OPENS SUNDAY, 8/19 AT 12:00 AM EST AND IS DUE SUNDAY, 8/26 AT 5 PM EST			
Exploratory Exercise 1, Addressing Learning Goal 1 – What is Science: Students will view the videos “Know the Difference: Hypothesis vs. Theory”, and “Know the Difference: Science vs. Religion” which are available on YouTube. Students will learn about and discuss “ways of knowing.” Students will demonstrate competence in distinguishing different types by categorizing a series of statements. Opens on Wednesday, 8/22 at 5 pm and closes Wednesday, 8/29 at 5 pm			
Quiz 1 – Covering modules and book assignments from week 1. Opens on Thursday, 8/23 at 5 pm and closes Sunday, 8/26 at 5 pm.			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 2 8/27 – 9/2	Students will understand the structures of the central and peripheral nervous systems and how our understanding	The Nervous System and Science of Perception	Chapter 3

	changes over time consistent with Learning Outcome 2.	Structure of Central and Peripheral Nervous Systems	Chapter 4
<p>Exploratory Exercise 2 – Hope in Music addressing Learning Goal 4. Students will listen to 3 musical pieces that evoke hope according to the composers of the respective pieces. Students will then analyze the compositions and artists according to their unique understanding of the music by explaining how the music conveys hope, incorporating information from their own life experience and technical competence in music. Opens on Wednesday, 8/29 at 5 pm and closes Wednesday, 9/5 at 5 pm</p> <p>Quiz 2 – Covering modules and book assignments from week 2. Opens on Thursday, 8/30 at 5 pm and closes Sunday, 9/2 at 5 pm.</p>			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 3 9/3 – 9/9	Students will examine how individual neurons can determine mood and how advances in technology have allowed us to alter mood and emotion consistent with Learning Outcome 3.	How Neurons Communicate Biochemistry & Neurochemistry of Chemically- Induced Emotions	Chapter 5 Chapter 6
<p>Exploratory Exercise 3 addressing Learning Goal 3 – Basic Neurobiology: Students will view three videos that address components of nervous system function. Thereafter, students will answer factual questions regarding the nervous system. Additionally, students will demonstrate mastery of the material by explaining how different parts of the nervous system work together to form the basis of hope. Opens on Wednesday, 9/5 at 5 pm and closes Wednesday, 9/12 at 5 pm</p> <p>Quiz 3 – Covering modules and book assignments from week 3. Opens on Thursday, 9/6 at 5 pm and closes Sunday, 9/9 at 5 pm.</p>			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 4 9/10 – 9/16	Students will understand basic facts and principles that underlie hope, and how lack of hope can affect treatments using scientific principles as elaborated in experiments consistent with Learning Outcomes 1 and 4.	Biology of Hope Revisited: Addiction Research and Hope Neurochemistry of Hope: Placebos and the Benedetti Experiments	Chapter 7 Chapter 8
<p>Exploratory Exercise 4 addressing Learning Goals 1 and 3 – Evolution of Pesticide Resistance: Students will read material that covers toxicology and social impact of insecticides. Then, drawing on materials on evolution learned previously in class, students will participate in a dry lab on pesticide resistance that assesses speed at which gene frequencies change and demonstrates how evolution works mechanistically. Opens on Wednesday, 9/12 at 5 pm and closes Wednesday, 9/19 at 5 pm</p> <p>Quiz 4 – Covering modules and book assignments from week 4. Opens on Thursday, 9/13 at 5 pm and closes Sunday, 9/16 at 5 pm.</p>			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 5 9/17 –	Students will understand that hope is a phenomenon that reflects an evolving body of knowledge and will learn that	Serotonin and Artificial Hope Yin-Yang Relationship of	Chapter 9 Chapter 10

9/23	the philosophical and social implications of how hopelessness is treated are intertwined consistent with Learning Outcomes 1 and 4.	Hope and Despair: Quantifying Hope	
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Exploratory Exercise 5 addressing Learning Goal 2 – Blog: Students will blog on why American society has antipathy towards science. The class will be divided up into 40 person groups. Students are assigned three papers to read that cover evidence of American ambivalence about science and why antipathy towards science appears to be increasing. Students will then engage in a blog with members of their group about the issues raised. Students receive scores on their blog posts according to a sliding scale with factual recall earning a score of 1, ability to discern reasons for American’s attitudes earning a 2 and genuine insight, including solutions earning a 3. **Opens on Wednesday, 9/19 at 5 pm and closes Wednesday, 9/26 at 5 pm**

Quiz 5 – Covering modules and book assignments from week 5. **Opens on Thursday, 9/20 at 5 pm and closes Sunday, 9/23 at 5 pm.**

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 6 9/24 – 9/30	Students will understand that key developments of the biological basis for hope derives from animal models and that interdependence among social groups requires a biologically-based genetic capacity for hope consistent with Learning Outcomes 1 and 4.	Do Animals Have Hope? Scientific Experiments Do Animals Have Hope? Views from Natural History	Chapter 11 Chapter 12

Exploratory Exercise 6 addressing Learning Goals 2 & 4– Students will read Loren Eiseley’s *Judgment of the Birds* and answer questions about the essay. Questions will include factual information about the essay as well as others that address the implications of Eiseley’s views to science and society. Students are encouraged to explain how their own views are upheld or changed by the essay. **Opens on Wednesday, 9/26 at 5 pm and closes Wednesday, 10/3 at 5 pm**

Quiz 6 – Covering modules and book assignments from week 6. **Opens on Thursday, 9/27 at 5 pm and closes Sunday, 9/30 at 5 pm.**

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 7 10/1 – 10/7	Students will understand the evolutionary forces that molded the human body over time and how our descent from an arboreal existence depended on altered social interaction including hope and belief in a supernatural deity consistent with Learning Outcomes 1 & 4.	The Upright Ape: Evolution of the Human Brain and Bipedalism How Down from the Trees Changed Human Society	Chapter 13 Chapter 14

Exploratory Exercise 7 addressing Learning Goals 1 - 4 –Biological Basis for Hope. This exercise synthesizes all of the material on the biological basis for hope studied this far. Students are asked to demonstrate comprehensive understanding of that biological basis by identifying and discussing at least 7 different ways in which hope is manifested in biological systems. Then, students are asked to choose a

format, based on their own interests and learning to combine these diverse elements into a coherent whole. The latter can include almost anything including prose, poetry, song, visual art, performance art, etc.

Opens on Wednesday, 10/3 at 5 pm and closes Wednesday, 10/10 at 5 pm.

Quiz 7 – Covering modules and book assignments from week 7. **Opens on Thursday, 10/4 at 5 pm and closes Sunday, 10/7 at 5 pm.**

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 8 10/8 – 10/14	Students will learn that human psychology evolved along with a changing body form along with departures from the primate lineage, consistent with Learning Outcomes 1 and 2.	Moral Behavior in Great Apes/Experiments with Primates and Other Animals	Chapter 15

Exploratory Exercise 8 addressing Learning Goal 4– Students will analyze a discussion by philosopher Daniel Dennett. Students will understand how humans evolved and what were the major drives of that evolution. Students will be asked to identify the major influences on human evolution, explain the significance to our evolutionary past and describe the social and philosophical implications of our evolutionary past to modern times. **Opens on Wednesday, 10/10 at 5 pm and closes Wednesday, 10/17 at 5 pm**

Autumn Break 10/11 – 10/12. **NOTE: NO quiz this week.** Quiz 8 will include 20 extra points to cover module 15.

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 9 10/15 – 10/21	The classic trolley car experiment is used to elucidate key elements in our changing understanding of human thought and how religion arose to address the significant problem of survival in a subsistence environment consistent with Learning Outcomes 2 and 4.	The Moral Ape: Morality in Humans/Trolley Car Experiments Hope as a Progenitor of Religion, Selective Advantage of a Sacred Narrative	Chapter 16 Chapter 17

Exploratory Exercise 9 addressing Learning Goals 1 and 2 - Clever Monkeys: focuses on the evidence of moral behavior in nonhuman primates. Students will watch the eponymous video. Students will then be asked factual questions about the video as well as questions that require students to link primate and human behavior and to explicate impacts of this shared ancestry on science and society. **Opens on Wednesday, 10/17 at 5 pm and closes Wednesday, 10/24 at 5 pm**

Quiz 8 – Covering modules and book assignments from weeks 8 and 9. **NOTE THE CHANGE:** Quiz 8 will cover modules and chapters 15, 16 and 17 and will be worth 60 points. **This quiz CANNOT be dropped.** **Opens on Thursday, 10/18 at 5 pm and closes Sunday, 10/21 at 5 pm.**

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 10 10/22 – 10/28	Students will understand that evolutionary forces guided the emergence of religion among Hunter-Gatherers. Additionally, students will know that the emergence of technical skills increased survival of early humans consistent with Learning Outcomes and 3.	Evolution of religion: Four Mental Criteria for Acquiring Religion Evidence of Religious Practice Among Hunter-Gatherers	Chapter 18 Chapter 19

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 11 10/29 – 11/4	Students will understand that the nature of human belief evolved over time and that experimental evidence substantiates that conclusion consistent with Learning Outcome 2.	Forming Beliefs and How it is Done From Causality to Supernatural Agency: The Princess Alice Experiments	Chapter 20 Chapter 21

Exploratory Exercise 11 addressing Learning Goal 3 – Probing Belief – Proof of Heaven?: Students will watch and analyze video about Eben Alexander, a physician whose near death experience convinced him that heaven is real. Students will be asked to discover whether there is an evidentiary basis for this claim, whether its veracity can be probed or proven with modern technology and whether it changes the way they see the world.

Opens on Wednesday, 10/31 at 5 pm and closes Wednesday, 11/7 at 5 pm

Quiz 10 – Covering modules and book assignments from week 11. **Opens on Thursday, 11/1 at 5 pm and closes Sunday, 11/4 at 5 pm.**

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 12 11/5 – 11/11	Students will recognize that technological advances allowed for altered human perception of the world; students will understand the role of technological innovation in increasing survival of early human populations consistent with Learning Outcome 3.	Don't Stop Believing: Receptivity to the Supernatural Do You Believe in Magic?	Chapter 22 Chapter 23

Exploratory Exercise 12 addressing Learning Goals 1-4 - An Atheist and a former Evangelical, Michael Shermer and Karl Giberson lock horns over different world views. Students will watch and analyze panel discussion. Thereafter they will be asked to characterize both men's viewpoints, indicate what specific elements they found persuasive and describe the scientific basis for each man's understanding.
Opens on Wednesday, 11/7 at 5 pm and closes Wednesday, 11/14 at 5 pm

Quiz 11 – Covering modules and book assignments from week 12. **Opens on Thursday, 11/8 at 5 pm and closes Sunday, 11/11 at 5 pm.**

Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 13 11/12 – 11/18	Students will evaluate evidence that spiritual beliefs reside in the brain and will be able to evaluate the impact of such claims on the evolution of early humans consistent with Learning Outcomes 3 and 4.	Spiritual Beliefs in the Brain Is There a God Gene? The Heritability of Belief	Chapter 24 Chapter 25
No additional exploratory exercises assigned for the course.			
Quiz 12 – Covering modules and book assignments from week 13. Opens on Thursday, 11/15 at 5 pm and closes Sunday, 11/18 at 5 pm.			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 14 11/19 – 11/25	Students will understand how advanced technologies such as MRI and CT scans can reveal the nature of religious belief; students will also evaluate how these technologies change our perception of belief consistent with Learning Outcomes 3 and 4.	The Strange Case of Music: A Portal to the Divine?	Chapter 26
Thanksgiving Break 11/21 – 11/23 No Quiz			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 15 11/26 – 12/2	Students will evaluate whether technology can open pathways to God, whether the evidence of this capacity is compelling and evaluate whether technology alters what it means to be human consistent with Learning Outcomes 3 and 4.	Neurotheology	Chapter 27
Quiz 13 – Covering modules and book assignments from weeks 14 and 15. Opens on Thursday, 11/29 at 5 pm and closes Sunday, 12/2 at 5 pm.			
Extra Credit Due – See page 6 of Syllabus for details			
Week and Dates	Module Learning Goals:	Module Topics/ Video Recording	Textbook Assignment
Week 16 12/3 – 12/10	-	Study video recordings, lectures and quizzes for Final Exam	Study Chapter notes for Final Exam
Final Exam – Opens on December 8th at 9:00 am and will close on December 10th at 11:30 pm. If you are unable to take it during this window, please email Dominique at least 48 hours prior to your requested time frame and the scheduled window.			

Evaluation:

Course Format:

- Taking the Syllabus Assessment – Required to take prior to accessing the rest of the course
- Watching recorded videos each week ~2 online modules/week
- Taking one online quiz per week
- One exploratory exercise per week
- Weekly readings from textbook
- Comprehensive final exam

The term “**module**” refers in CarmenCanvas to all course related activities for a given week. Modules, thus, consist of 2-3 recorded videos, the corresponding book chapters, the exploratory exercise and quiz for that week.

Your grade in this course will be determined from the following:

Syllabus Assessment	12 points
Exploratory Exercises (11) – There are 12 but the lowest score will be dropped at the end of the semester.	220 points
Quizzes (11) – There are 13 but the 2 lowest scores (except Quiz 8) will be dropped at the end of the semester	460 points
Extra Credit – If you choose to participate you can earn up to 20 points.	0 (Extra Credit is not counted against you thus, it must be 0 for it to be extra)
Final Exam	200 points
Total	892 points

SYLLABUS ASSESSMENT

Due to students not fully reading the syllabus and adhering to the deadlines set forth, we have added a syllabus assessment to the course. *You will be required to take the **syllabus assessment** prior to moving onto the modules and assignments for the rest of the course and is **worth 10 points**. The syllabus assessment is opened on **Sunday 8/19/18 at 12:00 am** and is due by **Sunday 8/26/18 at 5:00pm EST**. The assessment will remain open after the deadline, but you will not earn the points allotted (i.e. your score will be 0). This assessment is not counted as an official “module quiz” as described in the next section. Thus, you cannot drop this score. Please note that the first module quiz is due the same day and time. If you wait until Sunday at 4:30 pm EST to complete the syllabus assessment and do not have time to complete Quiz 1 by the deadline, you now have earned a 0/40 for the quiz. ***We will not give you an extension for any of the assignments if you miss the deadline for any reason other than a valid medical excuse.****

MODULE QUIZZES - Closed Book

Instead of taking hour exams periodically during the semester, you will be asked to take a **quiz** over the modules studied during each week. At the end of each recorded video, you will find a **study guide** as the last PowerPoint slide which I use to write weekly quiz questions. In general, we use Bloom’s Taxonomy to write questions that will test skills such as application, comparison, analysis and synthesis of information to gauge your comprehension of course materials. You will take a **total of 12 quizzes** of the course of the semester, each of which is worth **40 points**. **You may drop the two lowest scores at the end of the course** (except Quiz 8 which is worth 60 points). *The quizzes for a given week will be available to you starting*

Thursday at 5:00 pm EST and continuing until Sunday at 5:00 pm EST. You must complete the quizzes during this timeframe or provide a medical excuse for not doing so. *You will have 30 minutes to complete each quiz once you open the quiz.* Once you have started the quiz, you will not be able to exit without losing credit for the quiz, so please think about this before you start. The quizzes are incredibly important as they constitute the majority of your final grade. I strongly recommend that you take each and every quiz even though we will drop the two lowest scores. Why do I say this? If you decide to skip the first two quizzes, for instance, you will be stuck with your scores on the remaining 10. If you miss another quiz for some unforeseen reason, you will already have had your dropped quizzes. Also, I don't give make up quizzes. Let me say that again in all bolded caps: **I DON'T GIVE MAKE UP QUIZZES. Please don't ask one for you unless you can provide a valid medical excuse.** And if you discover something inconvenient like you can't get an internet connection and you've waited until 4:30pm on Sunday to take the quiz, you now have a quiz score of 0/40. You have a 72-hour window in which to take each quiz. I ask you, nay, plead with you to plan ahead and be **very aware of deadlines.**

So that you don't feel completely lost, I have collated the assignments by week on the syllabus. The latter are referred to as **modules**. This provides you with a week by week schedule so that you can keep pace with the course materials. Please print the syllabus out as well as the exploratory exercise documents because you will need to refer to them often.

EXPLORATORY EXERCISES (EEs)

An important part of this course is contained in the **exploratory exercises (EE)**. These are not exercises in rote memorization. The EEs allow you to take information learned in the modules and do some **independent** thinking about the issues raised in class and their meaning. As such, the EEs are a mechanism through which you can express your creativity. We provide rubrics each week explaining what is expected in each exercise.

In the exploratory exercises, of which there are 12, you will be asked to do something each week. This may include watching a video, doing a computer simulation, answering questions or designing an original piece of your own. **There are 20 points attached to each exercise which will serve as the basis for your grade. Please note the due dates.** At the end of the course, Dominique will manually drop your lowest (1) exploratory exercise score.

Each exploratory exercise will be assigned (open) on Wednesday at 5 pm EST of the week the information is presented and will be due (close) the following Wednesday at 5 pm EST. Please make sure to have your assignment uploaded to the drop box by 4:59 pm EST as the system will not allow you to upload anything starting at 5 pm EST on the due date. If you have difficulty uploading your assignment feel free to email it directly to Dominique (NOT using CarmenCanvas). If you email it to Dominique, make sure that it is emailed before the 5 pm EST deadline. ***If the time stamp on the email is 5:01pm EST or after and not uploaded to the respective drop box on CarmenCanvas prior to 4:59 pm EST on the due date, your submission is now late.*** We will not accept it for grading without a valid medical excuse as explained. **It is your responsibility to verify that your submission went through and contains the correct document prior to the deadline.** This means that if you accidentally submit a document without your responses and do not realize it until after the deadline you will have earned a 0/20.

FINAL EXAM — Comprehensive, Closed-book

Consistent with university policy, there will be a comprehensive final for this course. **You will be required to take this comprehensive, closed-book Final Exam.** You do not need to come to campus to take the exam. It will be in the same format as the quizzes in the course with a couple of exceptions: 1) the exam is worth **200 points** 2) it will have 100 multiple choice questions and, 3) you will have 2 hours to take the exam. As with the quizzes, once you open the exam you must complete it. If it closes before you are finished, it will be graded in its entirety (meaning still out of 200 points). The Final Exam is scheduled to open on **December 8th at 9:00 am EST and will close on December 10th at 11:30 pm EST.** **If you are unable to take it during this window, please email Dominique at least 48 hours prior to your requested time frame and the scheduled window.**

EXTRA CREDIT

Extra Credit: Random Acts of Hope

You have the option of earning up to 20 points for practicing **Random Acts of Hope**. These can be almost anything. For instance, you might open the door for a person who is loaded down with packages. You might help a stranger find her lost dog. You might give a dollar to that hungry guy on the street. You might pick up an earthworm on the sidewalk after it rains and return it to the grass. You can report anything you do that helps some other creature that requires selfless effort on your part. To get credit, you need to do two things: write down what you did **and** explain how it made you feel. For each Random Act, properly written up and sent to me (fisher.14@osu.edu) by 5:00 PM on **November 30th**, you will receive 2 points, up to a total of 20 points (i.e. up to 10 acts). It can make a partial grade difference in your final score, so it is worth your time and effort. **Make sure to submit your extra credit in its entirety (do not email each one individually).** *Please make sure you do both parts of this assignment or you won't get full credit. Do NOT use CarmenCanvas to email these articles/summaries.*

Grading Scale: QM 3.2

93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B
77-79	C+
73-76	C
70-73	C-
67-69	D+
60-66	D
59 - 0	E

Grade Adjustments at Course End

At the end of the course, Dominique will manually drop the appropriate Exploratory Exercise and Quiz scores as discussed below. This will be done around the time the comprehensive Final Exam is posted.

If any errors are made in the calculation of your final score, we will, of course, correct those and make appropriate adjustments to your score. However, because we allow you to drop 2 quizzes (with exception of Quiz 8) and 1 exploratory exercise in addition to providing you the opportunity to earn 20 extra credit points during the semester, we do not make additional unearned adjustments to your score even if you are close to the next higher grade.

COURSE POLICIES

- **Faculty feedback and response time:** [QM 5.3](#) I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)
- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **E-mail:** Neither I, nor Dominique check emails each hour each day. Therefore, if you need help or have questions, please allow at least 24 hours for a reply (i.e. if you need help regarding an EE question, don't wait until the day it's due to begin emailing us). Most of the time your email will be replied to well before the 24th hour but there may be times where it won't.
- *Please Note: We communicate with you via email and Course Announcements on CarmenCanvas. Please check these sites often. Please email us directly, i.e., **do NOT use the CarmenCanvas system email.***
- **Discussion board:** I will check and reply to messages in the discussion boards every **24 hours on school days**.

Attendance Policy: [QM 5.4](#)

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- Logging in: **AT LEAST ONCE PER WEEK**
Be sure you are logging in to the course in Carmen each week, including weeks with holidays or weeks with minimal online course activity. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- Office hours and live sessions: **OPTIONAL OR FLEXIBLE**
All live, scheduled events for the course, including my office hours, are optional. For live presentations, I will provide a recording that you can watch later. If you are required to discuss an assignment with me, please contact me at the beginning of the week if you need a time outside my scheduled office hours.

Discussion and communication guidelines [QM 5.4](#)

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

Writing style:

While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. Informality (including an occasional emoticon) is fine for non-academic topics.

Tone and civility:

Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.

Citing your sources:

When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)

Backing up your work:

Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Tardiness:

Due dates have been provided for every assignment in this course. They do not change over the semester. We have included information about the assignments on the quiz taken prior to receiving access to the course materials. Finally, you have 72 hours to do each quiz and 7 days to do each exploratory exercise. We also drop two quizzes and 1 exploratory exercise. Therefore, we do not provide make-up assignments for any reason other than a bona fide medical excuse. We will not extend deadlines. [QM 5.4](#)

Technology Devices:

The use of electronic devices is strictly prohibited during exams other than a computer to connect to CarmenCanvas.

E-Mail Etiquette: [QM 1.3](#)

For example, Professional relationships should be maintained when using e-mail for a class. Below I have included guidelines from Bloomsbury's guide on email etiquette that you should follow when drafting your e-mail. I will not respond to e-mails that I consider inappropriate. I will respond to appropriate emails in a timely manner, do not expect an immediate reply. If you require an immediate response consider visiting with me in person.

DO

- Include a descriptive statement in the subject line.
- Use proper salutations when beginning an e-mail.
- Be concise in the body of the e-mail, use complete sentences and proper grammar.
- Use an appropriate closure at the end of each e-mail followed by your first and last name.
- If replying to an e-mail, reference the original e-mail and its content.
- Be selective of your choice of words. Emotions are difficult to convey in text and without the benefit of facial expressions your sentiment can be lost in the words you choose to write.

DON'T

- Use all capital letters; this conveys a tone of ANGER.
- Use e-mail as a format to criticize other individuals.
- Ask for your grade via e-mail. Grades will not be discussed by e-mail. If you need to discuss a graded item make an appointment to do so in my office.
- E-mail to inquire when grades will be posted. We will work toward submitting grades promptly, however, recognize that grading assignments and exams requires considerable time to ensure uniformity and fairness.
- Send an e-mail out of frustration or anger. Learn to save the e-mail as a draft and review at a later time when emotions are not directing the content.

Quizzes and exams: [QM 5.4](#)

You must complete the quizzes, exploratory exercises and final exam yourself, without any external help or communication.

Make up Assignments

Make up quizzes, final and exploratory exercises are given only in the case of documented illness. Once a quiz, assessment or the Final Exam is opened you must complete it. The system will not allow it to be opened again. If for some reason you close it out prior to completion it will be graded as is. There will not be a make-up for this issue.

Illness

If you are too ill to do an assignment, please contact Ms. Vacheresse or Dr. Fisher **during the window the quiz or exploratory exercise is open**. You must be seen by and receive written documentation from a professional health care practitioner during that window in order for a make-up to be given or a deadline to be extended. **The written documentation must come from a qualified health care official, be written on letterhead paper, be signed by someone who is not a relative and be presented either to Dr. Fisher or to Ms. Vacheresse during the time the window for the assignment is open.**

Deadline Extensions

All quizzes are opened on Thursday at 5:00 pm of the week that the material is presented and closed on Sunday at 5:00 pm. Neither the days nor the time of the quizzes change throughout the semester. As a result, we do not accept excuses such as “I thought the quiz was open until midnight on Sunday” as an excuse. The time and dates for exploratory exercises are also set and do not change. All exploratory exercises are opened on Wednesday at 5:00 pm of the week that material is presented and closed on Wednesdays at 5:00 pm of the following week. All deadlines are Eastern Standard Time. Make sure you know when these assignments are due. **Late submissions will not be accepted without an appropriate medical excuse. *We will not give you an extension for any of the assignments if you miss the deadline for any reason other than a valid medical excuse.***

Questions about Quiz Questions

To assist you in discerning why specific quiz answers are correct, we have included either explanatory material with each question and/ or citations to where the relevant material can be found in the book. If you still have questions, you may ask either Ms. Vacheresse or Dr. Fisher for further explanation. **However, this must be done within one week of the quiz window closing.**

Written assignments: QM 5.4

Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow **MLA/APA** style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.

Reusing past work: QM 5.4

In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.

Falsifying research or results: QM 5.4

All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.

Collaboration and informal peer-review: QM 5.4

The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

Group projects: QM 5.4

This course includes group projects, which can be stressful for students when it comes to dividing work, taking credit, and receiving grades and feedback. I have attempted to make the guidelines for group work as clear as possible for each activity and assignment, but please let me know if you have any questions.

UNIVERSITY POLICIES QM1.4

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct at <http://studentconduct.osu.edu>.

Please note: the work you do on exploratory exercises must be your own. Students who submit identical answers for exploratory exercises will receive a zero for the assignment and, consistent with university rules, will be referred to the committee on academic misconduct.

Ohio State's academic integrity policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Intellectual Property (covered by copyright) includes Course materials (Text, Audio, Video, Multimedia, Sims, Apps, etc.), and Student Generated materials

Disability Services:

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue. QM 7.2

Diversity:

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential.

Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

OSU provides assistance to students facing a diversity of problems. Help with these issues can be found at:

<https://online.osu.edu/student-services-benefits>.

Requesting accommodations

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act

of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at [614-292-3307](tel:614-292-3307) or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University. Go to <http://ods.osu.edu> for more information.

Accessibility of course technology QM 6.5, 7.2, 8.2

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- [CarmenCanvas accessibility](#)
- Streaming audio and video
- Synchronous course tools
- [Definition OSU](#)
- [Overview of Accessibility at OSU](#)
- If you require specific software for the course list or provide a link to the software's accessibility privacy statements
 - [Adobe Connect \(Carmen Connect\) Accessibility](#) [Adobe Privacy Policy](#)
 - [MediaSite Accessibility Statement](#)
 - [Microsoft Office Accessibility](#) [Microsoft Office 365 Privacy](#)
 - [Proctorio Accessibility](#) [Proctorio Privacy](#)
 - [Top Hat Accessibility](#) [Top Hat Privacy](#)

UNIVERSITY RESOURCES QM 7.4

Counseling and Consultation Services: QM 7.3

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younklin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org.

Title IX:

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu.

Sexual Harassment: OSU considers sexual harassment offenses to be unacceptable behaviors that erode the quality of the learning environment. Please report any concerns about questionable behavior to Dr. Fisher.

Grievances:

According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, take your case to the department chairperson, college dean or associate dean, and to the provost, in that order. Specific procedures are outlined in Faculty Rule 3335-7-23. Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Trigger Warning:

Some contents of this course may involve media that may be triggering to some students due to descriptions of and/or scenes depicting acts of violence, acts of war, or sexual violence and its aftermath. If needed, please take care of yourself while watching/reading this material (leaving classroom to take a water/bathroom break, debriefing with a friend, contacting a Sexual Violence Support Coordinator at 614-292-1111, or Counseling and Consultation Services at 614-292-5766, and contacting the instructor if needed). Expectations are that we all will be respectful of our classmates while consuming this media and that we will create a safe space for each other. Failure to show respect to each other may result in dismissal from the class.

University Escort Service:

A safe ride is a service provided to university students who would like safe transportation across campus. Any university student, faculty, or staff member may request a safe ride. Hours: 7pm to 3am; phone: 614-292-3322.

Online Privacy: we follow FERPA and OSU policy for the protection of student information. Details can be found at:

https://registrar.osu.edu/policies/privacy_release_student_records.pdf

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Entomology 1350 GE Assessment Plan Summary: ONLINE section

GE Learning Objective	Direct Methods	Indirect Methods
1. Students understand the basic facts, principles, theories and methods of modern science.	Embedded questions on quizzes and exams ¹ Analysis of Exploratory ² Exercises	SALG ³ Analysis of Student Discussion ⁴
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.	Embedded questions on quizzes and exams Analysis of Exploratory Exercises	SALG Analysis of Student Discussion
3. Students describe the inter-dependence of scientific and technological developments.	Embedded questions on quizzes and exams Analysis of Exploratory Exercises	SALG Analysis of Student Discussion
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.	Embedded questions on quizzes and exams Analysis of Exploratory Exercises	SALG Analysis of Student Discussion

¹ On each quiz and the final exam, several questions will be written specifically to assess student comprehension of each learning outcome using Bloom's Taxonomy. The scores on these questions will be included in the totals for the exam but will also be analyzed separately so that the data can be used in revising the course. Examples of questions with graduated content according to Bloom's are provided in the Appendix A of this document.

²In the Exploratory Exercises, the student has the opportunity to demonstrate mastery of learning outcomes on several key exercises. Elements that reprise the four learning goals have been written into the Exploratory Exercises so that success in meeting specific learning goals can be quantitatively assessed.

³The Student Assessment of Learning Gains (SALG <http://www.wcer.wisc.edu/salgains/ftp/SALGPaperPresentationAtACS.pdf>.) uses a Likert scale for assessing student perception of courses. In addition, SALG asks students to self-assess whether they have met the GE learning objectives for this course. The SALG will be used as noted above in conjunction with other indirect methods of assessing progress towards securing the GE Learning Outcomes. Examples of SALG questions can be found in Appendix B of this document.

⁴Discussion is an extremely important part of this course because it allows for the student to articulate his/her own thoughts and is, therefore, a superb opportunity for us to assess student understanding. In the online section, discussion among students will take place through weekly discussion boards wherein students will ask and answer each other's questions about lecture content and readings using Packback Questions, an online learning community (See Appendix C). Additionally, students will directly engage with one another when they complete Exploratory Exercise 5, which will require an online discussion board about why Americans do not understand science. By comparing student Packback scores with other objective measures of learning (quizzes and exams, exploratory exercises, etc.) will allow us to independently assess whether the discussion component is critical to understanding the material or whether its value is social.

Explanation of level of student achievement expected.

In general, for exams, embedded questions and exploratory exercises, mastery of the learning outcomes and attainment of the minimal level of learning success will mean that 100% of students will answer 75% of the embedded GE questions correctly or receive a score of 75% on exploratory and discussions.

Description of follow-up/feedback processes.

At the end of the course, we will use SEI information as well as an analysis of each graded component of the course to identify problem spots and how we might change the course and the presentation of materials to address these problems. We will also analyze the SALG questions carefully to judge how students evaluated their own progress to determine whether student perception meshed with performance. If there is a conflict, we will adjust the presentation and assessment of material as warranted. We will archive these end-of-semester analyses in the instructor's office so that we can gauge whether any changes made were effective. These evaluations will be discussed with the curriculum committee when the effectiveness of courses is evaluated.

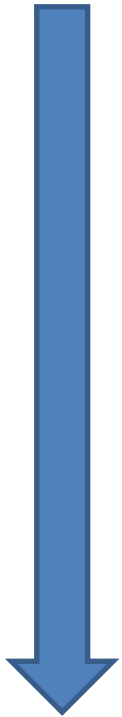
Appendix A

Entomology 1350

Application of Bloom's Taxonomy in Embedded GE Exam Questions and other Course Elements

Examples of embedded questions designed to test learning outcome 1 using Bloom's Taxonomy: Students understand the basic facts, principles, theories and methods of science (Correct answers are shown in bold):

**Bloom's
Hierarchy**



1. Understand

1. Which of the following statements accurately **describes** a scientific hypothesis:
- a. in science, an hypothesis is a fact
 - b. an hypothesis explains many phenomena and is generalizable
 - c. hypotheses cannot be tested.
 - d. an educated guess about why something occurs that is testable and falsifiable.**

2. Application

A detergent company claims that its laundry soap OhSoClean is superior to all other brands. To demonstrate its superiority, the company produced a commercial in which two badly soiled shirts were placed in different washing machines. One shirt was treated with OhSoClean while the other shirt was washed with another major brand. After viewing the washed shirts, the makers of OhSoClean announced that their product was the definitive winner. Using your knowledge of hypothesis testing, why might you have reason to question the claim that OhSoClean was more effective in cleaning the shirts?

- a. We don't know if the same amount OhSoClean vs. the other detergent was used to clean the shirts, whether the shirts were washed for the same amount of time and if the shirts were washed at the same temperature.
- b. Judging the cleanliness of the washed shirts is subjective and it might be hard to quantify.
- c. A sample size of one shirt in one trial is not enough to draw sweeping conclusions.
- d. Any of the above could be used to question the results of OhSoClean's claims.**

3. Analyze

If the robot experiment were repeated and this time, a line was drawn on the floor to

guide the robot to the door with an X on it, what do you think the result would be?

- The robot would use the line on the floor to find the door even with an X on it.
- The robot would ignore the line and open the door with the X any way.
- The robot, which cannot learn from experience, would be confused by the appearance of new lines on the floor and could not open the door.**
- Robots easily absorb new information and would understand that lines on the floor were irrelevant to the task.

4.Evaluate



These two rabbits represent different color morphs of an arctic species. As part of a study on morphology and survival, investigators collected data on the relative survival of both color morphs during the summer and the winter. The findings were consistent over a three year period. The average survival rate for the black morph during winter was 24% while the average survival rate of the white morph in winter was 71%. Both color morphs showed equal survival rates during summer. How can we make sense of these finding?

- The black form must have had as mutation that made it less adept at hiding during the summer.
- Both color morphs were equally visible to predators in the summer.
- White rabbits were less visible to predators against a background of snow while both morphs shared similar visibility to predators in the summer.**
- The predators preferred the black morph as a food source.

5. Create This part of Bloom's Taxonomy can't be productively evaluated with objective questions is evaluated, instead, with the Exploratory Exercises.

Appendix B Entomology 1350


Examples of SALG Questions Adapted from Biology 2100

1. As a result of your work in this class, what GAINS DID YOU MAKE in your UNDERSTANDING of each of the following? (1 = no gains, 2 = a little gain, 3 = moderate gain, 4 = good gain, 5 = great gain)

- How ideas from this class relate to those encountered in other disciplines
- How this class helps people address real world issues
- Articles in the media that discuss scientific findings
- How to think about a research question and the scientific method
- Historical aspects of entomology
- Understanding the main concepts (basic facts, principles, theories and methods of modern biology)
- Understanding the interdependence between scientific and technological developments
- Understanding the potential of science and technology to address problems of the contemporary world
- Current and future significance of biology/entomology on society
- Scientific ethics and practices

Please comment on how this class has CHANGED YOUR ATTITUDES toward this subject.

APPENDIX C
ENTOMOLOGY 1350: ONLINE Section
SLIDING RUBRIC FOR GRADING DISCUSSION in EXPLORATORY EXERCISES

GRADE	LECTURE VIEWINGS (Misses)		PARTICIPATION FREQUENCY	DISCUSSION QUALITY
A	0 - 1		Asked and/or answered questions on every lecture; questions were meaningful/relevant and answers were correct/insightful	Relevant; Regularly connected readings, lectures, discussions, opinion makes full and creative use of content; Clearly understands learning outcomes.
B	2		Asked and answered good questions; may not have asked/answered a question for each lecture or occasionally dominating or occasionally off topic	Usually relevant; Some connections among readings, lectures, discussions, opinions generally based in content; Some evidence of understanding learning outcomes.
C	3		Some trouble balancing asking and answering questions, and/or not asking appropriate questions or providing incorrect answers	Generally relevant; occasionally connecting among readings, lectures, discussions, sometimes expresses unfounded opinion; Rarely shows evidence of understanding learning outcomes.
D	4		Poor job of balancing asking and answering questions, and/or not asking appropriate questions, providing incorrect answers or being disrespectful of classmates.	Superficial and/or unfounded comments, off topic comments; No evidence of understanding learning outcomes.
F	5 or more			

This is a sliding rubric. The two left-side columns are permanently locked in relationship to each other. In so doing, they establish the upper level for grades based on absences. The right side columns are similarly linked with each other, but they can slide down so that the top rating of the right side aligns with the number of absences. For example, a student who does not view 3 or more recorded lectures would have to have an "A" grade for participation frequency and quality in order to receive a "C" grade overall. This is used to grade discussion during exploratory exercises that have a discussion component for both the online and in person sections. An example is the blog on why science is not embraced as a way of knowing by a large segment of the US population.