This course proposal form should be completed when introducing a new course or a revision of an existing course. The proposal will be reviewed by the Committee on Curriculum, or, in the case of minor revisions, will be approved administratively by the Associate Provost for Instruction.

This Course Proposal must be completed according to the guidelines provided in Course Proposal Form – Instructions and Guidance. Please see the last page of Course Proposal Form – Instructions and Guidance, for instructions on how this Course Proposal should be submitted to the Committee on Curriculum for review.

Date: Feb 3, 2021

1. Course Information:

1.1 Course Prefix and Number: FCH502
Course Title: Research Ethics
(If a new or renumbered course, please check with the Registrar regarding the use or reuse of the course number)

1.2 ☑ This is a New Course.
OR
☐ This is a Major Course Revision
OR
☐ This is a Minor Course Revision

If this is a Course Revision, please see Course Proposal Form – Instructions and Guidance to determine if your revision is major or minor. Indicate below the reason(s) for the revision.

(Please check all that apply)

☐ Course Number/Division ☐ Learning Outcomes ☐ Institutional Resources
☐ Title ☐ Concepts, Content ☐ Semester Offered
☐ Credit hours ☐ Catalog Description ☐ Course Inactivation
☐ Pre- or Co-requisite(s) ☐ Instructional Methods ☐ Course Reactivation
☐ Format ☐ General Education

1.3 General Education knowledge and skills area (if applicable): If none, check here ☑

☐ American History ☐ Humanities ☐ Other World Civilizations
☐ The Arts ☐ Mathematics ☐ Social Sciences
☐ Basic Communication ☐ Natural Sciences ☐ Western Civilization
2. Proposer Need Statement:

2.1 Describe why this course (or course revision) is needed to meet current or proposed goals and outcomes of the program or College, and, if a revision, provide an explanation of and justification for the revision. This course will cover the necessary topics required by NIH and NSF for Responsible Conduct of Research. For NSF, that covers undergraduate, graduate, and faculty receiving funding for which Responsible Conduct of Research training is required. For NIH, that covers graduate students applying for NIH fellowships and early career investigators applying for mentored awards. NIH stipulates that at least eight hours of face-to-face training is necessary to fulfill this obligation.

2.2 List the pre-requisite or co-requisite courses (taught within the home department or taught by another department) and explain their relationship to the proposed course. None

2.3 Explain the impact of this course in meeting the goals and outcomes of other Departments/programs (if any). This course is intended for any SUNY ESF or SU student that is required by NIH or NSF to receive training in research ethics. Faculty can audit the course if they are required to taking ethical training by NIH or NSF.

2.4 If the proposed course is designed to fulfill SUNY General Education Requirements, the Associate Provost for Instruction must review this proposal to ensure that General Education Requirements will be met for the specified knowledge area (See Instructions and Guidance).

Please provide an explanation of how this course fulfills SUNY General Education Requirements. NA

2.5 What are the staffing requirements (instructor, TA, Lab tech, etc.) for this course? If a new course, are there new staffing needs or are there adequate staff members already in place? If a revised course, are there additional staffing needs? This course will be taught by current faculty. No new staffing needs are required.

2.6 What Department (or extra-Department) resources are or will be made available to support the course or course revision? None

2.7 Anticipated Enrollment (enter where applicable)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>0</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>10</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>0</td>
</tr>
</tbody>
</table>

2.8 Anticipated frequency of class meetings. 1 per week
3. DETAILED COURSE DESCRIPTION

3.1 COURSE IDENTIFICATION AND FORMAT:

3.1.1 Course Prefix and Number: FCH502
3.1.2 Course Name: Research Ethics
3.1.3 Credit Hours: 1
3.1.4 Semester (check all that apply): Fall ☐ Spring ☒ Summer ☐
3.1.5 Format (check as appropriate): Lecture ☐ Online ☐ Lab ☐ Field ☐
Other ☒ (explain) Seminar
3.1.6 Contact hours per week: 1
3.1.7 Prerequisite(s) – if none, please enter “None” (Be specific, as Upper Division courses and Graduate courses will likely have some pre-requisite knowledge) None

3.2 SCOPE:

3.2.1 Level of Instruction (check one, or two if a shared resource course):
   Lower Division ☐ Upper Division ☐
   Beginning Graduate ☒ Advanced Graduate ☐

3.2.2 Relation to curriculum or to other ESF or Syracuse University courses:
   a. Is this a required course?  No ☐ Yes ☒.
      If Yes, please list the program(s) for which it is a requirement: NA
   b. Is this an elective course within your department?  No ☐ Yes ☒.
   c. Is enrollment in this course restricted?  No ☐ Yes ☒.
      If Yes, please explain: NA
   d. Are other ESF or SU courses similar or identical to this course?  No ☐ Yes ☒.
      If Yes, please identify the courses: NA
   e. Is this course a shared resource offering (i.e. is there a graduate or undergraduate concurrent offering)?  No ☐ Yes ☒.
      If Yes, what is the course number of the concurrent offering? NA

3.3 STUDENT LEARNING OUTCOMES:

Identify the student learning outcomes associated with this course. After successfully completing this course, the students should be able to:

1. Explain the key ethical responsibilities of being a scientific researcher.
2. Identify common challenges one could face regarding ethical responsibilities in research and apply a range of strategies to respond to potential ethical challenges.

3.4 MAJOR CONCEPTS, PROCESSES or TOOLS:

Identify the course content and themes (e.g. Table of Contents) consistent with the learning domains and outcomes. This course will cover the necessary topics required by NIH and NSF for Responsible Conduct of Research, including but not limited to:
1. Conflicts of interest
2. Safe laboratory practices
3. Policies regarding human subjects and animal work
4. Mentor/mentee responsibilities
5. Peer review
6. Research misconduct
7. Responsible authorship and publication
8. Data sharing and ownership

3.5 INSTRUCTIONAL METHODS:

Identify the methods used to meet the course outcomes, as well as the principal instructional methods. This course will be taught using a flipped classroom design. Students will be assigned required readings prior to coming to class and must participate in the discussion. During class time, we will have open discussions about their reading and the answers to their homework assignments. At the end of the semester, the students will select a topic discussed in the course and complete a reflection paper. The students will also be required to take the CITI Responsible Conduct of Research training and provide a copy of their certificate stating that they successfully passed the online training course.

3.6 CATALOG DESCRIPTION

Provide the course description using the precise format to be included in the ESF catalog (i.e. course number and title; format; brief description; semester(s) offered; and pre-/co-requisites). Please do not exceed 1000 characters.

FCH 502 Research Ethics (1)

One 55 minute class meeting per week. Discussions on the ethical responsibilities of being a scientific researcher. These in-depth discussions will focus on the following topics: conflicts of interest, safe laboratory practices, policies regarding human subjects and animal work, mentor/mentee responsibilities, peer review, research misconduct, responsible authorship and publication, and data sharing and ownership. Spring.

Pre and co-requisite(s): None.

3.7 COURSE HISTORY:

Provide the dates of prior approval of this course, and its revision history. NA

3.7.1 Relationship to current ESF courses
This course is replacing a current ESF course  

☑ YES  ☒ NO

If NO, then proceed to section 4 below.

If YES, then provide below the number and name of the course to be deactivated and removed from the catalog once this course proposal has been approved:

Course Number (of the course to be replaced)
Course Name (of the course to be replaced)

If the course to be replaced is used by departments other than the department sponsoring this proposal, please indicate below which departments are affected and the date they were notified about the course replacement.

Department:  Date of Notification:  
Department:  Date of Notification:  
Department:  Date of Notification:  
Department:  Date of Notification:  
4. **Institutional Impacts:**

This section pertains to forecasting institutional resource needs to support the course or course revision. Provide clear statements regarding the needs and current availability (or absence) of resources. Note that, if this is a course revision, only the impacts of the revision should be included.

- **Staffing needs:** 1 faculty currently on staff

- **Classroom resources (e.g. physical facilities in a laboratory, lecture hall, flexible space, academic computing):** Room suitable for discussion by a group of 10 students having a computer projector

- **Technology Resources:** None

- **Computing Resources (software licensing, hardware, access):** None

- **Library Resources (subscriptions, services):** None

- **Transportation Requirements (budget, fees, fleet vehicles):** None

- **Forest Properties or Field Practicum Facilities:** None
5. Health and Safety Considerations:

Will any of the conditions or situations outlined below be present in association with the course?  

Yes / No

5.1. Will substances with any of the following properties be used during instruction: flammability, toxicity, corrosivity, reactivity, registered pesticide, legally controlled, or other characteristics with the potential to cause harm or injury?  

☐ / ☒

5.2. Will any physical hazards be present during instruction? (e.g., machines that need safety guards; razor blades or syringes; compressed gases, etc.).  

☐ / ☒

5.3. Will any biological hazards be present during instruction? (e.g., handling animals (rabies or hantavirus); cultures or stocks of infectious agents (fungal spores, viruses, bacteria, etc.).  

☐ / ☒

5.4. Will any radiation hazards be present during instruction? (e.g., radioisotopes, X-rays, ultraviolet rays, lasers, etc.).  

☐ / ☒

5.5. Will any electrical equipment that, due to its design, location, or method of use, pose any threat to safety during instruction? (Give considerable thought to electrical use outdoors, or any potentially wet location.).  

☐ / ☒

5.6. Will there be any personal safety issues related to the class? (e.g., due to time of day or location, at the end of any organized class exercise, will students be in danger of physical assault, etc.).  

☐ / ☒

5.7. Will any students be driving official state or research sponsored land or water vehicles during any class or instructional exercise?  

☐ / ☒

5.8. Will any type of personal protective equipment be necessary during class exercises? (e.g., hard-hats, eye/face protection, hearing protection, hand/foot protection, lab coat, visibility clothing, etc.)  

☐ / ☒

If the answer was “Yes” to any of the HEALTH AND SAFETY questions, please explain: NA

For lab and field courses to which all answers are “no”, you should explain that here, also. Normally, we would expect some safety precautions for such courses.NA
6. Coordination and Consultation

Emails/letters, as noted below and attached to this proposal, or signatures below, indicate that the affected departments, programs or units have been notified of this proposal and have had an opportunity to assess the impact of the proposal on their respective units.

**Affected Academic Department(s) or Program(s) – other than the sponsoring department:**

Department/Program 1

Chair Signature

Name of Chair/Program Director

Date

Or letter attached □

Department/Program 2

Chair Signature

Name of Chair/Program Director

Date

Or letter attached □

Department/Program 3

Chair Signature

Name of Chair/Program Director

Date

Or letter attached □

[if more than three Departments/Programs, please continue on a separate page]

**Other Units:**

Associate Provost for Instruction & Dean of the Graduate School (for Gen Ed courses only)

Date

Or letter attached □

Registrar

Date

Or letter attached □

Library Director

Date

Or letter attached □

Computing and Network Services

Date

Or letter attached □

Physical Plant

Date

Or letter attached □

Forest Properties

Date

Or letter attached □

Environmental Health and Safety

Date

Or letter attached □
7. Proposer Information and Sponsoring Department Chair Affirmation:

Contact Person:
Name: Jaime Mirowsky
Department: Chemistry
Email: jmirowsk@esf.edu
Phone: 315-470-6850

This proposal has been reviewed and approved by the sponsoring Department. Affected departments have been notified and given the opportunity to provide feedback. Department resources are or will be made available to support the course, or a plan is in place to meet the resource needs as identified in the Institutional Impacts section of this proposal (see Section 4, above).

Name: Avik Chatterjee
Signature: Avik Chatterjee
Date: Feb. 25th, 2021

8. Approvals:

Curriculum Committee

Faculty Governance

Provost