

Spectroscopy and Remote Sensing – Course Syllabus

To access the links in this syllabus, view the online version on your computer or mobile device.

Instructor Information

Dr. Michaela Buenemann (Professor)



- Office: NMSU Main Campus, Breland Hall 139
- [Email](mailto:elabuen@nmsu.edu) (elabuen@nmsu.edu)
- Phone: (575) 646-6493
- Advising Hours: Tue, 9:00-10:00 & 13:45-16:00; Wed, 13:15-16:00; Thu, 9:00-10:45 & 13:45-16:00; by appointment. To ensure my time is all yours when we meet, either in person in Breland Hall 139 or via [Adobe Connect](#) in Canvas, please [sign up for an advising session](#).
- Response time: 1 business day to email; 3 business days to phone calls

Adrian Sanchez (Teaching Assistant)

- Office: Breland Hall 140; [Email](mailto:atsancho@nmsu.edu) (atsancho@nmsu.edu); Phone: (575) 646-3509
- Advising Hours: Tue & Fri, 11:30-13:00; by appointment; in person in Breland Hall 140 or via [Adobe Connect](#) in Canvas

Course Introduction

Course Overview

- Course prefix and number: GEOG 491/598
- Course title: Spectroscopy and Remote Sensing
- Department: [NMSU Department of Geography](#)
- Semester: Fall 2019
- Credit hours: 3
- Access to course materials: [online via the Canvas Learning Management System](#)
- Meeting days, times, and locations:
 - Wed, 10:30-13:00; NMSU Main Campus, Breland Hall 192
 - For information on open lab hours, view our [Breland 192 Lab Schedule](#).

Course Description

This course introduces you to fundamental concepts, methods, and applications of spectroscopy and remote sensing. Spectroscopy is the science that is concerned with the study of interactions between matter and electromagnetic radiation. Remote sensing is the art, science, and technology of obtaining information about the environment through the recording, analysis, and interpretation of data acquired through non-contact sensors. The

course is divided into three major parts: an introduction to the general principles of spectroscopy and remote sensing as well as spectral data collection techniques; an exploration of spectral data analysis techniques; and a focus on student research. The class meets once per week and each meeting includes lecture, activity, and discussion components. The lectures emphasize theory; the activities concentrate on practice; and the discussions focus on applications.

Course Learning Outcomes

Upon completion of this course, you will be able to:

1. collect spectral data of a diversity of materials in various settings using an ASD FieldSpec 4 Hi-Res Spectroradiometer;
2. analyze lab, field, and remotely sensed spectral data using a number of methods; and
3. conduct a spectroscopy and remote sensing research project from inception to completion.

Course Delivery Method

This course will be completely face-to-face, with optional online meetings. You may complete assignments in any order, but we strongly recommend that you complete them in the carefully designed order outlined in the [Course Schedule](#). You may submit assignments ahead of their due dates; [late work](#) will not be accepted except in unusual circumstances.

Course Organization

The course introduces a variety of interrelated concepts and methods relevant to spectroscopy and remote sensing. It also introduces you to [ViewSpec Pro](#) spectra processing software, [ENVI](#) image analysis software, and [R](#) and [R Studio](#) statistical computing software. We will deal with new topics every week and each topic is treated more or less separately in the readings, lectures, and activities. However, the power of spectroscopy and remote sensing can only be fully appreciated and exploited through synthesis and integration of the many topics discussed throughout the semester. It is thus crucial that you always keep up with all course materials.

Course Schedule

Week	Date	Topics
PART I: INTRODUCTION & DATA COLLECTION		
1	08/21	<ul style="list-style-type: none"> ✓ Welcome & Introductions ✓ Lecture: Spectroscopy and Remote Sensing 101 ✓ Activity: Discussing Potential Research Topics
2	08/28	<ul style="list-style-type: none"> ✓ Lecture: More on Spectroscopy ✓ Discussion of a Scholarly Peer-Reviewed Article Selected by Dr. B. ✓ Activity: Using the FieldSpec in the Lab
3	09/04	<ul style="list-style-type: none"> ✓ Lecture: More on Remote Sensing ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Activity: Analyzing Images in ENVI

4	09/11	<ul style="list-style-type: none"> ✓ A Day of Field Work ✓ Lecture: Linking Spectroscopy and Remote Sensing ✓ Activity: Using the FieldSpec in the Field ✓ Activity: Planning and Executing a UAS Mission
PART II: DATA ANALYSIS		
5	09/18	<ul style="list-style-type: none"> ✓ Lecture: Spectra Post-Processing ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Activity: Viewing and Manipulating Spectra Using R and ViewSpec Pro ✓ Activity: Using the FieldSpec
6	09/25	<ul style="list-style-type: none"> ✓ Lecture: Image Pre-Processing ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Activity: Radiometrically Correcting Images Using ENVI ✓ Activity: Using the FieldSpec
7	10/02	<ul style="list-style-type: none"> ✓ Lecture: Spectral Unmixing ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Activity: Simple and Multiple Endmember Spectral Mixture Analysis ✓ Activity: Using the FieldSpec
8	10/09	<ul style="list-style-type: none"> ✓ Dr B at 2019 SWAAG Meeting in Fort Worth, TX ✓ Work on Activities, FieldSpec Use, and Projects
9	10/16	<ul style="list-style-type: none"> ✓ Lecture: Predictive Modeling ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Activity: Classification and Regression Using R ✓ Activity: Using the FieldSpec
10	10/23	<ul style="list-style-type: none"> ✓ Exam – Theory & Practice
PART III: STUDENT RESEARCH		
11	10/30	<ul style="list-style-type: none"> ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Lecture & Activity: TBD Based On Student Needs and Interests
12	11/06	<ul style="list-style-type: none"> ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Lecture & Activity: TBD Based On Student Needs and Interests
13	11/13	<ul style="list-style-type: none"> ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Lecture & Activity: TBD Based On Student Needs and Interests
14	11/20	<ul style="list-style-type: none"> ✓ Discussion of Student-Selected Scholarly Peer-Reviewed Articles ✓ Lecture & Activity: TBD Based On Student Needs and Interests
15	---	<ul style="list-style-type: none"> ✓ Thanksgiving Break (11/25-11/29): No Lectures, No Labs
16	12/04	<ul style="list-style-type: none"> ✓ Work on Presentations

Required Courses, Skills, Hard- and Software, Browsers, and Textbook

Prerequisites and Co-requisites

There are no prerequisites or co-requisites for this course.

Skills

Taking this course requires a number of skills. At a minimum, you will need to meet certain technology responsibilities to complete the work for this course. If you have questions about technical requirements for the course, please contact us immediately. To begin in this course, you must be able to:

- obtain access to an internet connection, preferably broadband, and a working computer for the duration of this course (note: you may do so in our computer teaching lab in Breland Hall 192);
- proficiently use Microsoft Office applications (see the [Microsoft Office Training Center](#));
- conduct searches and find resources on the Internet (see the [NMSU Library, Research Help for Students](#), and [Internet Tutorials](#));
- send and receive NMSU emails and email attachments in and out of class (see [NMSU email](#));
- use Canvas tools (see the [Canvas Student Guide](#));
- install software on your computer (note: this only applies if you are unable to complete course assignments in our computer teaching lab in Breland Hall 192);
- maintain backups of all your course work (see [5 Ways to Back Up Your Data](#));
- follow technical instructions to accomplish new tasks; and
- demonstrate a willingness and ability to learn new skills.

Computer Hardware & Software

To participate fully in this course, you will need access to the following technologies (note: you will have access to all of these technologies in our computer teaching lab in Breland Hall 192; if you have to complete course assignments remotely, then you will need to gain alternative access to these technologies):

- Windows or Macintosh desktop or laptop computer with internet access as well as microphone and speakers (built-in or external headset);
- [Windows Virtual Machine](#) (to run ENVI software) — Mac users only
- [Canvas Learning Management System](#) (Note that Canvas is not fully supported in mobile devices; i.e., while there is a free Canvas mobile app, its functionality is currently limited. To ensure full Canvas functionality, access Canvas on your computer.)
- [Adobe Connect](#) (to meet with your instructors or peers online, if needed)
- [Microsoft Office](#) (for reading and creating Microsoft Word, PowerPoint, and Excel files)
- [Adobe Acrobat Reader](#) (for reading PDF files)
- [ViewSpec Pro](#) (for spectra analysis)

- [ENVI 5.5 + IDL 8.7](#) (for remote sensing image analysis; we will provide you with instructions for installing a free and fully functional version of ENVI on your personal computers during third class meeting)
- [R](#) and [R Studio](#) (for statistical computing)

Web Browsers

Use any of the following browsers to access Canvas. Please remember to update the web browser you are using on a regular basis.

- [Chrome](#) (recommended)
- [Firefox](#)
- [Safari](#)

Textbook

There is no required textbook for this class. Readings will be made available online via [Canvas](#).

Communication

Canvas Course Management System Website

Much of this course will be available online via [Canvas](#), where you will have access to all course materials (e.g., lectures and labs); your grades; as well as communication tools such as Announcements, Messages, Discussions, Collaborations, and Adobe Connect. To access these resources, simply [log in to your Canvas account](#) and click the link for this course. Canvas is critical element of this course and you are required to review its contents regularly. If you encounter problems related to Canvas, please contact us immediately.

Email and Canvas Messages

You can reach us at the NMSU email addresses provided under [Instructor Information](#) above or via Canvas Messages. Note that your NMSU email account is the official means of communicating with the university. Information critical to your success at NMSU is delivered to you via this account, and you are expected to follow rules and policies provided to you via this communication method. Any email from you to us should be sent either through your official NMSU email account or through Canvas Messages. Please be advised that due to privacy and security concerns, we are unable to respond to emails from or about students that do not originate from an official NMSU email address. Unless we are away from the office with limited access to email, we will respond to your messages within one business day. Similarly, we expect you to respond to our emails in a timely manner. So, please access your NMSU email and Canvas accounts frequently.

Announcements

We will use the Announcements tool in Canvas to send time sensitive and regular information to the entire class. To ensure you receive this information the moment it is posted, set your notification preferences in Canvas to “right away”. To do so, in Canvas, go to Profile > Notifications > Announcements and change the setting “Notify me right away.”

Advising Hours

Our advising hours are provided under [Instructor Information](#) above. During these hours, we will be available in person in our offices or online in our Adobe Connect rooms as noted under [Instructor Information](#) above. To meet with Dr. Buenemann, [sign up for an advising session](#) with her prior to the meeting. If none of her ten weekly advising hours work for you, please [email her](#) to set up an appointment during an alternative time. To meet with the TAs, simply drop by their physical or virtual offices during their office hours or a pre-arranged time.

Phone Calls

Phone calls are not our preferred mode of communication and our response times to voice messages may be up to three business days. Our phone numbers are provided under [Instructor Information](#) above.

Expectations

What You Can Expect From Us

We will be available to you during our advising hours and scheduled appointments as well as via NMSU email and Canvas messages. Don't be shy and contact us as soon as ambiguities, problems, or worries arise. We will take all of your questions, comments, and concerns seriously and respond to you as promptly and as specifically as possible. We will do our very best to provide you with a high-quality learning experience, grade assignments fairly, and offer feedback on your work within one week of turning it in. We reserve the right to make changes to course materials, assignments, and policies to better accommodate your learning needs. Any changes made will be published as soon as possible via Canvas Announcements and will not adversely affect your workload or grade. We encourage each of you to be both teacher and learner in this course. To that end, we like to encourage interactions among participants and do not wish to be "sages on the stage."

What We Expect From Ourselves and You

Enrollment in this course and acceptance of this syllabus is your contract constituting acceptance of all NMSU policies and codes as well as all specific guidelines outlined in this syllabus. We will do our very best to facilitate learning (i.e., to help you achieve the [Course Learning Outcomes](#) stated above)—we will always prepare and present class materials to the best of our abilities; give you tasks that will help you better understand key concepts and methods; and encourage cooperative, student-centered learning. You are responsible for learning itself. In addition, we expect all participants in the course to follow the netiquette conventions below.

Grading Policy

Grade Components and Weights

Your final course grade will be based on the points you earn on the following assignments.

Grade Components Table*

Assignments	Units	Points	Weight
Discussion Lead	1	20	2.0%
Discussion Participation	10	180	18.0%
Activities	12	200	20.0%
Exam	1	200	20.0%
Research Project	1	400	40.0%
Total	36	1,000	100.0%

* Note: The allocation of points is identical for undergraduate and graduate students. However, compared to undergraduate students, graduate students are expected to complete additional or more extensive tasks on a number of assignments.

Grading Scale

Your final course letter grade will be based on the following fractional scale.

Grading Scale Table

Grade	Percentage	GPA
A+	> 100%	4.0
A	95% to 100%	4.0
A-	90% to 94%	3.7
B+	87% to 89%	3.3
B	84% to 86%	3.0
B-	80% to 83%	2.7
C+	77% to 79%	2.3
C	74% to 76%	2.0
C-	70% to 73%	2.0
D+	67% to 69%	1.0
D	64% to 66%	1.0
D-	60% to 63%	1.0
F	< 60%	0.0

Assignments and Criteria

You will complete five types of assignments for this course: numerous discussion participations, a discussion lead, various activities, a project, and an exam. All assignments are intended a) to help you acquire the learning outcomes (LOs; i.e., descriptions of things you should be able to do) of individual units, modules, and the course as a whole and b) to help us assess the extent to which this actually happened. Recall from the [Course Learning Outcomes](#) section above that you should be able to do three major things upon completion of this course: collect spectral data; analyze spectral data; and conduct a spectroscopy and remote sensing research project. As you can see, being able to do these things requires both conceptual and practical knowledge and skills in spectroscopy and remote sensing.

Throughout the course, we will provide you with **readings, lecture slides and videos**, and **other miscellaneous materials** to help you learn the more conceptual aspects of the course. These

materials promote a rather passive mode of learning, however, and do not provide you or us with feedback about how much you have actually learned. This is in part where the **discussions** come in. The **discussions** ($n = 10$, 18 points each, 180 points total) are combined homework and in-class assignments that challenge you to actively engage with the course material. They are based on the reading of one or more scholarly peer-reviewed articles on spectroscopy and/or remote sensing applications. In a nutshell, the discussions require you to complete and respond to a reading at home and to subsequently discuss the reading in class with your peers. The discussions give you and us an indication as to what does or does not make sense to you and allow us all to take corrective actions as needed. They are also opportunities for you to learn more about how spectroscopy and remote sensing are applied in the real world to solve a broad range of problems related to human, environmental, and coupled social-ecological systems. In addition to participating in discussions throughout the semester, you will also **lead one of these discussions** ($n = 1$, 20 points), which is a valuable higher-level and transferable skill to acquire and practice.

The **activities** ($n = 12$, 5 to 20 points each; 200 points total) are demonstrations and exercises designed to help you learn the more practical aspects of the course and to prepare you for completing the hands-on aspects of your own independent spectroscopy and remote sensing research project. This all-semester **research project** ($n = 1$ but with multiple tasks and due dates, 400 points total) is designed as an opportunity for you to apply spectroscopy and remote sensing concepts and methods to a problem of your choice. The project is divided into several tasks, and feedback from both your peers and instructors is incorporated throughout the semester to help you successfully complete your project. Finally, one **exam** ($n = 1$, 200 points, closed-book, proctored) serves as an incentive for you to (re-)learn class materials and as a means for us to assess your learning in this course. The exam is comprehensive, covering the first nine weeks of the semester, and includes two parts: a) a practical part in which you are asked demonstrate the safe and proficient use of our spectroradiometer; and b) a theoretical part in which you are required to demonstrate your knowledge of spectroscopy and remote sensing concepts, methods, and applications.

All assignments in this course are **individual efforts**. So, there will be no team grades and you need to earn each grade on your own (Carefully review the materials linked under [Academic and Non-Academic Integrity](#) below — cheating, plagiarism, and other forms of academic dishonesty will not be tolerated. If you are unsure if something is ethical or not, please ask Dr. B. and be safe rather than sorry.). That said, we strongly encourage **cooperation** and to some extent **collaboration** throughout the semester.

If you have any questions about the purpose of instructional materials and their relationships to each other, please let us know. Note that we will evaluate all assignments within one week of their respective due dates. Further details regarding all of the above will be provided to you in class and/or on [Canvas](#).

Curving of Grades

Individual assignments and tests will not be curved (\uparrow or \downarrow). We *may* make adjustments of the final letter grade after an assessment of the class curve at the end of the term. We consider class participation and improvement over the term as justification for discounting a grade that

is uncharacteristically lower than others.

Incomplete Grades

An I (Incomplete) grade will be assigned only if you are unable to complete the course due to circumstances beyond your control (e.g., documented illness, documented death, or crisis in your immediate family) that develop after the last day to withdraw from the course. An I grade will not be used to avoid assigning of D, F, U, or RR grades for marginal or failing work.

Late Work

Work not received by the deadline will not be graded and given 0 points, except in unusual circumstances. We have three major reasons for not accepting late work. First, it is difficult to keep up with students who turn things in late and determine just how much to dock an assignment. Our time is better spent on improving course materials and providing better feedback. Second, there will be no confusion concerning when assignments are due. Third, imposing hard deadlines will prepare you for the real world. To ensure you meet all deadlines, allow extra time for glitches in computer hardware and software, internet connectivity, etc.; i.e., start working on assignments early and try to submit them ahead of time. If you are unable to submit your work on time due to extenuating circumstances, please discuss the situation with us well before anything is due so that we can develop solutions that support you.

Attendance

Absences need to be excused on exam days only. Absences due to University-sanctioned activities, work-related events, holidays or special events observed by organized religions, or illness will be excused, if you provide us with official written documentation explaining your absence. We don't really have any additional attendance policies. Just keep the following in mind: learning is your responsibility and, if you miss class, you will have to figure out how to "make it up."

Class Withdrawals

Withdrawal from this course is solely your responsibility; we will not drop you from this class under any circumstances. If you no longer wish to be enrolled in this course, you must withdraw from it. If you are still on the class roll at the end of the semester, you will receive a grade based on the work submitted.

Honors Students

Students who are Crimson Scholars (3.5 GPA) who wish to have this course count as an Honors course may do so by completing the [Course by Contract form](#). We will assign you additional work that will permit you to gain Honors credits for this course in your major. These credits will count as upper division credits towards the accumulation of 18 credits needed to graduate with University Honors. For additional information on pursuing the Honors recognition at graduation, contact the Honors College at 575-646-2005 or [email Dean Chaiken](#). Completed Contract forms must be submitted in person to the Honors College no later than one week after the beginning of each semester.

Academic and Non-Academic Integrity

Enrollment in this course and acceptance of this syllabus is your contract constituting acceptance of all University policies regarding academic and non-academic integrity. You are expected to comply fully with the NMSU Student Code of Conduct, which defines academic misconduct, non-academic misconduct, and the consequences or penalties for each. The Student Code of Conduct is available in the [NMSU Student Handbook](#). Students who are judged to be guilty of [academic misconduct](#), which includes cheating, plagiarism, and other forms of academic dishonesty, will be reported as required by [NMSU policy](#).

Student Support

NMSU is committed to ensuring all students have the support they need to be successful and expand their educational horizons.

Academic Learner Services Support

- Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) covers issues relating to disability and accommodations. If you have questions or need an accommodation in the classroom (all medical information is treated confidentially), contact: [Student Accessibility Services \(SAS\)](#), Corbett Center Student Union Room 208; Trudy Luken, Director; Phone: (575) 646-6840; [E-mail](#).
- NMSU, in compliance with applicable laws and in furtherance of its commitment to fostering an environment that welcomes and embraces diversity, does not discriminate on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex (including pregnancy), sexual orientation, spousal affiliation, or protected veteran status in its programs and activities, including employment, admissions, and educational programs and activities. Inquiries may be directed to the Laura Castille, Executive Director, Title IX and Section 504 Coordinator, [Office of Institutional Equity \(OIE\)](#) – O’Loughlin House, P.O. Box 30001, 1130 E University Avenue, Las Cruces, NM 88003; Phone: (575) 646 3635; TTY: (575) 646 7802 (TTY); [E-mail](#).
- Title IX prohibits sex harassment, sexual assault, intimate partner violence, stalking, and retaliation. For more information on discrimination or Title IX, or to file a complaint, contact Laura Castille, Executive Director, Title IX and Section 504 Coordinator, [Office of Institutional Equity \(OIE\)](#) – O’Loughlin House, P.O. Box 30001, 1130 E University Avenue, Las Cruces, NM 88003; Phone: (575) 646 3635; TTY: (575) 646 7802 (TTY); [E-mail](#).
- [NMSU Police Department](#): (575) 646-3311
- [NMSU Police Victim Services](#): (575) 646-3424
- [NMSU Counseling Services](#): (575) 646-2731
- [NMSU Dean of Students](#): (575) 646-1722
- For Any On-Campus Emergencies: 911

Student Support Services

- The [Math Success Center](#) provides students continuing support with math supplemental instruction, tutoring, and testing.
- The [Writing Center](#) offers free services to all NMSU students through one-on-one consultations at any stage in the writing process, from understanding assignment directions to revising final drafts. The Writing Center is staffed by graduate assistants who teach undergraduate writing courses in the English Department and offers online consultations for distant learners. Consultants advise students on aspects of proofreading and editing, but do not provide editing services.
- The [NMSU Student Success Center](#) offers a variety of programs and services, including Freshman Year Experience, Campus Tutoring Service, Learning & Study Skills Workshops, Peer, and TRIO Student Support Services. The Student Success Center also serves students through Career Services and Financial Literacy.
- The [NMSU Center for Academic Advising and Student Support](#) offers centralized advising for undergraduate students. We also encourage both undergraduate and graduate students to meet with [faculty in the NMSU Department of Geography](#) concerning any questions and concerns.
- [NMSU Financial Aid and Scholarship Services](#) offers timely and understandable information about financial aid and scholarship options to all students.
- The [NMSU Registrar's Office](#) supports all students at NMSU; [registering for classes](#) at NMSU requires three steps: academic advising, registering for classes, and paying the tuition and fee bill.
- [Other resources for NMSU](#) students include [tutoring services](#), the [library](#), [career services](#), the [Aggie Health and Wellness Center](#), and more. Numerous webpages provide information on [distance education](#) for online students.

Technical Support

The ICT Customer Service Center is equipped to deal with all of your information technology (IT) and telecommunications needs at NMSU. The ICT Customer Service Center hours of operation are from 8:00 am until 5:00 pm Monday through Friday Mountain Time. Please feel free to contact them at (575) 646-1840 or via [e-mail](#). You can also go to the [Student Technology Help](#) web page and [Student Resources](#) located at the [Canvas](#) web page for additional information on Canvas. For assistance with ENVI, contact your TA or Dr. Buenemann as [described above](#).

VPAT Statements

A Voluntary Product Accessibility Template, or VPAT, is a standardized form developed by the Information Technology Industry Council to show how a software product meets key regulations of Section 508 of the Rehabilitation Act. Below are the VPATs for the primary tools in this course.

- [Microsoft Products](#)
- [Apple Products](#)
- [Canvas](#)

- [Adobe Products](#)
- [Google Products](#)
- [Harris Products](#)
- Malvern Panalytical Products
- R Products

Privacy Policies

We take protecting and honoring your privacy very seriously at NMSU. The privacy policies for tools used in this course are noted below.

- [Microsoft Products](#)
- [Apple Products](#)
- [Canvas](#)
- [Adobe Products](#)
- [Google Products](#)
- [Harris Products](#)
- [Malvern Panalytical Products](#)
- [R](#) and [R Studio](#) Products

Important Dates

You may add courses through 22 August 2019 without instructor permission and through 30 August 2019 with instructor permission. Late registration fees will apply for courses added after 21 August 2019. The deadlines for dropping this course without and with a “W” are 6 September 2019 and 18 October 2019, respectively. You may withdraw from the university (withdraw from all classes) through 6 December 2019.

Syllabus Modifications Statement

We reserve the right to make changes to course materials, assignments, and policies to better accommodate your learning needs. Any changes made will be published as soon as possible via Canvas Announcements and will not adversely affect your workload or grade. For the most recent version of the syllabus, always consult Canvas.

Notes

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