



ECONOMIC GEOLOGY


UNIVERSITY OF FLORIDA, GLY4930/6932 FALL 2020


CONTACT

Dr. Anita Marshall

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 Williamson Hall 255

 ~~352-273-3365~~ off campus f2020

 Office Hrs: Mondays 10-noon
or by appt. Virtual office link on
Canvas.

GUEST INSTRUCTORS


Kristin Woods, PG, Chemours Co.


Douglas Valleau, Strategia
Innovation & Tech


John Pazel, PG, Nutrien Inc.

George Schlutermann, South FL
Water Management

COURSE INFO:

 Online

 **Synchronous activities** will be
scheduled on **Fridays**, 12:50-
3:50 pm on [Zoom](#).

 **Text:** no text purchase required.
Reading material will be
provided.

Welcome to Economic Geology. This course will give you an overview of careers in the geosciences and the skills regularly used by professional geologists. The purpose of this course is to explore geoscience careers, get some experience in project management, learn about the geologic underpinnings of various jobs/job sites, and to build your professional toolkit with industry professionals serving as guest instructors. Guided activities using real datasets will provide experiential learning with real-world applications. Please read through the syllabus for important information to help you succeed in this course.

COURSE WEBSITE AND CONTACT

Course Webpage: Access the course webpage by logging in at: <https://elearning.ufl.edu/>.

Asking Course-related questions: Please post general questions about the course on the Questions Discussion board on Canvas so the question can be answered for everyone. Personal questions (grades, missing assignments, accommodations, etc.) should be sent through the Canvas messaging system. Questions regarding specific modules can be sent to the relevant guest instructor. Please be respectful when contacting guest instructors and take the effort to compose professional emails*, cc'd to Dr. Marshall.

**see this helpful guide if you aren't sure what that means:* <https://students.tufts.edu/career-center/i-need/network/professional-email-etiquette>

COURSE MATERIALS:

Textbook: There is no required text for this class. Reading assignments will be provided or available online.

TECHNOLOGY REQUIREMENTS

Computer: A computer with reliable internet access. Any software used in class will be free for students.

COURSE DETAILS

Prerequisite Knowledge: This course is targeted at upper-level geology majors. Prerequisites include three courses in geoscience or related fields, *or instructor permission*. The specific courses are not important, as long as you have some geology background knowledge before taking this course. Please talk to me if you would like to take the course and have taken fewer than 3 geoscience courses.

Course Summary & Goals: This is a 3-credit-hour course. Course goals include:

- Becoming more familiar with geologic resources: how they are formed, how they are found and extracted, uses, and environmental considerations.
- Gaining a better understanding of geology career paths by exploring a variety of geology-based jobs in industry.
- Building Project Management skills by working with a data set and creating a technical report and presentation.
- Improve geology student's "soft skills" such as resumes and interviewing.

Course Schedule: Module activities will be comprised of some combination of reading assignments, exercises, quizzes and discussions. Students should reference the course calendar in Canvas for due dates and check the class webpage and emails regularly for any changes in the schedule.

Preliminary Course schedule, subject to change:

Dates	Module	Instructor	Topic
9/4	Intro	Marshall	Intro to Professional Geology, course overview
9/11	Professional Development	Valleau	1. Hard Truth of Soft Skills: Resumes, interviews, online presence, etc.
9/18	UAVs and other Tech in industry	Marshall	The uses of advancing technology in geo jobs.
9/25	Mineral Sands	Woods	Mineral Sands
10/2	Project Management	Marshall	Mindset and Workflow of Project Management Introduce Project data set
10/9	Prof. Development	Pazel	Preparing for the Professional Geologist License
10/16	Energy Resources	Valleau	Fossil Fuels
10/30		Marshall	Other fuel resources (methane, geothermal, etc.)
11/6	Phosphates	Pazel	North Florida Geology and Phosphates
11/13	Water Resources	SFWMD team	Water Resource Management
11/20	Environmental monitoring/ remediation	SWFWMD Brooksville	Water quality, and environmental monitoring
11/27		THANKSGIVING HOLIDAY – NO CLASS ACTIVITIES	
12/4		All	Students Present Projects for instructor feedback.
12/11		READING DAY – NO FRIDAY CLASS MEETING	
12/18			Final Exams End – last day to have anything due.

DETAILED COURSE OUTLINE

Module 1: Intro to Professional Geology, course Overview

9/4/2020

Read Ahead Assignment(s): Chapter 2 in the open access textbook (link on Canvas)

View ahead Assignment: none

Complete Ahead Assignment: Quiz 1 on reading assignment

Synchronous Activity on 9/4: welcome, introductions and course orientation, Q & A on Economic Geology and geology career tracks.

Key Concepts:

- Introduce the general fields of economic geology: mining (ores, gravels, minerals, phosphate), energy resources (oil/gas, coal), water, etc.
- Economic, geological, technology and social factors that affect the profitability of a given resource.
- Potential career paths for geology jobs in industry, consulting and govt.

Module 2: Professional Development

9/11/2020

Read Ahead Assignment(s): add link here

View ahead Assignment: The Hard Truth About Soft Skills - Valleau

Complete Ahead Assignment: Quiz 2 on video presentation, Submit Resume for review

Synchronous Activity on 9/11: Valleau Q & A, interactive workshop/practice video interviews and other soft skills.

Key Concepts:

- X
- X
- x

9/18/2020

Read Ahead Assignment(s): add link here

View ahead Assignment: Video Presentation by Pazel, Preparing for Professional Geology License

Complete Ahead Assignment: ?

Synchronous Activity on 10/16: Q&A about PG certification process presentation.

Key Concepts:

- X
- X
- X

Module 3: Aggregates and Mineral Sands

9/25/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by Romeo and or Lewis?

Complete Ahead Assignment: Quiz 3 on video presentation and readings

Synchronous Activity on 9/18: Q&A on presentation, interactive activity

Key Concepts:

- X
- X
- X

Introduce Course Project & Dataset(s)

10/2/2020

Read Ahead Assignment(s): TBD

View Ahead Assignment: *Marshall* - introduce Project Management.

During the week Assignment: Discussion Board Activity (open through 10/9): Articulating an action plan for project assignment

Synchronous Activity on 10/2: HOMECOMING – NO SYNCHRONOUS ACTIVITIES

Module 4: UAVs and other tech in Industry

10/9/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by Marshall (and any one else who wants to)

Complete Ahead Assignment: Quiz 4 video presentation and readings

Proj Management assignment: background/context research

Synchronous Activity on 10/9: Q&A on presentation, interactive activity, UAV demo?

Key Concepts:

- X
- X
- X

Module 5: Oil, Gas and Energy jobs

10/16/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by Valleau

Complete Ahead Assignment: Quiz 5 on video presentation and reading assignment

Proj Management assignment: Discussion thread about data.

Synchronous Activity on 10/30: Q&A on presentation

Key Concepts:

- X
- X
- X

10/30/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by ? – methane, geothermal and other alt energy

Complete Ahead Assignment: Quiz 6 on ? video presentation,

Proj Management assignment: Discussion thread about data (con't).

Synchronous Activity on 10/30: Q&A on presentation

Key Concepts:

- X
- X
- X

Module 6: Phosphates

11/6/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by Pazel, Phosphates

Complete Ahead Assignment: Quiz 6 on Pazel video presentation and readings

Proj Management assignment: articulating a game plan.

Synchronous Activity on 10/9: Pazel – Q&A on presentation, interactive activity?

Key Concepts:

- X
- X

- X

Module 7: Water Resources

11/13/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by SWFMD

Complete Ahead Assignment: Quiz 7 on video presentation,
Project Assignment: Turn in progress report

Synchronous Activity on 11/6: Q&A on presentation, interactive activity.

Key Concepts:

- X
- X
- X

Module 8: Environmental monitoring & remediation

11/20/2020

Read Ahead Assignment(s): [add link here](#)

View ahead Assignment: Video Presentation by ?

Complete Ahead Assignment: Quiz 8 on video presentation and assigned readings.

Synchronous Activity on 11/6: Q&A on presentation, time for practices runs of project presentations.

Key Concepts:

- X
- X
- X

Project Presentation Day

12/4/2020

Complete Ahead Assignment: All Projects should be done.

Synchronous Activity on 11/6: Present the results of your data analysis project to a panel of our industry professionals.

COURSE ACTIVITIES AND GRADING

Quizzes: There will be 8 quizzes on the assigned reading/viewings for the week, one for each module. Each quiz is worth 20 points each. Quizzes will be posted BEFORE the relevant class meeting and need to be completed before the synchronous class time on Fridays.

Activities: Homework assignments to be completed prior to class on Friday. Each assignment is worth 20 points. These will vary in type and style from module to module, and may not be present in each module.

Project: One of the most highly sought-after qualities in new recruits to geoscience jobs (and graduate programs) is evidence of Project Management skills. We will walk through a project from start to finish from task management to data analysis to presentation. The final results will be presented to our industry professionals on 12/4. The total grade for this project will be broken up into a series of benchmark assignments throughout the course, of which the final presentation is just one part. A grading rubric will be provided before projects begin.

Participation: This grade is assigned weekly based on your interaction with the course. You are expected to attend the synchronous class meetings and engage in activities. If there are Fridays where you cannot attend synchronously, this grade will be assigned based on your participation in weekly online Discussions threads and other online presence in the course, as well as completion of any in-class activities that can be done outside of class time. There are 10 weeks where this grade is assigned as a Satisfactory grade equivalent to 20 points.

Late work: Late work is accepted up to one week after the due date. This policy does not apply to the final project, who's due date is firm.

Grade Calculations

See <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for general UF grading policies.

Grades will be based on the completion of course activities which will account for the following percentage of your total grade:

Quizzes	30%
Activities	20%
Final Project	30%
Participation	20%
Total possible:	100%

COURSE RECORDINGS

Official UF Statement on recording virtual class presence: Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

ACCESSIBILITY, INCLUSION & RESPECT

Official UF Statement on Accommodating Students with Disabilities: Students requesting accommodation Students with disabilities requesting accommodations should first register with the Disability Resource Center by calling 352-392-8565 or by computer at: www.dso.ufl.edu/drc/ and provide appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester, as *accommodations are not retroactive*.

My Statement on Accessibility: We all learn differently. You don't have to have a formally recognized disability to find yourself having difficulty with some aspect of the college learning environment. For example, colorblindness is not typically recognized in formal accommodations, but very much impacts a student's ability to process visual information. Please let me know if something in the course material presents a barrier to your full participation in the class so we can work together to find a reasonable solution – *even if you don't have a formal accommodation letter*.

Religious Observances: Students who anticipate the necessity of missing homework deadlines and discussions due to religious observances *must provide notice of the date(s) to the instructor*, in writing at least two weeks in advance of the missed class days so accommodations to be made for missed work. Do not wait until after you have missed assignments to ask for an exception, as these requests may not be honored!

Respect & Inclusion: In this classroom, everyone should feel welcome to share their thoughts in a respectful way. Treat you classmates the way you would like to be treated. You deserve to be called by the name you prefer and have me pronounce it correctly. Please don't let me keep saying your name (or pronouns) incorrectly! If something in the course material, instruction or class interactions make you feel excluded or uncomfortable, please let me know so I can address it. Please see the Netiquette section under "UF Policies" for more details on how to interact respectfully online.

STUDENT FEEDBACK AND COURSE EVALUATION

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

UF POLICIES

University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at: <http://www.dso.ufl.edu/students.php>.

Netiquette – Communication Courtesy: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. More information at: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

UF Online Handbook: Available at: <http://handbook.ufonline.ufl.edu/>

NEED HELP?

Technical Support: For issues with technical difficulties with Canvas, please contact the UF Help Desk: <http://helpdesk.ufl.edu>, or (352) 392-4357. If you miss a deadline due to technical issues, requests for extensions or make-up activities MUST be accompanied by the ticket number received from The Help Desk when the problem was reported to them.

Help from me: While I have a short window of time listed for office hours, you can always set up an appointment to make sure I am in. Office hours are for your benefit - ask questions, get assignment help, discuss geoscience degrees and career options, etc.

Other Resources: For support regarding Counseling and Wellness, disability, documenting student concerns and complaints, and a link to the Library Help Desk, please see: <http://www.distance.ufl.edu/getting-help>.