**IDS 3910C – Fundamentals of Research and Inquiry – 1 credit**

**Location: Sanson Science SC
Time: Fri 12pm to 2:50pm
Fall Semester 2016**

***Instructor:***

Dr. Evelyn Frazier (Sanson SC 212; 7- 4472; efrazier@fau.edu)

***Office Hours:***By Appointment

**Course Description:**

This course is an introduction to scientific research. Students will learn and apply the scientific method to their own research questions. The course focuses on scientific literacy, such as reading scientific papers, interpreting and analyzing data and communicating scientific results. The course promotes and facilitates the matching of students to research mentors`, but cannot guarantee the matching.

***Course Objectives/Learning Outcomes: Students will learn to:***

1. Conduct a literature search, and navigate important research related websites.
2. Critically analyze scientific articles, as well as critique oral presentations
3. Utilize several software required for making presentations (e.g., Microsoft Office and Photoshop).
4. Complete laboratory safety training courses offered through the Environmental Health and Safety office
5. Develop a research question founded in current literature.
6. Identify, communicate with and secure a research mentor

***Course Outcomes: After completion of this course students should be able to:***

1. Ability to understand how academic research is conducted and critically analyze scientific research and interpret scientific graphs and figures (a,b,e,f,h,i,j,k).
2. Ability to maintain a safe laboratory environment with proper safety training (a,b,d,e,f,g,h,i,j,k)
3. Ability to identify and approach potential faculty mentors about undergraduate research (d,e,g,h,i,j,k)
4. Ability to navigate important research related reference materials and apply ethical conduct skills (a,b,e,f,g,h,i,j,k)
5. Ability to identify and apply for additional research opportunities (summer internal, external, graduate school, etc.) (d,e,g,h,i,j,k)
6. Ability to communicate the ideas within the research project in a written proposal as well as an oral presentation (d,g,k).

***Course Evaluation Method:*** The course grade will be based on evaluation of the following:

Attendance and Participation: 70 pts

Written Assignments: 180 pts

Seminar presentation summaries – 30 pts

Oral Presentation: 30 pts

***Course Grading Scale:***

Total Points Percent Final Grade

278-310 93-100 A

267-277 90-92 A-

260-268 87-89 B+

248-259 83-86 B

239-247 80-82 B-

230-238 77-79 C+

218-229 73-76 C

209-217 70-72 C-

200-208 67-69 D+

188-199 63-66 D

179-187 60-62 D-

000-178 00-59 F

An incomplete grade (I) will not be given in lieu of a grade of C or less. Appropriate documentation must be presented for justifiable absence from a class.

Attendance is required for the student to obtain a letter grade. If a student misses 3 or more meetings the student will begin to incur point deductions. Students who are late turning in assignments, or fail to turn in assignments will also receive point deductions.

***Policy on makeup class work, late work, and incompletes***

Students will not be penalized for absences due to participation in University-approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. STUDENTS MUST PROVIDE DOCUMENTATION within one week of the absence. These students will be allowed to make up missed work without any reduction in the student’s final course grade. Students have to contact the faculty and teaching assistants BEFORE these events to arrange for appropriate make-up arrangements that might include turning in the assignment earlier. Reasonable accommodation will also be made for students participating in a religious observance. Also, note that grades of Incomplete (“I”) are reserved for students who are passing a course (with a C-) but have not completed all the required work because of exceptional circumstances. A grade of “I” will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU’s University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing withsupporting documentation, where appropriate.

***Honor Code Policy***

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 unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001\_Code\_of\_Academic\_Integrity.pdf

***Instructions to students:***

Please turn in all your work as a Word document (.doc, not .docx) in SafeAssign through our blackboard site. Your file should be named as follow: your name, the title of the work, and the date of submission, i.e. Frazier Research Poster 01-13-2012. Once the teaching assistant has made suggestions, we expect them to be incorporated in your paper. If you disagree with the suggestions, please talk to T.A. and explain your reasoning for not incorporating the suggested changes. Only final versions should be submitted to Dr. Frazier. We also expect our suggestions be incorporated on your final version. IF you disagree with the suggestions, explain in writing, why you have chosen not to incorporate them in your final version. All final versions of your documents should be turned in through SafeAssign via blackboard.

**Required Books/Supplements:** None

**Blackboard:** is an online educational program that ALL students enrolled in this class have FREE access to. All you need to do is go to <http://blackboard.fau.edu> and follow procedures to login.

**E-mail:** All students are required to check their FAU e-mails every day once a day. Your instructor as well as your TA will be communicating with you personally via e-mail. DO NOT have your FAU account forwarded to AOL or other e-mail sites because some messages will NOT make it through.

**E-mail Etiquette:** Wait 48 hours for a response to your e-mail. Do not expect anyone to reply during a weekend or holiday. When e-mailing your T.A.’s, faculty or staff at FAU, please write e-mails in a professional format. WE ARE NOT YOUR BUDDIES! We have a PROFESSIONAL relationship and you should be trained to correspond in a professional manner. Here are some suggestions: Greetings: refer to the faculty as Dr. Last Name, T.A.’s and FAU staff as Mr. LAST NAME or Mrs./Ms. LAST NAME; Subject line of the e-mail should include: Course name or number: e.g.Fundamentals of Research and Inquiry orIDS 3910; and ALWAYS write your FULL NAME.

**INAPPROPRIATE E-mail example:”** yo, what is my grade b4 the final?” NEVER USE abbreviations such as used in text messaging. No one should have to answer such an e-mail! Always include a greeting with the appropriate titles, and make sure to include your full name at the end of the email.

**Religious Accommodations**: Students who wish to be excused from class activities or examinations must notify the instructor in advance of their intention to participate in religious observation and request an excused absence. All coursework has to be made up.

**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)—in Boca Raton, SU 133 (561-297-3880); in Davie, LA 203 (954-236-1222); or in Jupiter, SR 110 (561-799-8585) —and follow all SAS procedures.

SCHEDULE OF ACTIVITIES

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| **Week** | **Date** | **Activity** | **Homework****Due following Tuesday 11:59pm unless stated differently.** | **Due Date** |
| Week 1 | Fall 2016 | 1. Introduction,
2. Expectations

and schedule3) What is Science? | 1) Look up the names of the faculty you are interested in working with, read one research paper abstract of three faculty2) Submit three faculty names and a brief description of their research |  |
| Week 2 | Fall 2016 | 1. How to dissect a research paper
2. Working with Faculty and graduate students
3. How to identify and reach out to a research mentor

4) Finding scientific references. Using FAU library Services/Databases | 1) Research two recent scientific articles by the faculty of your choice. Dissect one of the research articles and submit a summary. 2) Draft a professional email that you will send the faculty that you have selected. Submit and bring a hard copy to class to be exchanged with your classmates for peer review |  |
| Week 3 | Fall 2016 | 1)Meet the Peer Mentors/Faculty Liaisons/Faculty Researchers2) How to get started in Research and InquiryOURI Opportunities (CSI, SURF, Symposium, Honors in the Major, DIR, Grants, etc.) Summer Experiences (e.g., NSF REU).3) OURI UG research grant application process | 1) Read one reference regarding a topic of research related to the research conducted by the faculty who will be giving the talk next week.2) Write a two paragraph summary of the paper. In that summary answer the three concept questions and formulate three questions you will ask the speaker.3) Select and bring to class guidelines of two research opportunities of your choice |  |
| Week 4 | Fall 2016 | Presentations:Speaker 1 & 2 | 1) Write a two paragraph paper on your understanding of the research questions and how they were addressed by this week’s invited speaker 2) Read one reference regarding a topic of research related to the research conducted by the faculty who will be giving the talk next week.3) Write a summary. In the summary, answer the three concept questions and formulate three questions you will ask the speaker. |  |
| Week 5 | Fall 2016 | Presentations:Speaker 3 & 4 | 1) Write a two paragraph paper on your understanding of the research questions and how they were addressed by this week’s invited speaker 2) Read one reference regarding a topic of research related to the research conducted by the faculty who will be giving the talk next week.3) Write a summary. In the summary, answer the three concept questions and formulate three questions you will ask the speaker. |  |
| Week 6 | Fall 2016 | Presentations:Speaker 5 & 6 | 1) Write a two paragraph paper on your understanding of the research questions and how they were addressed by this week’s invited speaker 2) Read one reference regarding a topic of research related to the research conducted by the faculty who will be giving the talk next week.3) Write a summary. In the summary, answer the three concept questions and formulate three questions you will ask the speaker. |  |
| Week 7 | Fall 2016 | Presentations:Speaker 7 & 8 | 1) Write a two paragraph paper on your understanding of the research questions and how they were addressed by this week’s invited speaker 2) Read one reference regarding a topic of research related to the research conducted by the faculty who will be giving the talk next week.3) Write a summary. In the summary, answer the three concept questions and formulate three questions you will ask the speaker. |  |
| Week 8 | Fall 2016 | 1) Discussion on possible research mentors2) Establish goals and expectations with your research mentor3) OURI UG research grant (OPTIONAL) | 1. Discuss a research project and a timeline of activities with your research mentor. Submit your timeline via blackboard
2. Discuss the mentor mentee contarct
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| Week 9 | Fall 2016 | Library Skills | Find 3 research articles of your choice |  |
| Week 10 | Fall 2016 | Laboratory Safety and EtiquetteHaz wasteBiosafetyIACUC/IRB issuesResearch Ethics | None |  |
| Week 11 | Fall 2016 | 1)Resume/CV writing 2) Evaluate research applications3) Preparing for grad school  | 1) Write a draft of your resume and CV for peer review in class2) Bring a list of the application requirements for the graduate school of your choice |  |
| Week 12 | Fall 2016 | What makes a good poster, critiquing a poster | Critique 4 posters of your choice |  |
| Week 13 | Fall 2016 | 5 min presentation on your research topic/ project/ mentor  | All students present ( 5 minutes for presentation,3 minutes for questoion 2 break. |  |
| Week 14 | Fall 2016 | Thanksgiving | None |  |
| Week 15 | Fall 2016 | Final evaluations | None |  |
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