

**The University of Florida, Department of Material Science and Engineering
Nuclear Engineering Program**

ENU 4612: Nuclear Radiation Detection and Instrumentation

Fall Semester 2020

Catalog Description: Physics and electronics of radiation detection and instrumentation systems for application to nuclear energy, radiological sciences, radiation protection, medical physics and imaging, and industrial safety and control systems.

Credit: 3 hours

Instructor: Prof. Kyle C. Hartig, kyle.hartig@ufl.edu
352-392-4907

Office hours: Monday TBD
Friday TBD

Note: Office hours will be offered as a combination of in-person in my office or virtually through Zoom following all current UF and CDC best practices and guidelines. Office hours may change due to laboratory schedule/upcoming travel schedule.

Note: For all course-related questions a preferred mode of interaction is to visit with the professor during office hours (virtual or otherwise) and refrain from using email.

Teaching Assistant: TBD
Email: TBD
Office hours: TBD

Textbook: G. Knoll, *Radiation Detection and Measurement*, Wiley, Fourth Edition, 2010 (978-0470131480)
Chart of Nuclides: You will need access to a chart of nuclides during the course. Feel free to use any one of the numerous resources available (so long as it is accurate). Below are a couple of suggested chart of nuclides.
I. Joseph R. Parrington, et al., *Nuclides and Isotopes*, 15th Ed., Lockheed Martin/GE Nuclear, 1996.
II. <http://atom.kaeri.re.kr> (Recommended)

Recommended:

- I. Kenneth S. Krane, *Introductory Nuclear Physics*, Third Edition, 1988, John Wiley & Sons (978-0471805533)
- II. Shultis and Few, *Introduction to Nuclear Science and Engineering*, Second Edition, 2007, CRC Press (978-1420051353)
- III. Nicholas Tsoulfanidis, *Measurement and Detection of Radiation*, 2nd Ed., Taylor and Francis, 1995

Other online and print resources will be given out during lecture and on the Canvas site.

Pre-requisites and Co-requisites:

Pre-requisites for ENU 4612:

- EEL 3003 Elements of Electrical Engineering
- ENU4605 Interaction of Radiation with matter

Course Objectives:

Provide students with the opportunity to learn the principals of radiation interactions with matter, radiation detection techniques and characteristics of different radiation detectors; Development of communication skills including technical writing and oral presentations; Prepare students for independent research and/or design projects.

Contribution of Course to Meeting the Professional Component (ABET only):

- a. Graduates will have successful careers in Nuclear Engineering and related disciplines.
- b. Graduates will pursue continuing education or advanced degrees.

Relationship of Course to ABET Program Rubric: (L – Low, M – Medium, H – High)

This course supports the following program rubric outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics - M.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors - M.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions - H.

Meeting Times & Schedule:

MWF 0935–1025, Aug 31 – Dec 9, 2019

Laboratory: ENU4612L laboratory sections will be assigned/scheduled during first or second week of classes based upon schedules (four sections will be offered - two on Tuesdays and two on Thursdays for Fall 2020 to account for reduced in-person class sizes and social distancing).

Note: Adjustments to this regular schedule could be made periodically and announced in advance in class and/or through the class website/email.

Meeting Location:

Lecture: Virtual through Zoom. Lectures will be delivered asynchronously (i.e. pre-recorded and available on Canvas/YouTube). Each week a recitation lecture will occur synchronously (during pre-arranged class period- listed above) over Zoom.

Laboratory: In-person. Limit of three students per section. Undergraduate Laboratory (Rhines Hall Basement TBA)

Material and Supply Fees: None.**Web Tools:** <https://lss.at.ufl.edu/>

The course Canvas site will be used to distribute the syllabus, lectures, quizzes, discussion, exams, projects, grades, and all other course material. The site will be used to provide announcements, slides, taped lectures, review sheets, previous exams, etc. I may place course notes ahead of lectures on Canvas. The notes I may post will only contain fragments of the entire lecture.

Grading Scale

The final grades will be assigned based on:

- A: $\geq 92\%$
- A-: $\geq 88\%$
- B+: $\geq 84\%$
- B: $\geq 80\%$
- B-: $\geq 76\%$
- C+ $\geq 72\%$
- C: $\geq 68\%$
- C-: $\geq 65\%$
- D+: $\geq 62\%$
- D: $\geq 59\%$
- D-: $\geq 56\%$
- E: $< 56\%$

Please note that following:

1. At the end of the course, students overall course grades may be curved up at my discretion.
2. Grading in this course is “plus-based”. That is, I award you points based on correct steps, rather than deducting points for errors. As a result, a question such as, “Prof. Hartig, why did you take off 2 points here?” is both presumptuous and nonsensical, since you didn’t have the points to begin with.
3. There is no general protection against double jeopardy. Points are often allocated, particularly on exams, to each specific step and to obtaining the final, correct answer in each problem – a single error will prevent you from earning points at that step and for the final answer.
4. The grade cut-offs for A, B, and C are somewhat lower than the “high-school scale” (90, 80, 70, etc.) under which many UF courses and syllabi templates operate. This is not to grant inflated letter grades but rather to account for the challenging nature of the course material and to appropriately award genuinely excellent performances.

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Grading: Your performance in both the lecture and laboratory will be graded separately as they are two different courses. Below is a breakdown for the grading in the lecture:

Participation - 10%
Homeworks - 15%
Quizzes - 10%
Project(s) - 25%
Exams - 25%
Final Exam - 15%

Note: Professional document and figure standards will be enforced on all electronic submissions in this course. The onus is on you to figure out how to meet these standards in whatever programs you use to write/typeset the documents and create figures. All submissions must be in a single PDF document. When access to a physical scanner is not available and you choose to use your phone to “scan” a document you must use the free Adobe Scan app (I will not accept “scans” using the CamScanner app). When scanning documents, it is strongly suggested that you re-write the document in pen to aid in scanning. You will be graded off your organization and clarity of your work, so please take some time to organizing (logically) your

work and/or re-write your finished work prior to submission. Excel may not be used to prepare figures (plots). It is suggested that students prepare figures (plots) in Python (GnuPlot), MatLAB, Mathematica, Igor Pro, or Origin Pro. I have exactly zero sympathy for those who select a word processor or computer program without knowing how to format their text or figures using it – complaints that the standards are not the same as a particular piece of software's defaults will fall on deaf ears. For projects, you will be required to typeset reports using Word or Latex.

Homework Sets

There will be about 7 homework sets covering the major course topics handed out throughout the semester. Due dates will be indicated on the problem sets I hand out. Homework solutions must be turned into the class site drop box in PDF format prior to the deadline to avoid a late penalty (note: there is a time stamp associated with the Canvas submission, so please upload your assignment before the due date and time). Homeworks are graded based on the specifications and criteria distributed separately and posted on class site for each HW. Homeworks that fail to meet the specifications will not be graded. Graded homeworks will be distributed electronically through the Canvas site dropbox.

For any question regarding the grading of homework assignments, please contact the TA or the Professor (during office hours or after class). I receive a large amount of emails and will not prioritize and may not respond to emails related to this course, so please see me or the TA during posted office hours or before/after lecture or lab.

Note: the homework sets will involve both theoretical derivations and analysis of real data.

Quizzes

Quizzes will be given sporadically throughout the semester during or shortly after lecture periods. It is expected that quizzes will take no longer than 10-15 minutes to complete. Quizzes will be on material covered in previous lectures and will be delivered through Canvas, and may make use of Honorlock.

Participation

Students will be expected to participate in discussion board activities each week throughout the semester. Such activities may include peer review of each other's work and discussion posts and responses to topics from lecture, reading, or supplemental materials for example.

Exams

At least two non-cumulative exams will be given during the semester. The tentative dates for the weeks they will be given are listed in the course outline below but are subject to change. Exams will be 110 minutes in length and will occur outside of the normally scheduled lecture period. Make-up Exams are only allowed through prior requests or DOCUMENTED reasons pursuant to UF policy and the policy listed under the "make up work" section of this syllabus.

Exams may be either open or closed book and may be some combination of the two. Exams will make use of Honorlock.

Textbooks, class notes, and homeworks may be allowed during open book examinations. The final exam is currently scheduled for Thursday December 17th (1230 – 1430) and is cumulative. The same open book/closed book exam layout may apply to the final, as well. UF policy restricts make-up finals to Friday, December 18, 1500-1700, barring a conflict at that time with another make-up in a course of higher number. This rule applies regardless of your personal business; such as travel times. I strongly discourage you from making hard-to-change travel plans such as flight reservations before Friday evening.

For each exam, you will receive an Exam Preview, intended to prepare you for taking the exam (both technically and procedurally). The preview will also include the specific topics addressed by the problem (for

most problems), the way points are distributed among problems, and a list of topics within the scope of the exam.

Examinations are due at the end of the examination period. No collaboration is permitted during examinations, although you may prepare for these however you choose. Use of any unauthorized materials or any communication (including mobile phones, laptops, or with classmates/any other individual) is grounds for immediate and final collection of your exam with no more work permitted and any work already completed that, in my judgement, was aided by said materials/communication not considered in grading. Any instance of unauthorized assistance that is discovered to have occurred during examinations will result in an immediate "0" grade for the assignment and may result in a referral/submission to the academic dishonest office (any violations after the first instance of any kind/level of academic dishonesty will automatically be referred to the academic dishonesty office and prosecuted fully).

In the unlikely event you (1) are unable to complete the exam at the time originally scheduled for allowed reasons, (2) are unable to make the UF-appointed make-up exam time for allowed reasons, (3) do not make-up the exam at some other time prior to the finalization of grades on December 16, and (4) are on pace to pass the course, you will receive a grade of I (Incomplete). In the (also unlikely) case that the first three of these conditions apply but you were on pace to fail the course, UF policy requires that I assign a failing grade with the notation that you stopped participating before the end of the term. This may have implications on financial aid beyond a simple "E" grade.

Project(s)

A group project will be assigned. The makeup of the groups (number of groups and members) will be solely at the Professors discretion. More detail related to the project will be released during the semester (e.g. description, requirements, rubric, etc.).

Workload: The instructor is aware that senior students have extremely busy semesters. Reasonable accommodations on homework, project, exams, and other requirements will be made for professional commitments (conference attendance, taking the candidacy exam, grad school visits, etc.). Some deadlines may be moved back due to other courses.

Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to me when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester. Please note that UF policy, clarified to faculty during the Fall 2016 term, states that no retroactive accommodations are available.

UF Counseling Services

- Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

Software Use: All faculty, staff and student 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. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Grade Appeal: All appeals of grades, including those from clerical/grade-calculation errors, must be made within one week of return. (This may be modified for specific assignments near the end of the term. I will announce this via e-mail as needed.)

Grade appeals must be provided in the following format:

- Include your entire assignment unmodified.
- Attach (paper clip preferred) a written summary of which problem(s) or part(s) you believe were graded inaccurately. Be as specific as possible.
- Turn in your appeal to me (virtually or in-person) at class time or during office hours.

I will review your grade appeal, contact you via your ufl.edu e-mail address, and return the assignment in class. Fairly simple appeals provided to me during office hours may be decided upon while you wait, at my discretion.

Appeals will be considered for clerical errors, addition errors, and inconsistent scoring. Grade appeals will not be entertained if you simply do not like that (for example) Part 1 was worth only 2 points with Part 2 worth 5 points.

On very rare occasions, if I believe the student is not acting in a good faith belief that more points are deserved, I will deem the appeal frivolous. Following two frivolous appeals, your grade appeal privilege through this method will be revoked. Further appeals must be done through the petitions process, which requires formal paperwork and department/program level involvement.

Electronic Communication and Course Website

The primary means of communication with the class outside of class time will be e-mail listserv. These listservs will send to your @ufl.edu address only. Any inquiries regarding grading will be directed towards your @ufl.edu address only, per FERPA.

The primary use of the Canvas website is for file storage, as assignments, lecture notes, etc. may be provided there. I take no responsibility for downtime of this service, nor for actions of University of Florida staff that affect the website (including Canvas upgrades). The gradebook on Canvas is used to enable you to look up grades quickly. Note that this gradebook is not official. I reserve the right to correct errors, including transcription errors, from the official (spreadsheet) gradebook, to which I alone have access, until finalization of grades with the registrar.

Schedule: (subject to adjustments throughout semester) [Hurricanes, pandemics, protests, travel, etc...]

Week	Topics	Reading	Lab
31-Aug	Introduction. Syllabus, Sources of Radiation, Radiation Interactions	Ch 1 & 2	
7-Sep	Labor Day (No class M) Radiation Interactions and Counting Statistics	Ch. 3	
14-Sep	Counting Statistics (cont.)	Ch. 3	Lab 0: Intro. & Safety
21-Sep	Error Analysis	Ch. 3	Lab 1: OScope Usage
28-Sep	Error Analysis (finish), Pulse Shaping & NIM Electronics Homecoming! (No class F)	Ch. 3, 16, & 17	Lab 2: Nuc. Instruments Electronics

Week	Topics	Reading	Lab
5-Oct	Circuits, Multi-Channel Analyzers and General Detector Properties	Ch. 16-18	
12-Oct	General Detector Properties and Gas Detectors (ion chambers) (Exam 1 - this week?)	Ch. 4	
19-Oct	Gas Detectors (ion chambers & G-M tubes)	Ch. 5	Lab 3: G-M Detectors
26-Oct	Gas Detectors (G-M tubes & proportional counters), Scintillators (inorganic)	Ch. 6 & 7	
2-Nov	Scintillators (inorganic & organic), Photomultiplier Tubes & Photodiodes, and Radiation Spectroscopy.	Ch. 6, 8, & 9	Lab 4: Gas-Flow Prop. Detectors
9-Nov	Radiation Spectroscopy, Semiconductor Detectors Veterans Day (no class W)	Ch. 9 & 10	Lab 5: NaI Scintillation Detectors
16-Nov	Semiconductor Detectors and Silicon & Germanium Detectors (Exam 2 - this week?)	Ch. 10 - 12	Lab 6: High-Purity Germanium Detectors
23-Nov	Neutron Detection Thanksgiving holiday (no class W & F)!	Ch. 14 & 15	
30-Nov	Neutron Detection		Lab 7: Neutron Detection
7-Dec	Neutron Detection (Finish) Special Topics*, Jeopardy Final Review, and Final Thoughts		
14-Dec	Final Exam (Dec. 17th 1230-1430)		

*If time permits, I will cover additional topics such as reactor instrumentation, imaging detectors, nuclear forensics, nonproliferation, and/or health physics personnel dosimetry.

Attendance:

Students should attend each class period as quizzes will occur during the lecture period sporadically throughout the semester. If the student has to miss a class for an appropriate reason, it should be brought to the attention of the instructor as far in advance as possible.

In the event of an unexcused absence, it is the student's responsibility to obtain and review the material that was covered during that class period.

If a student arrives late or leaves early, he/she is expected to do so with minimum level of disruption to the class in progress. There is no tolerance for mobile phones or other electronic disruptions. Such disruptions will lead to the student being told to leave the room for the duration of the class period, including during examination periods. The same principle applies to office hours or appointments – if you stop by my office and your phone rings, you will be told to leave the room for the duration of that day's office hours (or your appointment considered over).

Make Up Work:

Late-work excuses can be grouped into the categories of professional, medical, and personal.

Professional: Reasonable extensions for job/internship interviews, technical conferences, or other professional/career development reasons should be requested. Requests are typically granted, at my discretion, unless they would grant a student or group of students an unfair advantage over their peers, cause significant disruption to the course or grading schedule, or violate some UF policy.

Medical: Extensions will also be granted for (your own) medical reasons – please do not come to class if you are ill. Per UF policy, in the case of medical absences that are frequent or suspiciously- timed (e.g.; you are repeatedly, suddenly ill at deadlines), I may request a signed note from a physician or similar professional practitioner.

Personal: In addition, UF policies require accommodation for several non-academic, non- medical reasons. Extensions for these personal issues are strictly limited to those mandated by the letter of UF policies. The list of UF-approved personal reasons changes from time to time. If you have a question regarding your personal issue and if it qualifies under one of the excused absence/late-work policies, contact me in advance.

The 12-day rule will be enforced strictly. Note that the count of days is based on a per-student, not per-approved-activity basis. All requests for excused absence or extension must be submitted in writing, preferably via e-mail.

Pursuant to HWCoe policy, the following statement is required: Excused absences are consistent with university policies in the undergraduate catalog

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> and require appropriate documentation.

For the purposes of this course, in the above-referenced list of approved absence reasons, the word “family” shall be taken to mean your parents, grandparents, great-grandparents (etc.); children, grandchildren (etc.); siblings; aunts/uncles; nieces/nephews; your spouse and the spouse of any of the above; and half- or step- “versions” of the above categories. More distant relatives (cousins, etc.), partners (excluding spouses), and pets are not included. Minor illnesses (guideline: anything meriting home care only or care at a walk-in clinic, as opposed to an ER) of family members, including minor children, do not count as serious family emergencies, nor do events such as birthdays, anniversaries, weddings, etc.

Political activities, including protests, demonstrations, and the like are considered personal matters and not generally permitted as excused absences. This includes activities related to nuclear engineering or nuclear power. Exceptions: (1) A student who is pursuing nuclear-related (whether pro- or anti-) politics as a career path may be granted excused absences, at my discretion, on condition of providing evidence of *bona fide* efforts to secure a full-time position or to secure admission to a relevant, non-STEM degree-granting graduate program and (2) activities between October 28 and November 3, inclusive, that are connected to the ANS Conference will be taken as related to that professional activity and permitted as excused absences.

Further, be advised that any approved reasons for late work do not reduce the amount of work you are expected to complete, but merely rearranges the timing. For those issues that are predictable (interview, holidays, etc.), you should work ahead to avoid disruption. In the case where your approved make-up work adversely affects a group project, I may modify the assignment and/or groups for those concerned to minimize the disruption of one student's issues on other group members.

Collaboration

The ground rules for collaboration should be decided by each group through compromise and consensus. However, regardless of the preferences of the group as a whole, each student retains the individual right to privacy and to maintain good mental and physical health. To this end, no student shall be compelled:

- To join a real-name social networking site or modify their existing use of such a site, or
- To accept a 24/7 or another onerous on-call policy.

That is: each member holds a unilateral veto on using Facebook (or some such) for your group's work or for being contacted at all hours of the day and night.

Inter-personal issues within your group stemming from deciding group rules must be brought to me promptly for arbitration. This arbitration will focus on the guidelines above and in forming an equitable compromise (essentially, equal marginal/new inconvenience) among group members and not on determining whose activities outside this course (including personal pursuits, situations, and choices) are more meritorious.

The allowed level of collaboration on homework may vary and is specified on the assignment.

Course Evaluations

UF expects students to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu/evals>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at

<https://evaluations.ufl.edu/results/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students 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." The Honor Code:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TA in this class.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see:

<http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Changes to Syllabus

Changes to this syllabus will be provided via the Canvas platform. Such changes may include those required by policy changes, my travel, changes in the speed of course coverage, university closure, errors in previous syllabus versions, and other reasons.

Letters of Recommendation/Evaluation Policy

To request a letter of recommendation/evaluation (for graduate school or otherwise), you must provide:

- A hard copy of your UF transcript.
- A hard copy of a resume (or CV).
- A hard copy of the following form: <http://www.registrar.ufl.edu/pdf/ferparelease.pdf>. You must check all four circles.

Letters are typically filed once per week. For students whom I know only through coursework, my letter typically focuses on an estimate of their rank-in-class and on their performance on projects and challenging problems.

I will only file one batch of letters per student during the term, for any student currently enrolled in a class with me. (This policy is designed to keep me from looking up slight changes in your rank/performance multiple times for multiple batches of letters.) I recommend that this batch occur as late as possible in the term to allow me sufficient information (sample size) on your performance to write a useful letter.

I reserve the right to refuse to provide a letter for any student and am not obligated to provide a reason for such refusal.

Commitment to a Safe and Inclusive Learning Environment:

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Additional University Policies

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.
<https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.