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 **GEOLOGY 204**

**GEOLOGY AND SOCIETY:**

**THE SCIENCE OF MONSTERS**

 3 credits

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**OVERVIEW AND GOALS OF COURSE:**

GEOL 204 uses a thematic approach to geology, with different themes exploring the relationship between scientific ways of knowing and geology in particular, with society.  It is repeatable once as a geology elective with different topics.  It may be taken only once for GUR credit.  This Self-paced version is a course examining the scientific reality behind common monsters and monstrous things as found in literature and the movies.  We will study a broad range of topics including the nature of fear, the physics of giants, the life styles of dinosaurs and sea monsters, and the reality behind the movie “Alien”.  This course will reveal the surprising and interesting ways that movies and literature get monsters wrong, and often right.

This course is a SCI GUR.  Prerequisites for this course are GEOL 101 or GEOL 211; or GEOL 101 and GEOL 211A; or SCED 202 and GEOL 211A; or  BIOL 101; or CHEM 101; or PHYS 101; or permission of the instructor.

**COURSE MATERIALS:**

There is no textbook for this course but you will be assigned readings that are linked in the notes.  My PowerPoint’s and notes are posted within the course site under Modules.

**Required Video:**

* "Alien" (1979)  available for rent from most video outlets.

**COURSE REQUIREMENTS:**

You will need access to a computer and the internet.

There are 18 topics covered in this course.  There are PowerPoint’s posted in the Modules for each topic with a recorded narration.  There are also notes with review questions for each topic posted in the Modules.  You must read the notes for each topic and watch the PowerPoint’s.  In addition you will watch a video for which you will write an essay.

Your grade will be based on exams and the written video essay.  There are no other written assignments.

**CALENDAR:**

You may take up to six months to complete this course.  However, many students wish to complete Self-paced courses within a single quarter and in some instances- such as those mandated by financial aid- this must be done.  To assist students planning to complete the course within a ten-week quarter, I've included an optional brief outline of what could be done each week to meet such a schedule.

For each topic below, you should read the appropriate notes, watch the PowerPoint lecture and/or view the video and write a critique of it.

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| --- | --- |
| **Week** | **Topics (each topic is a title in the notes and a PowerPoint lecture)** |
| Week One: | Introduction, Physics of Size (the narrated PowerPoint lectures for Physics of Size are in two parts; Physics of Size 1 and 2) |
| Week Two: | Sauropoda, Big Theropods, read PDF “Weighing Dinosaurs”. |
| Week Three: | Dromaeosaurs, Sea Monsters 1 and 2 |
|   | TAKE EXAM 1 |
| Week Four: | Mimicry, Parasites (the narrated PowerPoint lectures for Parasites are in two parts; Parasites 1 and 2) |
| Week Five | Lesson 1: Critique "Alien" (1979) and submit essay in Canvas. |
| Week Six: | Plague (the narrated PowerPoint lectures for Plague are in two parts; Plague and Smallpox), read “The Demon in the Freezer”, read PDF excerpts from “The Hot Zone”, “The Invisible Enemy”, and “Man and Microbes”. |
|  | TAKE EXAM 2 |
| Week Seven: | Frankenstein, Bigfoot |
| Week Eight: | Global Change: Sea Level, Asteroid Impacts |
|  | TAKE EXAM 3 (This exam will include an essay on the evidence for the existence of Bigfoot) |

**GRADING/TESTING:**

Your grade will be based on three exams, each of which will be worth 25% of your grade (amounting to 75% of the total grade) and on the essay for the movie Alien which will be worth 25% of your grade. Exams 1 and 2 will be composed of multiple choice questions. The final exam will have multiple choice questions and one essay question.  The exams are not cumulative.

My grade breakdown is as follows: 93% and up = A, 89.5% and up = A-, 87% and up = B+, 83% and up = B, etc.  A minimum score of 59.5% is necessary for a Pass.  A minimum score of 69.5% is necessary for minor credit.

**HELP WITH THE COURSE:**

Email is the best way to reach me at thor.hansen@wwu.edu.  I check it daily and will respond quickly.  If you have any questions about the assignments or the course in general please email.  You may also call or leave a message at my office phone: 360-650-3648.

**ABOUT THE INSTRUCTOR:**

Thor Hansen is a Professor in the Geology Department at Western Washington University.   He received his Bachelor of Science degree in geology at George Washington University in 1972 and Ph.D. at Yale University in 1978.

“I was trained as an invertebrate paleontologist (specializing in clams and snails) but have always been fascinated by dinosaurs and monsters in general.  I started the classroom version of this course in 2004 and it has always been one of my favorite courses to teach.  In the classroom I try to make use of lots of different media; images, videos, audio recordings, and classroom demonstrations.  As much as possible I have incorporated these into this Independent Learning Course.  If you like monsters, I think you will enjoy this course.”