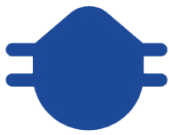


Summer A 2021 Important Information

This course will be conducted in a format that includes face-to-face sessions. During all face-to-face activities, the following public health and safety protocols are required of all students, instructors, and teaching assistants:



Bring and wear a face mask at all times when indoors.



Wash hands (>20 sec) before and after class.



Maintain at least 6ft of distance from others.



If you feel sick or have symptoms, stay home.

Any individuals who are unable or unwilling to meet [these requirements](#) cannot participate in face-to-face activities and may be subject to progressive discipline. If you are experiencing [COVID-19 symptoms](#) please use the UF Health screening system and follow the instructions on [whether you are able to attend class](#). Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work.

When in the computer room:

- *Groups will use the same workstations for the duration of the course lab.*
- *Students are required to wear face masks (over mouth and nose) at all times.*
- *Strict 6-foot minimum social distancing must be maintained at all times in the classroom, including when entering and leaving.*
- *Students will sanitize the workstation and surrounding work area before and after each use.*

COURSE SYLLABUS

SUR 4940C/6940C PRACTICUM IN UAS MAPPING

Summer A (May 5-14, 2021)

Prerequisites:

SUR4501C/6502C Foundations of UAS Mapping or Permission of Instructor

Instructors:

Dr. Ben Wilkinson	benew@ufl.edu	Reed Lab 406A
Dr. Eben Broadbent	eben@ufl.edu	Reed Lab 303

Assisted by:

Dr. Adam Benjamin	abenjamin@ufl.edu	Ft Lauderdale Campus
Justin Thomas	jthomas88@ufl.edu	Reed Lab 301

Course Description and Learning Objectives:

This three-credit course provides students experience with planning UAS mapping operations and the subsequent processing and analysis of the data acquired on these flights. By the end of this course, students will be able to:

- Plan field operations for establishing georeferencing control
- Compute coordinates of ground control points and checkpoints for georeferencing UAS datasets
- Process high resolution aerial data acquired via UAS
- Produce common deliverables (e.g., orthophotos, digital elevation models (DEM))
- Analyze the spatial accuracy/quality of UAS deliverables
- Apply UAS data to address specific applications

Method of Instruction:

The course will meet daily over a period of 10 days for a total of ~70 hours. Learning will occur through a combination of group and independent assignments, field experience, and processing of UAS data.

Meeting Times and Places:

The class will meet in-person at 9:00am every day (earlier for field collect days TBA) and activities will generally run until 5pm (later for field collect days TBA). Sunday will have no formal meeting. Field portion timing is contingent on weather.

Course Evaluation:

Grading is based on participation, data deliverables, final report, and poster presentation:

- Attendance/participation 20%
- Deliverables and Report 50%
- Final poster/presentation 30%

Attendance and Participation:

Students are expected to attend and actively participate in ALL field and office sessions. Requirements for class attendance, assignments, and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Deliverables:

As the course progresses, students will a) develop field operation plans (i.e., ground control, validation features), compute GCP coordinates, b) process point clouds, c) create orthophotos and other intermediate products, and d) conduct various analyses. Each student will generate a **report** and poster summarizing these deliverables and submit it on the final day of the course. Field collection and processing will be performed in groups. Analysis, reports, and posters will be done individually.

Final Poster:

Each student is required to develop and present a poster summarizing the methodology, technology, analysis, and results achieved for both assigned projects. The poster/presentation should also address the questions posed in the terms of reference. On the final day of class, there will be a judged poster session.

Grade Scale:

A 93 -100%	C 73 - 76.99%
A- 90 - 92.99%	C- 70 - 72.99%
B+ 87 - 89.99%	D+ 67 - 69.99%
B 83 - 86.99%	D 63 - 66.99%
B- 80 - 82.99%	D- 60 - 62.99%
C+ 77 - 79.99%	E 0 - 59.99%

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Class and Project Schedule:

The following is the proposed schedule for the course. Some timing may be flexible (except for site surveys) and tasks may overlap, but students are encouraged to keep up to the extent possible as falling behind will impact graded submissions due at the end of the course.

- **May 5 (Wed):** Intro; Review of TORs; GCP Planning; Flight Planning; Ground truth planning; field work plan
- **May 6 (Thu):** Fieldwork and flying at Site 1 (UF)
- **May 7 (Fri):** Process UAS imagery for Site 1
- **May 8 (Sat):** Continue processing and analysis for Site 1; Flight planning and field work plan for Site 2
- **May 9 (Sun):** Independent work and rest (Mothers Day!)
- **May 10 (Mon):** Field work and flying at Site 2 (Cedar Key!)
- **May 11 (Tue):** Process data from Site 2
- **May 12 (Wed):** Processing and analysis of data from Sites 1 and 2
- **May 13 (Thu):** Complete analysis; design and prepare posters*
- **May 14 (Fri):** Complete, print and present posters*

*reports and posters should be kept in mind throughout the practicum, and figures, photos, screen-captures, etc. should be collected along the way for final selection at the poster design/preparation phase.

Online Course Evaluation Process:

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>

UF Academic Honesty:

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities:

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

Campus Helping Resources:

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,
www.counseling.ufl.edu/cwc/

Counseling Services Groups and Workshops Outreach and Consultation Self-Help Library Wellness Coaching

Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

Other Requirements:

Cellular phones must be silenced during class. They may be used in field sessions for field work communication pertaining to this course work only.