

BSC4473C- Scientific Diving

Course Information

Classification	Scientific Diving; 4 credits.
Objectives/ Goals	This course will provide an introduction to scientific diving and satisfy the 100 hours of required training for scientific divers as prescribed by the American Academy of Underwater Sciences (AAUS). This training is required to participate in scientific diving activities at many universities, including UCF, and at all AAUS member organizations throughout the United States.
Description	Students will be instructed in advanced diving skills, dive rescue, CPR, oxygen administration, and research diving techniques. Practical field diving activities will be a large focus of the course. The course will be taught by the UCF Diving Safety Officer (DSO). Following successful completion of course objectives, students will be eligible to participate in diving research projects as a scientific diver-in-training or scientific diver. Students will also be eligible to apply for applicable recreational diving certifications. Participation is not a guarantee of certification.
Schedule	The class will meet for three hours once a week for lectures and exams. Course completion requires 12 open water dives and swim evaluations at the UCF pool. Scuba diving activities required for course will take place on weekends and will require up to two overnight expeditions. Transportation will be provided in Biology vehicles if necessary. Qualified students will drive the Biology vehicles. Accommodation will be in tents at nearby campgrounds (tentative dates below). Each student must supply their own camping gear. Each student must pay entrance fees to the local springs for diving. Each student will give a 12-15 min PowerPoint presentation on a dive related topic of their choice (topics must be approved by instructor; details will be discussed in class).

Course Requirements

Prerequisites	C or better in BSC 2010C or BSC1005 or EVR1001 AND instructor consent. Each student <u>must</u> show proof of the following prior to beginning the course: <ul style="list-style-type: none">• Nationally recognized open water diving certification• <i>Diver's Physical Examination</i> (appendix 1-3 of UCF Scientific Diving Manual)• Medical Insurance specific to scuba diving (such as DAN membership)• Within first two weeks of course students must be able to demonstrate swimming/ watermanship ability acceptable to the instructor, including but not limited to:<ul style="list-style-type: none">○ Swim underwater 25 yards without surfacing.○ Swim 400 yards in less than 12 minutes.○ Tread water for 10 minutes or 2 minutes without the use of hands.○ Transport a passive person of equal size a distance of 25 yards in the water.
Attendance	Participation in all classroom and field sessions is mandatory; absence or inability to participate will likely disqualify the student from course completion unless the reason is excused. Make-up sessions will be not be offered.

Evaluation Field Activities/Personal Dive Log = 5%
 DFA Pro Exam = 25% (grade of $\geq 80\%$ required for certification)
 Rescue Exam = 25%
 Nitrox Exam = 25% (grade of $\geq 80\%$ required for certification)
 Student Presentation = 20%

*Students will not be given a second attempt on exams in order to get certifications.

Grading Grades will be assigned according to the following scale:

Percentage	Letter Grade
90.0 – 100	A
80.0 – 89.9	B
70.0 – 79.9	C
60.0 – 69.9	D
< 60.0	F

Course Materials

Required Texts All provided by instruction as pdfs: Nitrox Diving Manual; Rescue Diver Manual; UCF Scientific Diving Manual

Equipment

Student divers are encouraged to provide all of their own diving equipment, with the exception of scuba cylinders/ tanks. All personally owned equipment must conform to the minimum standards of the AAUS and the UCF Scientific Diving Program. When applicable, proof of annual equipment service is required (*). As noted, some items can be provided by the UCF Scientific Diving Program.

Required Personal Equipment

All participating divers must provide their own:

- Mask, Fins, Snorkel
- Wetsuit
- Booties
- Camping gear (can be rented from UCF Recreation and Wellness Center)

Additional Required Equipment

All participating divers must also be equipped with the items listed below. If not personally owned, these items will be provided by the UCF Scientific Diving Program.

- Regulator with alternate air source, low pressure inflator hose, and submersible pressure gauge
- Depth gauge AND dive computer
- Buoyancy compensator (BCD) with power inflator
- Weight system with weights (weight belt or BC-integrated weights acceptable)
- Whistle (for surface signaling)
- UW Compass

Instructor Information

Michelle R. Gaither, Assistant Professor; UCF Diving Safety Officer
 SDI Dive Instructor

Email: michelle.gaither@ucf.edu

Office: BMS 132A, Office Hours: Friday 1pm – 2pm (or by appointment)

Course Schedule

NOTE: Equipment preparation and cleanup often takes at least an hour prior to and after the official ‘end’ of the class day. *Show up on time and ready.* Below is a tentative schedule. Days may shift depending on the weather and how the class is progressing. I have scheduled in several “EXTRA DAYS” in case of the need for rescheduling.

Week	Meeting place	Classroom Topic	Dives	Reading (webcourses)
1/12	BIO104	Class orientation		
1/19	BIO104	DAN Diving First Aid for Professional Divers (DFA Pro): CPR, AED		DAN online materials; DFA Pro V3.0 Student Handbook
1/26	BIO104	DFA Pro: CPR, AED DFA Pro: Airway, Neuro, O ₂		DAN online materials; DFA Pro V3.0 Student Handbook
1/27	UCF Pool 9am – 11am		Swimming evaluations; DFA Pro Scenarios	
2/2	BIO104	Logistics De Leon Springs; DFA Pro: Secondary Assessments, HMLI		DAN online materials; DFA Pro V3.0 Student Handbook
2/3	UCF Pool 9am – 11am		OW 1-Buoyancy OW 2-Skills Review DFA Pro Scenarios	
2/9	BIO104	DFA Pro wrap up Navigation & Low Vis		
2/10	De Leon Springs State Park 7:45 am at gate		OW dives 3&5 (round robin): Navigation	
2/16	BIO104	DFA Pro Exam Dive logs, planning, tables		Example dive logs and dive plans
2/17	EXTRA DAY			
2/23	BIO104	Review DFA Pro Exam Rescue		SDI Computer Nitrox Diving Manual
3/1	BIO104	Finish Rescue		SDI Rescue Diving Manual
3/2	Troy Springs SP At gate at 10am		OW dives 6&7 (round robin): Rescue	
3/8	BIO104	Rescue Exam Guest Lecturer: Dr. Peter Sinelli (UCF), Maritime Archaeology		
3/9	Lake Denton 7:30 am in parking lot	Camp at Highlands Hammock SP	OW dives 8-11 (round robin): Lift bags, safety sausages; search and recovery; out of air; fish transects	
3/15	BIO104	Guest Lecturer: Dr. Richard Coleman (RSMAS), Rebreathers		

Spring Break 3/18-3-22

3/29	BIO104	Nitrox		
4/5	BIO104	Nitrox Exam		
4/7	Blue Heron Bridge 7 am on beach (HT at 7:43 am)	Camp at Jonathan Dickinson SP	OW 12&13: Site familiarity	
4/12	BIO104	Student Presentations	Dive logs due	
4/13	EXTRA DAYS			
4/19	BIO104	Student Presentations		

UCF CORE SYLLABUS STATEMENTS

Academic Integrity

Students should familiarize themselves with UCF's Rules of Conduct at <https://scai.sdes.ucf.edu/student-rules-of-conduct/>. According to Section 1, "Academic Misconduct," students are prohibited from engaging in

1. Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
2. Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
3. Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
4. Falsifying or misrepresenting the student's own academic work.
5. Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
6. Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.
7. Helping another violate academic behavior standards.
8. Soliciting assistance with academic coursework and/or degree requirements.

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, *The Golden Rule* <https://goldenrule.sdes.ucf.edu/>. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and respond to academic misconduct when necessary. Penalties for violating rules, policies, and instructions within this course can range from a zero on the exercise to an "F" letter grade in the course. In addition, an Academic Misconduct report could be filed with the Office of Student Conduct, which could lead to disciplinary warning, disciplinary probation, or deferred suspension or separation from the University through suspension, dismissal, or expulsion with the addition of a "Z" designation on one's transcript.

Being found in violation of academic conduct standards could result in a student having to disclose such behavior on a graduate school application, being removed from a leadership position within a student organization, the recipient of scholarships, participation in University activities such as study abroad, internships, etc.

Let's avoid all of this by demonstrating values of honesty, trust, and integrity. No grade is worth compromising your integrity and moving your moral compass. Stay true to doing the right thing: take the zero, not a shortcut.

Course Accessibility Statement

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need access to course content due to course design limitations should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) <<http://sas.sdes.ucf.edu/>> (Ferrell Commons 185, sas@ucf.edu, phone 407-823-2371). For students connected with SAS, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential course access and accommodations that might be necessary and reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student. Further conversation with SAS, faculty and the student may be warranted to ensure an accessible course experience.

Campus Safety Statement

Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at <<https://centralflorida-prod.modolabs.net/student/safety/index>>.
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see <<https://ehs.ucf.edu/automated-external-defibrillator-aed-locations>>.
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <<https://my.ucf.edu>> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video (<<https://youtu.be/NIKYajEx4pk>>).

Deployed Active Duty Military Students

Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.