

PCB 4683: EVOLUTIONARY BIOLOGY

Department of Biology, College of Sciences
4 credits, Fall 2020

Course Instructor

Dr. Chase Mason, PhD

Assistant Professor

Email: chase.mason@ucf.edu

or contact via Webcourses (preferred)

Office Hours: Wednesday 12-2pm Thursday 2-4pm

These office hours are one-on-one by appointment with the instructor (contact >24 hours in advance).

Teaching Assistants

Katie Martin, M.A. (Graduate Teaching Assistant)

Email: katie.martin@knights.ucf.edu

Office Hours: By appointment.

Kristen Brightwell (Undergraduate Teaching Assistant) Contact: via Webcourses

Office Hours: Monday 12pm-1pm, Tuesday 1:25pm-2:25pm, Thursday 10am-11am

Course Description

Evolution is the unifying theory of biology, applicable to all biological organisms including humans. As such, understanding evolutionary biology is critical for biologists and anyone who seeks an understanding of the natural world. To quote a notable evolutionary theorist, "Nothing in biology makes sense except in the light of evolution" (Theodosius Dobzhansky, 1973). In this class we take an analytical approach to explore the pattern and process of evolution in all life forms, from viruses to single-celled organisms to plants to *Homo sapiens*. Evolutionary genetics will be considered as the foundation underlying all aspects of evolutionary biology, and concepts in speciation, adaptation, classification, population genetics, and macroevolution will be covered in depth. The importance of evolutionary concepts to all facets of biology will be emphasized, particularly the interplay between evolution and ecology, genetics, development, and medicine.

Course Goals and Learning Objectives

Upon completion of the course, students will be able to:

- Understand major evolutionary patterns and how evolutionary relationships are estimated.
- Discuss the principles of population genetics, including selection, genetic drift, mutation, linkage, non-random mating, and gene flow.
- Understand the mechanisms of adaptation, speciation, and diversification.
- Engage with the scientific literature and think critically about individual scientific studies.
- Consider the relevance of evolutionary biology to human society.

Class Meetings (synchronous)

Tuesday/Thursday 11:30-1:20pm via Zoom Password: EvoBio2020

Prerequisites

A grade of 'C' or better in undergraduate Genetics or consent of the instructor. A good understanding of basic genetics and ecology are vitally important to success in this class.

Course Materials and Resources

Webcourses (<http://webcourses.ucf.edu>) will be used to post materials for the course, including the syllabus, lecture slides, class recordings, reading materials, and grades for all assignments. All exams and quizzes will be conducted via Webcourses.

This course will use the textbook **“Evolutionary Analysis” by Scott Freeman and Jon C. Herron**. You may use any edition of this book from third to fifth. Chapters are the same for the fourth and fifth editions, but differ for the third edition (see table). Note that Syllabus and Webcourses references to chapters refer to the 5th edition.

5th Edition (2014) ISBN: 0321616677

4th Edition (2007) ISBN: 0132275848

3rd Edition (2003) ISBN: 0131018590

Additional supplementary reading materials (e.g. journal articles, videos, etc) will be provided by the instructor as files through Webcourses. This course will also involve an individual project using the evolution simulation game *Niche*. This will be made available to all students in the course via a remote connection.

Topic	5 th Ed.	4 th Ed.	3 rd Ed.
Evolutionary Thinking	Ch. 1	Ch. 1	Ch. 1
The Pattern of Evolution	Ch. 2	Ch. 2	Ch. 2
Natural Selection	Ch. 3	Ch. 3	Ch. 3
Phylogenetics	Ch. 4	Ch. 4	Ch. 14
Mutation and Genetic Variation	Ch. 5	Ch. 5	Ch. 4
Population Genetics: Selection and Mutation	Ch. 6	Ch. 6	Ch. 5
Population Genetics: Migration, Drift, Mating	Ch. 7	Ch. 7	Ch. 6
Linkage and Sex	Ch. 8	Ch. 8	Ch. 7
Quantitative Genetics	Ch. 9	Ch. 9	Ch. 8
Studying Adaptation	Ch. 10	Ch. 10	Ch. 9
Sexual Selection	Ch. 11	Ch. 11	Ch. 10
Kin Selection	Ch. 12	Ch. 12	Ch. 11
Life History Evolution	Ch. 13	Ch. 13	Ch. 12
Evolution and Human Health	Ch. 14	Ch. 14	Ch. 13
Mechanisms of Speciation	Ch. 16	Ch. 16	Ch. 15
Human Evolution	Ch. 20	Ch. 20	Ch. 19

Assessment and Grading Procedures

Grades will be assigned on the following scale without rounding:

A: 90-100% B+: 85-89.9% B: 80-84.9% C+: 75-79.9% C: 70-74.9% D: 60-69% F: <60%

The grade for this course will be based on the following components:

- (1) Four **progress exams** will be given on the dates indicated on the schedule. They will consist of multiple choice, math problems, and short answer questions. The lowest exam grade will be dropped (12% each, 36% total). A 24-hour window will be provided to take each two-hour exam, and questions will be presented in random order.
- (2) One **cumulative final exam** (18%) will have the same format as the progress exams and will take place during a 24-period containing the assigned final exam period for this course, which is Thursday December 10, 10am-12:50pm.
- (3) Eight short **reading quizzes**, two per unit, that will help you gauge your understanding of the material. The lowest grade will be dropped (3% each, 21% total).
- (4) Eight **discussion thread posts** through Webcourses (1% each, 8% total) in advance of each guest lecture by a visiting scientist in relation to an assigned scientific study. These are graded based on contribution of worthwhile questions and comments for the visiting scientist and upcoming discussion.
- (5) **Evolution simulation project** (15% total). This individual project will involve running an evolution simulation under certain conditions, and writing a report on your findings under a defined rubric.
- (6) A **pre-test** and **post-test** for the course will be given via Webcourses to gauge course efficacy (1% each, 2% total).

Course Policies and Specific Expectations

1. We enter the Fall 2020 semester together, yet apart. Too many of us are arriving in this course from a place of dislocation, anxiety, uncertainty, awareness of social injustice, anger, and trauma. It is my hope that this course will be the opposite of an emotional burden, and will instead be in some small way a source of pleasure, community, and agency as we learn about the natural world. The goal of this course is growth – if you are growing, you are succeeding.
2. This course contains both synchronous and asynchronous components. Synchronous components are being held via Zoom through Webcourses. Attendance is strongly encouraged during synchronous class meetings. That being said, I am not living in a fantasy world where a global pandemic is not occurring. I fully understand that synchronous attendance may not always be possible due to connectivity, health, or family issues. For this reason, content lectures are pre-recorded and can be viewed at any time, exams are being given in a 24-hour window, and other assignments will have broad windows of time to be completed.
3. Assigned readings are very important to this course, and all assigned readings for a given day should be completed before watching the accompanying lecture, and both should be completed before attending synchronous class meetings.
4. This course may occasionally cover socially controversial topics where they intersect with science and scientific evidence. Students are expected to behave professionally and treat others in a civil manner in the interest of scholarly discourse. However, discourse that invalidates the human dignity of others will not be tolerated.
5. Written communication with the instructor should be sent via Webcourses or UCF email. Note that I will not be able to respond to course inquiries sent from third-party email addresses (e.g., Gmail) where student identity cannot be confirmed, in order to comply with FERPA regulations. I strive to respond within 48 business hours, but please be patient as there are over 200 students.
6. This course will involve an individual project completed at your own pace over multiple weeks. Start early, and reach out to the teaching assistant or instructor if you have questions.
7. Academic dishonesty (e.g. plagiarism or cheating) is governed by the UCF Golden Rule. Students found to have committed academic dishonesty will receive a minimum of an “F” for the assignment in question, and at the instructor’s discretion based on severity of the violation, an “F” for the entire course with referral to the Office of Student Conduct. See university policy below. Note that any communication with other humans during exams through digital or analog means constitutes cheating, as does the use of the textbook or internet resources during exams. You don’t need to cheat to succeed!
8. Students are highly encouraged to discuss any and all portions of this course with me. If you are struggling, please do not wait until you fall behind to meet with me. For open discussion and questions, there will be a large amount of in-class time. For one-on-one meetings, I will be available for scheduled virtual meetings during my designated blocks of office hours.

Course Schedule

Course schedule is an approximation and will be updated throughout the semester if needed

Date	Pre-recorded Lecture	Reading (5th ed)	In-Class Activity	Exams/Quizzes Due
Aug 25 (T)	Why study evolution? A Case for Evolutionary Thinking	Chapter 1	Class Introduction	Pre-test
Aug 27 (TH)	The Pattern of Evolution/ Scientific Method	Chapter 2	Special Presentation/Q+A Session	
Sept 1 (T)	Evolution by Natural Selection I	Chapter 3	<i>Natural Selection Activity</i>	Reading Quiz 1
Sept 3 (TH)	Evolution by Natural Selection II		Q+A Session/Concept Review	
Sept 8 (T)	Intro to Phylogenetics I	Chapter 4	<i>Phylogenetic Reconstruction Activity</i>	
Sept 10 (TH)	Intro to Phylogenetics II		Guest Lecture + Paper Discussion #1	
Sept 15 (T)	Genetic & Environmental Variation	Chapter 5	Q+A Session/Exam Review	Reading Quiz 2
Sept 17 (TH)	--	--	--	EXAM 1 (Ch 1-5)
Sept 22 (T)	Population Genetics I: Selection & Mutation	Chapter 6	Guest Lecture + Paper Discussion #2	
Sept 24 (TH)	Population Genetics II: Migration & Drift	Chapter 7	Q+A Session/Concept Review	Reading Quiz 3
Sept 29 (T)	Linkage and Sex	Chapter 8	Guest Lecture + Paper Discussion #3	
Oct 1 (TH)			<i>Niche Project Day</i>	
Oct 6 (T)	Quantitative Genetics	Chapter 9	Q+A Session/Exam Review	Reading Quiz 4
Oct 8 (TH)			Guest Lecture + Paper Discussion #4	
Oct 13 (T)	--	--	--	EXAM 2 (Ch 6-9)
Oct 15 (TH)	Methods for Studying Adaptation	Chapter 10	Guest Lecture + Paper Discussion #5	
Oct 20 (T)			Q+A Session/Concept Review	
Oct 22 (TH)	Sexual Selection I: Dimorphism and Males	Chapter 11	Guest Lecture + Paper Discussion #6	Reading Quiz 5
Oct 27 (T)	Sexual Selection II: Females, Plants + Humans		Q+A Session/Concept Review	
Oct 29 (TH)	Kin Selection	Chapter 12	<i>Niche Project Day</i>	
Nov 3 (T)	Life History Evolution	Chapter 13	Q+A Session/Exam Review	Reading Quiz 6
Nov 5 (TH)	--	--	--	EXAM 3 (Ch 10-13)
Nov 10 (T)	Evolution and Human Health	Chapter 14	Guest Lecture + Paper Discussion #7	
Nov 12 (TH)	Mechanisms of Speciation I	Chapter 16	Q+A Session/Concept Review	Reading Quiz 7
Nov 17 (T)	Mechanisms of Speciation II		<i>Niche Project Day</i>	
Nov 19 (TH)	Human Evolution	Chapter 20	Q+A Session/Exam Review	Reading Quiz 8
Nov 24 (T)			Guest Lecture + Paper Discussion #8	
Dec 1 (T)	--	--	--	EXAM 4 (Ch 14, 16, 20)
Dec 3 (TH)			Final Exam Review	<i>Niche Report + Post-test</i>
Dec 10 (TH)	--	--	--	FINAL EXAM

Guest Lecture Schedule

PDFs of papers will be posted to Webcourses. Never purchase a scientific journal article.

- Sept 10** **Dr. E. Sally Chang, PhD** - National Human Genome Research Institute, NIH
Yahalomi D, Atkinson SD, Neuhof M, Chang ES, Philippe H, Cartwright P, Bartholomew JL, Huchon D. 2020. A cnidarian parasite of salmon (Myxozoa: Henneguya) lacks a mitochondrial genome. *PNAS* 117:5358-5363. <https://doi.org/10.1073/pnas.1909907117>
- Sept 22** **Jigyasa Arora, PhD Candidate** – Okinawa Institute of Science and Technology
Arora J, Brisbin MAM, Mikheyev AS. 2020. Effects of microbial evolution dominate those of experimental host-mediated indirect selection. *PeerJ* 8:e9350. <https://peerj.com/articles/9350/>
- Sept 29** **Elizabeth Carlen, PhD Candidate** – Fordham University
Carlen E. and Munshi-South J. 2020. Widespread genetic connectivity of feral pigeons across the Northeastern megacity. *Evolutionary Applications*. <https://doi.org/10.1111/eva.12972>
- Oct 8** **Jordan Dowell, M.S., PhD Candidate** – University of Central Florida
Dowell JA, Reynolds EC, Pliakas TP, Mandel JR, Burke JM, Donovan LA, Mason CM. 2019. Genome-wide association mapping of floral traits in cultivated sunflower (*Helianthus annuus*). *Journal of Heredity* 110: 275-286. <https://doi.org/10.1093/jhered/esz013>
- Oct 15** **Amanda Katzer, PhD Student** – University of Kansas
Katzer AM, Wessinger CA, Hileman LC. 2019. Nectary size is a pollination syndrome trait in *Penstemon*. *New Phytologist* 223: 377-384. <https://doi.org/10.1111/nph.15769>
- Oct 22** **Andrea Wishart, PhD Student** – University of Saskatchewan
Wishart AE, Williams CT, McAdam AG, Boutin S, Dantzer B, Humphries MM, Coltman DW, Lane JE. 2018. Is biasing offspring sex ratio adaptive? A test of Fisher's principle across multiple generations of a wild mammal in a fluctuating environment. *Proc R Soc.* B285: 20181251. <https://doi.org/10.1098/rspb.2018.1251>
- Nov 10** **Dr. Taj Azarian, PhD MPH** – University of Central Florida
Azarian T, Martinez PP, Arnold BJ, Grant LR, Corander J, Fraser C, Croucher NJ, Hammitt LL, Reid R, Santosham M, Weatherholtz RC. 2020. Predicting evolution using frequency-dependent selection in bacterial populations. *Biorxiv*. <https://www.biorxiv.org/content/10.1101/420315v3.full>
- Nov 24** **Dr. Maria A. Nieves Colón, PhD** – Arizona State University/University of Minnesota
Nägele K, Posth C, Orbeagozo MI, Chinque de Armas Y, Hernandez Godoy ST, González Herrera UM, Nieves-Colón MA, et al. Genomic insights into the early peopling of the Caribbean. *Science*. <https://doi.org/10.1126/science.aba8697>
- Also, please read this article by Ed Yong at *The Atlantic*:
<https://www.theatlantic.com/science/archive/2019/09/what-ancient-dna-says-about-puerto-ricos-history/598246/>
- Optional additional paper for Nov 24: Nieves-Colón MA, Pestle WJ, Reynolds AW, Llamas B, et al. 2020. Ancient DNA Reconstructs the Genetic Legacies of Precontact Puerto Rico Communities. *Molecular Biology and Evolution* 37: 611–626, <https://doi.org/10.1093/molbev/msz267>

University-Level Policies

Use of Zoom in this Course

Because of the continued remote instruction requirement due to the COVID-19 pandemic, this course will use Zoom for some synchronous (“real time”) class meetings. Meeting dates and times will be scheduled through Webcourses@UCF and should appear on your calendar. Please take the time to familiarize yourself with Zoom by visiting the UCF Zoom Guides at <https://cdl.ucf.edu/support/webcourses/zoom/>. You may choose to use Zoom on your mobile device (phone or tablet).

Things to Know About Zoom:

- You must sign in to a Zoom session using your UCF NID and password.
- The Zoom sessions are recorded.
- Improper classroom behavior is not tolerated within Zoom sessions and may result in a referral to the Office of Student Conduct.
- You can contact Webcourses@UCF Support at <https://cdl.ucf.edu/support/webcourses/> if you have any technical issues accessing Zoom.

Notifications in Case of Changes to Course Modality

Depending on the course of the pandemic during the semester, the university may make changes to the way classes are offered. If that happens, please look for announcements or messages in Webcourses@UCF or Knights email about changes specific to this course.

COVID-19 and Illness Notification

Students who believe they may have a COVID-19 diagnosis should contact UCF Student Health Services (407-823-2509) so proper contact tracing procedures can take place. Students should not come to campus if they are ill, are experiencing any symptoms of COVID-19, have tested positive for COVID, or if anyone living in their residence has tested positive or is sick with COVID-19 symptoms. CDC guidance for COVID-19 symptoms is located here: (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>). Students should contact their instructor(s) as soon as possible if they miss class for any illness reason to discuss reasonable adjustments that might need to be made. When possible, students should contact their instructor(s) before missing class.

In Case of Faculty Illness

If the instructor falls ill during the semester, there may be changes to this course, including having a backup instructor take over the course. Please look for announcements or mail in Webcourses@UCF or Knights email for any alterations to this course.

Course Accessibility and Disability COVID-19 Supplemental Statement

Accommodations may need to be added or adjusted should this course shift from an on-campus to a remote format. Students with disabilities should speak with their instructor and should contact sas@ucf.edu to discuss specific accommodations for this or other courses.

University-Wide Face Covering Policy for Common Spaces and Face-to-Face Classes

To protect members of our community, everyone is required to wear a facial covering inside all common spaces including classrooms (<https://policies.ucf.edu/documents/PolicyEmergencyCOVIDReturnPolicy.pdf>). Students who choose not to wear facial coverings will be asked to leave the classroom by the instructor. If they refuse to leave the classroom or put on a facial covering, they may be considered disruptive (please see the Golden Rule for student behavior expectations). Faculty have the right to cancel class if the safety and well-being of class members are in jeopardy. Students will be responsible for the material that would have been covered in class as provided by the instructor.

Make-up Assignments for Authorized University Events or Co-curricular Activities (UCF Policy 401.2)

Students are frequently asked to represent the university in authorized events and activities. In some cases, this participation conflicts with the students' course assignments and requirements. It is university policy that instructors of record offer a reasonable opportunity for such students to complete missed classroom assignments, including written or oral examinations, quizzes, term papers, or other assignments. Furthermore, the make-up assignment and grading scale should be equivalent to the missed assignment and its grading scale. No penalty due to absence may be applied to these make-up assignments. The names of students participating in authorized activities such as, intercollegiate athletics, band, choir, co-curricular activities, and other academically related programs and events to represent the university will be listed on a Program Verification Form. It is the student's responsibility to present a copy of this form signed by the appropriate individual to the instructor(s) of record responsible for the class from which the student will be absent. The student must provide the Program Verification Form prior to the class in which the absence occurs. The university sponsor signs a copy of the Program Verification Form and files it with the Office of Student Rights and Responsibilities for verification purposes.

Make-up Assignments for Religious Observances (UCF Policy 5.020)

The University of Central Florida will reasonably accommodate the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of examinations and work assignments. A student who desires to observe a religious holy day of his or her religious faith must notify all of the instructors teaching the class(es) from which the student desires to be excused no later than the tenth business day of the term. The student will be held responsible for any material covered during the excused absence, but will be permitted a reasonable amount of time to complete any work missed. Where practicable, major examinations, major assignments and University ceremonies will not be scheduled on a major religious holy day. Students who are absent because of religious observances and have complied with this regulation will not be penalized. A student who believes that he/she has been unreasonably denied an educational benefit due to his/her religious belief or practices may seek redress with the Office of Institutional Equity in accordance with that office's Investigation Procedures.

Academic Integrity

The Center for Academic Integrity (CAI) defines academic integrity as a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility. From these values flow principles of behavior that enable academic communities to translate ideals into action.

<http://academicintegrity.org/>

UCF Creed: Integrity, scholarship, community, creativity, and excellence are the core values that guide our conduct, performance, and decisions.

1. Integrity: I will practice and defend academic and personal honesty.
2. Scholarship: I will cherish and honor learning as a fundamental purpose of my membership in the UCF community.
3. Community: I will promote an open and supportive campus environment by respecting the rights and contributions of every individual.
4. Creativity: I will use my talents to enrich the human experience.
5. Excellence: I will strive toward the highest standards of performance in any endeavor I undertake.

The following definitions of plagiarism and misuse of sources come from the Council of Writing Program Administrators (<http://wpacouncil.org/node/9>) and have been adopted by UCF's Department of Writing & Rhetoric.

Plagiarism

In an instructional setting, plagiarism occurs when a writer deliberately uses someone else's language, ideas, or other original (not common-knowledge) material without acknowledging its source. This definition applies to texts published in print or on-line, to manuscripts, and to the work of other student writers.

Misuse of Sources

A student who attempts (even if clumsily) to identify and credit his or her source, but who misuses a specific citation format or incorrectly uses quotation marks or other forms of identifying material taken from other sources, has not plagiarized. Instead, such a student should be considered to have failed to cite and document sources appropriately.

Responses to Academic Dishonesty, Plagiarism, or Cheating

UCF faculty members have a responsibility for your education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to infringements of academic integrity. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>. For more information about UCF's Rules of Conduct, see <http://www.osc.sdes.ucf.edu/>.

In-Class Recording Policy

Outside of the notetaking and recording services offered by Student Accessibility Services, the creation of an audio or video recording of all or part of a class for personal use is allowed *only* with the advance and explicit written consent of the instructor. Such recordings are only acceptable in the context of personal, private studying and notetaking and are not authorized to be shared with *anyone* without the separate written approval of the instructor.

Course Accessibility Statement

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need specific access in this course, such as accommodations, should contact the professor as soon as possible to discuss various access options. Students should also connect with [Student Accessibility Services](#) (Ferrell Commons, 7F, Room 185, sas@ucf.edu, phone (407) 823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable.

Deployed Active Duty Military Students

If you are a deployed active duty military student and feel that you may need a special accommodation due to that unique status, please contact your instructor to discuss your circumstances.

Campus Safety Statement

Emergencies on campus are rare, but if one should arise in our class, we will all need to work together. Everyone should be aware of the 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. Please make a note of the guide's physical location and consider reviewing the online version at http://emergency.ucf.edu/emergency_guide.html.
- Familiarize yourself with evacuation routes from each of your classrooms and have a plan for finding safety in case of an emergency. (Insert class-specific details if appropriate)
- If there is a medical emergency during class, we may need to access a first aid kit or AED (Automated External Defibrillator). To learn where those items are located in this building, see <http://www.ehs.ucf.edu/AEDlocations-UCF> (click on link from menu on left). (insert class specific information if appropriate)

- To stay informed about emergency situations, sign up to receive UCF text alerts by going to my.ucf.edu and logging in. Click on “Student Self Service” located on the left side of the screen in the tool bar, scroll down to the blue “Personal Information” heading on your Student Center screen, click on “UCF Alert”, fill out the information, including your e-mail address, cell phone number, and cell phone provider, click “Apply” to save the changes, and then click “OK.”
- If you have a special need related to emergency situations, please speak with me during office hours.
- Consider viewing this video (<https://youtu.be/NIKYajEx4pk>) about how to manage an active shooter situation on campus or elsewhere.

Resources for Success

University Writing Center

The University Writing Center (UWC) offers writing support to UCF students from first-year to graduate in every discipline. Trained peer consultants provide help at every stage of the writing process, including understanding assignments, researching, drafting, revising, incorporating sources, and learning to proofread and edit. The UWC’s purpose is not merely to fix papers or to make better writers, but to teach writers strategies to navigate complex situations for writing, both in and outside the University. Consultations are available for individuals and small groups. <https://uwc.cah.ucf.edu/>

UCF Libraries

The Research and Information Services Department exists to help students and faculty use library resources and services to find high-quality information both in the physical library collections and online. This unit provides one-on-one research consultations with a librarian for extensive, in-depth assistance with research. Sandy Avila is our science librarian, and she will participate directly in this course.

<https://library.ucf.edu/about/departments/reference/>

Counseling and Psychological Services

Counseling and Psychological Services (CAPS) is a campus agency designated to provide psychological services to currently enrolled students free of charge. CAPS provides a variety of services from career assessment and stress management to crisis intervention. The office is located in Counseling Center 101, which is next to the UCF Health Center. <http://caps.sdes.ucf.edu/>