

**Course Title:** RESPONSIBLE CONDUCT OF RESEARCH

Course Number and CRN: EDG 4361 Section \_\_\_, (2\_\_Credits), CRN # \_\_\_\_\_

**COURSE DELIVERY**: Hybrid (In-person and online)

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| --- | --- | --- | --- |
| Instructor: | Instructor’s Name | Semester & Year: |  |
| Office: | Bldg. & Room | Class Meeting Days: | Days |
| Phone: | 561-297-xxxx | Class Meeting Hours: | Time |
| Email: | XXXX@fau.edu | Class Location: | Bldg. & Room |
| Office Hours: | Day of week, Times; Students may schedule meetings outside of these times if needed. | | |

**COURSE PreREQUISITES/CO-REQUISITES:** N/A

**COURSE CONNECTION TO PROGRAM OF STUDY:**

This course is appropriate for all university personnel (faculty, administration, and necessary staff) involved in research as well as current and incoming graduate students, honors program students, students enrolled in lab or direct independent study (DIS), technicians, and post-doctoral fellows whose work requires compliance with U.S. Department of Health and Human Services, Office of Research Integrity guidelines. This course provides opportunities to consider the multitude of issues and dilemmas that occur daily. Students will demonstrate mastery of the course content through the completion of the CITI Program modules and participation in live-course discussions, as well as their completion of course specific tasks.

**Course Description:**

This course offers participants across disciplines the opportunity to develop awareness and competence in promoting ethics, integrity, and the responsible conduct of research (RCR). Students will learn knowledge and skills necessary for academic, industrial, and institutional researchers to ensure federal compliance with requirements outlined by the U.S. Department of Health and Human Services, Office of Research Integrity.

Technology:

E-mail: Only Your FAU e-mail address will be used.

“Students are responsible for checking their FAU email on a regular basis and should clean out their email boxes diligently to ensure all mail is delivered. FAU email should never be auto-forwarded to another email account.

Computer: **CANVAS -** This course is presented in hybrid format web through the FAU Canvas. Handouts, lecture notes, activities or power point presentations will be available via Canvas. **Go to the website:** <https://canvas.fau.edu> **to log in.** (Do not type www).

Electronic access to the Textbook: The Shamoo & Resnick (2015) textbook is available via Kindle and multiple other electronic reading software and hardware. The link below will aid students in locating the ebook. [CLICK HERE FOR KINDLE LINK](https://www.amazon.com/Responsible-Conduct-Research-Adil-Shamoo-ebook/dp/B00QBNR90O/ref=mt_kindle?_encoding=UTF8&me=)

Video/Media:

Department of Health and Human Services, Office of Research Integrity interactive movie on research misconduct.

* <https://ori.hhs.gov/thelab>

CITI Program Components and Certifications

* <https://about.citiprogram.org/en/series/responsible-conduct-of-research-rcr/>

Guidelines Used in Developing Course Objectives:

U.S. Department of Health and Human Services, Office of Research Integrity (ORI)

<https://ori.hhs.gov/rcr-objectives-delphi-study>

Council of Graduate Schools, The Project for Scholarly Integrity (CGS)

<http://cgsnet.org/best-practices-graduate-education-responsible-conduct-research>

National Institutes of Health (NIH)

<https://grants.nih.gov/grants/oer.htm>

**(The applicable standards for this course are presented in Appendix A of this syllabus.)**

**Course Objectives/ STUDENT LEARNING OUTCOMES:**

Following the completion of this course, the successful student will:

1. Demonstrate understanding of basic research concepts and complete the CITI Program online-training modules. (CGS)
2. Identify social responsibilities in research. (CGS)
3. Understand and adhere to all safety procedures, including human and animal involvement in research. (ORI 2, 3)
4. Understand inclusion of vulnerable populations in research. (ORI 2)
5. Demonstrate responsible authorship and peer-review practices. (ORI 8,9)
6. Identify ethical practice in data acquisition, management, sharing, and ownership, including intellectual property rights and responsibilities. (ORI 5)
7. Describe the components of collaborative research, university-industry partnerships, and mentor/mentee responsibilities. (ORI 6, 7)
8. Describe conflicts of interest and research misconduct. (ORI 1, 4)
9. Identify financial responsibilities. (NIH, ORI 4)
10. Describe the relationship between research, ethics, and social responsibility. (CGS)

**Course content:**

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| Integrity is defined as the use of honest and verifiable methods in proposing, performing, and evaluating research and reporting research results with particular attention to adherence to rules, regulations, guidelines, and commonly accepted professional codes and norms.  Topics for Responsible Conduct of Research (RCR) include:   1. Basic research concepts, general research 2. Social responsibility in research 3. Human subjects research 4. Publication, peer review, and authorship 5. Animal involvement in research 6. Mentorship 7. Data management 8. Collaborative science within academia and industry 9. Conflicts of interest and commitment 10. Intellectual property 11. Research Misconduct |

COURSE EVALUATION METHOD:

1. [CITI COMPLETION CERTIFICATION](https://about.citiprogram.org/en/series/responsible-conduct-of-research-rcr/) 
   1. [RCR Basic: Core norms, principles, regulations, and rules governing the practice of research](https://about.citiprogram.org/en/series/responsible-conduct-of-research-rcr/)
   2. [Completion of discipline specific, IRB requirements (may vary across students)](https://about.citiprogram.org/en/series/responsible-conduct-of-research-rcr/)
2. COURSE ACTIVITIES- These activities are designed to provide application opportunities and to analyze current practices in RCR. The instructor will evaluate these activities. Students will be responsible for the completion of these activities by applying the text and lecture concepts. Further description of these activities will be posted on the course CANVAS site and include:
   1. College specific tasks (5 tasks)
   2. Application Activities (5 in-class activities)
   3. Completion of online modules (6 modules)
3. PARTICIPATION AND ATTENDANCE- This is a hybrid course that includes both live and asynchronous learning opportunities. Attendance at the live sessions is required as with any face-to-face class presentation. Live attendance is a federal requirement as outlined by the U.S. Department of Health and Human Services, Office of Research Integrity.

**TIME COMMITMENT**

To be successful in this course, it is estimated that you will need to commit at least 4 hours per week, dedicated to this course. This includes reading, reviewing lecture notes and handouts, completing assignments, and interacting with your learning community.

**TEACHING METHODOLOGIES:**

Methods of instruction include lectures, discussions, modeling, guided practice, group activities, cooperative learning presentations, and media presentations. Participants will acquire knowledge and skills related to the responsible conduct of research.

**INSTRUCTOR COMMUNICATION GUIDELINES:**

Email is the preferred mode of communication. Please allow up to 48-hours for instructor response to email communications. Please allow up to one-week for grading feedback to appear in the grade book on the course site for all assignments submitted.

**ASSESSMENT PROCEDURES**

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| **Assignment** | **Points** |
| CITI Completion Certificate | 25 |
| College specific tasks (5 tasks @ 5 points each) | 25 |
| Application Activities (5 in-class activities @ 10 points) | 50 |
| Completion of online modules (6 modules @ 10 points each) | 60 |
| Participation in class activities | 15 |
| **TOTAL** | 175 |

**COURSE GRADING SCALE:**

Students will receive a satisfactory (S) or unsatisfactory (U) for this course. Students with 127 total points of the total available meeting the course requirements will not receive a satisfactory grade and must retake the course to satisfactorily complete their RCR requirements.

**COURSE POLICIES:**

1. The course carries two (2) credits. Students are expected to complete course requirements both during and outside of course meetings sufficient to earn two credits during the time-span of the course.
   1. There may be a technology fee included in the cost of this course.
2. Students are encouraged to talk with the instructor if there are concerns or problems relating to the course. 
   1. Reasonable accommodations will be made for students participating in religious observance.
   2. Grades of Incomplete (“I”) are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances.
3. Due dates for assignments are provided in the course outline and will be strictly enforced. Assignments submitted late will be penalized by 10% of points for every day it is late.
   1. Students may not be penalized for absences due to participation in University-approved activities, including athletic or scholastic teams, musical and theatrical performances, and debate activities. Students will be allowed to make up missed work without a reduction in their final course grade.
4. All written assignments must be (a) typed in 12-point TIMES NEW ROMAN OR ARIAL fonts ONLY, (b) double-spaced, (c) each page having a header with the students’ name, course id and section, assignment name, and page number, (d) submitted via Canvas on or before their posted due dates. All assignments for this course will be discussed in-class.
5. Laptop computers, tablets, or other electronic devices used in class are acceptable ONLY to take notes, or to follow course materials/content for this class exclusively.
6. Recording devices may only be used with the explicit permission of the instructor, for students registered with Student Accessibility Services, if note-taking assistance has been granted by the University as a reasonable accommodation, recording devices may be used following receipt of the students’ accommodation letter.

6.Changes to the syllabus: Amendments to schedules, assignments, grading criteria, or any other course policy may be changed based on the class performance. If there is any change, this will be announced and students are responsible for those changes.

7. Assignments submitted in class will be graded and returned back to students within 10 days. It is the student’s responsibility to collect the graded paper from the professor during office hours in the event the student is absent when the assignments are returned.

**Professional Ethics, University Policies, and EXPECTATIONS**

Students, scholars, and researchers are expected to practice ethical behavior during research activities, class, and within the university community. All students are expected to demonstrate a professional demeanor in their FAU courses including attendance, participation and responsible attention to requirements and deadlines necessary for the successful completion of this course. Attendance includes active involvement in all class sessions, class discussions, and class activities, as well as professional conduct in class. To avoid learner confusion or disappointment, the following are assumptions and expectations for this course:

**University Attendance Policy**

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in University-sponsored activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student’s responsibility to give the instructor notice prior to any anticipated absences, and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student’s final course grade as a direct result of such absence.

**Disability Policy Statement**

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU’s campuses- Boca Raton, Davie and Jupiter- however disability services are available for students on all campuses. For more information, please visit the SAS website at [www.fau.edu/sas/](http://www.fau.edu/sas/).

SAS office location information: Boca Raton, SU 133 (561) 297-3880: in Davie, LA 131 (954) 236-1222; in Jupiter, SR 111F (561) 799-8010.

**Counseling and Psychological Services (CAPS) Center:**

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU’s Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services - individual counseling, support meetings, and psychiatric services, to name a few - offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>.

**Assistance for Veterans:**

For general information important to veterans and other incoming students, Please visit the University website dedicated to veterans at: <http://www.fau.edu/vets/>

**FAU Code of Academic Integrity:**

*Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.*

**REQUIRED TEXT/READINGS**

The textbook required for this class is available in hard copy, as well as electronically through the Amazon Kindle website and Kindle App.

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|  | Shamoo, A. D., & Resnick, D. B. (2015). *Responsible conduct of research (3rd Ed*.). New York: Oxford University Press. |

supplementary/recommended readings:

Council of Graduate Schools. (2008). *Best practices in graduate education for the responsible conduct of research*. Retrieved from <http://cgsnet.org/best-practices-graduate-education-responsible-conduct-research-1>

**BIBLIOGRAPHY**

Council of Graduate Schools. (2008). *Best practices in graduate education for the responsible conduct of research*. Retrieved from <http://cgsnet.org/best-practices-graduate-education-responsible-conduct-research-1>

Langlais, P. J., & Bent, B. J. (2017). Effects of training and environment on graduate students’ self-rated knowledge and judgments of responsible research behavior. *Ethics and Behavior, 28*(2), 133-153.

Shamoo, A. D., & Resnick, D. B. (2015*). Responsible conduct of research (3rd Ed.)*. New York: Oxford University Press.

Todd, M. E., Watts, L. L., Mulhearn, T. J., Torrence, B. S., Turner, M. R., Connelly, S., & Mumford, M. M. (2017). A meta-analytic comparison of face-to-face and online delivery in ethics instruction: the case for a hybrid approach. *Science and Engineering Ethics, 23*(6), 1719-1954.

Watts, L. L., Todd, E. M., Mulhearn, T. J., Medeiros, K. E., Mumford, M. D., & Connelly, S. (2017). Qualitative evaluation methods in ethics education: A systematic review and analysis of best practices. *Accountability in Research, 24*(4), 225-242.

**COURSE SCHEDULE and TOPICAL OUTLINE**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| *Loc.* | | *Topics* | | *Reading* | | | *Activity* |
| *1* | *Live Lecture* | | Introduction to RCR, identify the 9 topics from ORI in DHHS | | DHHS ORI Website | Application  Activity 1 | | |
| *2* | *Online Module* | | General Research and Basic Concepts | | CGS 2008 RCR Handbook | Module 1 | | |
| *3* | *Online Module* | | Complete CITI training & RCR CITI module | | Module 2 (includes RCR-CITI)  Upload separate CITI completion certificate to the course website on Canvas, save attachment as: CITICERT\_Lastname\_course section | | | |
| *4* | *Live Lecture* | | Safety, Ethics, and Social Responsibility in Research | | Shamoo & Resnick Chapter 1 &12 | App. Act. 2 | | |
| *5* | *Live Lecture* | | Research involving human subjects  (including vulnerable populations) | | Shamoo & Resnick Chapter 11 | Case study  Task 1 | | |
| *6* | *Live Lecture* | | Animal involvement in research | | Shamoo & Resnick Chapter 10 | Case study  Task 2 | | |
| *7* | *Live Lecture* | | Collaborative research, science within academia and industry, conflicts of interest and commitment | | Shamoo & Resnick Chapter 5 & 9 | Case study/Discussion  App. Act. 3 | | |
| *8* | *Live Lecture* | | Research misconduct | | Shamoo & Resnick Chapter 2 | Thelab.gov  Task 3 | | |
| *9* | *Live Lecture* | | Data acquisition, management, sharing, and ownership | | Shamoo & Resnick Chapter 3 | Case study/Discussion  Task 4 | | |
| *10* | *Online Module* | | Publication practices, responsible authorship, plagiarism, peer-review, and mentoring | | Shamoo & Resnick Chapter 4, 6, & 7 | Module 3  Discussion | | |
| *11* | *Online Module* | | Financial management and responsibilities, Financial Conflict of Interest (FCOI) | | National Institutes of Health website | Module 4 | | |
| *12* | *Online Module* | | Export controls and national security | | CITI Export Control | Module 5 | | |
| *13* | *Live Lecture* | | [Intellectual Property](https://grants.nih.gov/grants/bayh-dole.htm) and Technology development | | Shamoo & Resnick Chapter 8 | Case study/ Case law  App. Act. 4 | | |
| *14* | *Online Module* | | Safety/college specific research conduct | | specific ethics codes and regulations | Module 6  Task 5 | | |
| *15* | *Live Lecture* | | Research ethics and society | | Shamoo & Resnick Chapter 13 | Case study  App. Act. 5 | | |

APPENDIX A

GUIDELINES USED IN THE DEVELOPMENT OF THIS COURSE.

The instructor has included links for students to read and review the guidelines for knowledge and skills related to the goals and objectives of this course for researchers. The intent is to help the students understand the foundations for the course and the relevancy of the material to be learned.

* + [U.S. Department of Health and Human Services Office of Research Integrity](https://ori.hhs.gov/general-resources-0)
  + [Council of Graduate Schools- Best practices in graduate education](http://cgsnet.org/scholarly-integrity-and-responsible-conduct-research-rcr)
  + National Institutes of Health
    - [Financial Conflict of Interest (FCOI)](https://grants.nih.gov/grants/policy/coi/coi_faqs.htm#policytopics)
    - [Intellectual Property](https://grants.nih.gov/grants/bayh-dole.htm)

APPENDIX B

CLASS ASSIGNMENT SUMMARY

The instructor has included a description of the course Modules, Application activities, and Tasks to assess knowledge and skills related to the goals and objectives of this course.

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| **Module (On-line; 6 modules @ 10 points = 60 Points)** | |
| 1 | General research and basic concepts |
| 2 | CITI training completion: how to complete and which sections must be completed in addition to RCR for each student |
| 3 | Publication practices, responsible authorship, plagiarism, peer review, and mentoring |
| 4 | Financial management and FCOI |
| 5 | Export controls and national security |
| 6 | Safety/college specific |
|  |  |  |
| **Application Activities (In-class; 5 activities @ 10 points = 50 Points)** | |
| 1 | Write down 9 RCR topics from ORI website; write down discipline specific ethics organization |
| 2 | Identify 2 issues in each of the following areas: safety, ethics, responsibility based upon thelab.gov video |
| 3 | Identify 3 types of conflict of interest |
| 4 | Short answer: Describe the Bayh-Dole Regs 37 CFR 401 |
| 5 | Using issues from Application Activity 2; for each issue, identify areas where research, ethics, and society could be addressed; or how to avoid in own practice |
|  |  |  |
| **College Specific Tasks (5 tasks @ 5 points = 25 Points)** | |
| 1 | Identify 5 issues within human subjects research |
| 2 | Identify 5 issues within animal research |
| 3 | Identify 5 examples of research misconduct relevant to your discipline |
| 4 | Identify 5 data management issues and where it applies |
| 5 | Identify 5 college specific safety/RCR issues apply |