
**ERE 365/ERE 565: PRINCIPLES OF REMOTE SENSING
COURSE SYLLABUS, SPRING 2021**

INSTRUCTOR:

Giorgos Mountrakis, 419 Baker, gmountrakis@esf.edu

LAB SUPERVISOR:

Mark Storrings, 446 Baker, mstorrings@esf.edu

TEACHING ASSISTANT:

TBD

LECTURES: Tuesday and Thursday 12:30 - 1:50pm ONLINE

LAB: Section 1: Thursday 2:00 - 4:50pm ONLINE

Section 2: Tuesday 2:00 - 4:50pm ONLINE

REQUIRED TEXT

Remote Sensing and Image Interpretation by Lillesand, Kiefer, Chipman (**sixth** or **seventh** edition).
One copy has been placed on reserve at the Moon Library.

COURSE DESCRIPTION

The class provides a qualitative and quantitative introduction to the fundamentals of acquiring, analyzing and utilizing remote sensing data in the performance of natural resource inventories, environmental quality surveys, site development studies and land use analyses. The class describes the fundamentals of remote sensing and also covers introductory concepts and methods in digital image processing and photogrammetry.

COURSE OBJECTIVES

The class aims to provide understanding of

- The basic principles and concepts in remote sensing
- Commonly used terms
- The application of remote sensing
- Basic concepts in digital image processing and photogrammetry

COURSE LEARNING OUTCOMES

Upon successful completion of the course students should be able to

- Describe the fundamental concepts of remote sensing
- Describe applications of remote sensing
- Describe the applicability of simple remote sensing techniques

PROGRAM LEARNING OUTCOMES

- an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

COLLEGE LEARNING OUTCOMES

- Scientific Reasoning
- Quantitative Reasoning

ATTENDANCE POLICY

Attendance will not be taken on a daily basis but 2% of your grade will be based on your overall active participation (see participation in the grading section). Also, clarifications/discussions will be offered during lecture/lab time that go beyond the written material and could be part of the examination.

LATE SUBMISSION POLICY

A penalty of 5% of grade will be applied if you are less than 24 hours late, an additional 10% for every additional 24 hours. Extenuating circumstances will be examined on a case by case basis with sufficient proof.

GRADING

In group activities you are expected to contribute equally. Failure to do so may result in different grading for each group member.

COMPONENT	CONTRIBUTION
Project	13%
Quizzes	10%
Labs	25%
Midterm	20%
Final	30%
Participation	2%

IMPORTANT: To pass the course your exam grade average ((midterm + final)/2) should be at least 60% (independently of all other grades).

- **PROJECT**

Each week a group of students will provide a 10-15 minute presentation on a student-selected application of remote sensing technology. Towards the end of the semester each group will have to provide a report on the subject.

- **QUIZZES**

A quiz will be administered almost every Thursday. Grading will be 0 if you do not respond to the quiz during the allocated time, 1 if your performance is less than 50%, and 2 if your score is larger than 50%. You have to be in class to take the quiz. If you try to take the quiz while not in class you would be violating the academic honesty policy.

- **LABS**

There will be 10 laboratory exercises. In the first half of the semester we will deal with image hardcopies, in the second half we will use computer software.

- **EXAMS**

A midterm exam will be offered on the last Thursday before the Spring Break. A final comprehensive exam will take place during the scheduled final exam period.

- **PARTICIPATION**

This grade will reflect the instructor's opinion on your comprehension of the taught material and the effort you put forward. It is mostly based on quality of questions and answers you provide during lecture. Assume that your grade will be 0% if you do not actively participate.

Note that graduate students will have to meet increased project expectations and additional questions at the final exam.

Letter grades will be assigned based on the scale shown below. The grade cutoffs may be adjusted (up or down) by up to one point when assigning final grades at the end of the semester.

Letter Grade	Range of Numerical Grade
A	93 and above
A-	90 to just less than 93
B+	87.5 to just less than 90
B	85 to just less than 87.5
B-	82.5 to just less than 85
C+	80 to just less than 82.5
C	77.5 to just less than 80
C-	75 to just less than 77.5
D	70 to just less than 75
F	less than 70

COMPUTER USE

E-mail will be used as a common means of communicating outside class times. All students have access to an e-mail account through the Syracuse University system. The internet will be used for providing information throughout the course. Computer clusters at ESF and at SU provide access for those who do not have home access.

It is the students responsibility to check daily their email syr accounts.

The class will also use BlackBoard software. **You are expected to bring a Blackboard-enabled device for Thursday's quizzes.**

STUDENTS WITH LEARNING AND PHYSICAL DISABILITIES

SUNY-ESF works with the Office of Disability Services (ODS) at Syracuse University, who is responsible for coordinating disability-related accommodations. ODS is responsible for coordinating disability-related academic accommodations and will work with the student to develop an access plan. Since academic accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible to begin this process. To discuss disability-accommodations or register with ODS, please visit their website at <http://disabilityservices.syr.edu>. Please call (315) 443-4498 or email disabilityservices@syr.edu for more detailed information.

ACADEMIC DISHONESTY

Academic dishonesty is a breach of trust between a student, one's fellow students, or the instructor(s). Examples of academic dishonesty includes but is not limited to plagiarism and cheating, and other forms of academic misconduct. By registering for courses at ESF you acknowledge your awareness of the ESF Code of Student Conduct. More information regarding Academic Integrity, including the process for resolving alleged violations, can be found in the Student Handbook (<https://www.esf.edu/students/handbook/>).

INCLUSIVE EXCELLENCE STATEMENT

As an institution, we embrace inclusive excellence and the strengths of a diverse and inclusive community. During classroom discussions, we may be challenged by ideas different from our lived experiences and cultures. Understanding individual differences and broader social differences will deepen our understanding of each other and the world around us. In this course, all people (including but not limited to, people of all races, ethnicities, sexual orientation, gender, gender identity and expression, students undergoing transition, religions, ages, abilities, socioeconomic backgrounds, veteran status, regions and nationalities, intellectual perspectives and political persuasion) are strongly encouraged to respectfully share their unique perspectives and experiences. This statement is intended to help cultivate a respectful environment, and it should not be used in a way that limits expression or restricts academic freedom at ESF.