Term Information

Effective Term	Spring 2013

General Information

Course Bulletin Listing/Subject Area	Honors, University
Fiscal Unit/Academic Org	Academic Affairs Admin - D4200
College/Academic Group	Office of Academic Affairs
Level/Career	Undergraduate
Course Number/Catalog	2596H
Course Title	Interdisciplinary and Collaborative Research
Transcript Abbreviation	Intrdisc. Research
Course Description	Provides an introduction to and practicum on interdisciplinary and collaborative research and creative activity. The course will include students dividing up into teams and executing a project of their own, the results of which will be shared in the final weeks of the semester. The students, guided by faculty, will formulate projects that relate specifically to the OSU.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Seminar
Grade Roster Component	Seminar
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	Prereq: Honors status.
Exclusions	

Cross-Listings

Cross-Listings	

Subject/CIP Code

Subject/CIP Code	24.0101
Subsidy Level	Baccalaureate Course
Intended Rank	Freshman, Sophomore

Quarters to Semesters

Quarters to Semesters	New course
Give a rationale statement explaining the purpose of the new course	Course is an introduction to interdisciplinary and collaborative research for first and second year students. We hope it will encourage students to participate in further research with a better understanding of the benfits of interdisciplinary work.
Sought concurrence from the following Fiscal Units or College	

Requirement/Elective Designation

General Education course:

Cross-Disciplinary Seminar (597 successors and new)

Course Details

Course goals or learning objectives/outcomes

- Understand the benefits and limitations of different disciplinary perspectives in research work
- Understand the benefits of synthesizing multiple disciplinary perspectives in research work
- Synethesize adn apply knoweldge from diverse disciplines to a topic of interest in research

Content Topic List

- Interdisciplinarity and collaboration as research processes
- Research, creativity, and original inquiry
- Coming up with good research questions or creative project
- Formulating the right research question
- Case studies of collaborative research in the humanities, arts, medicine, engineering, and biology
- Student Presentations of research project conducted on topics related to OSU

Attachments

- Syllabus - Honors 2596H.docx: Syllabus

  (Syllabus. Owner: Krabacher,Anne Claxton)
- GE Assessment Plan - Honors 2596H.docx: GE Assessment Plan

  (Other Supporting Documentation. Owner: Krabacher,Anne Claxton)
- Request to Offer Course in Spring2013.docx: Request to Registrar to offer in Spring 2013

  (Appeal. Owner: Krabacher,Anne Claxton)
- GERationale - Honors 2596H.docx: GE Rationale

  (Other Supporting Documentation. Owner: Krabacher,Anne Claxton)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Krabacher,Anne Claxton	09/13/2012 10:39 AM	Submitted for Approval
Approved	Krabacher,Anne Claxton	09/13/2012 10:39 AM	Unit Approval
Approved	Soave,Melissa A	09/13/2012 12:48 PM	College Approval
Pending Approval	Nolen,Dawn Jenkins,Mary Ellen Bigler Vankeerbergen,Bernadette Chantal Hogle,Danielle Nicole Hanlin,Deborah Kay	09/13/2012 12:48 PM	ASCCAO Approval

Sample Syllabus

University Honors 2596H

Interdisciplinary and Collaborative Research

Instructor: Professor Daniel Reff
Office: 430 Hagerty Hall
Phone: 292-1485; email: Reff.1@osu.edu
Office Hours: M&W 3-4 pm or by appointment.
Class Meeting Time & Location:

Course Description

Many honors students go on to graduate/professional school or careers in business (think GOOGLE, NASA, Ford, or the Limited) and are asked to do interdisciplinary or collaborative research (or creative activity), that is, they are asked to work as part of a team, bringing different perspectives to bear on a particular problem or challenge.

This course provides an introduction as well as a practicum on interdisciplinary and collaborative research, or creative activity (e.g. realizing works of drama, art, and performance). The course will include students dividing up into teams and executing a project of their own, the results of which will be shared in the final weeks of the semester. The students, guided by the instructor and/or other faculty, will formulate projects that relate specifically to the OSU campus and its environs. Arguably, the OSU campus (both natural and human-made) is a world unto itself. For instance, the university spends many millions of dollars on energy; where exactly does it all go? The river that runs through campus has signs saying don't go near the water; what exactly is in the Olentangy river and where does it come from? Along the same river, just south and north of campus (or along High Street), homeless people live in tents and cardboard shelters; how do these often familiar people "contribute" to campus life? Many students and faculty perceive the neighborhoods surrounding campus as less than ideal places to live; some are even perceived as dangerous — what's the reality? The campus itself is a "constructed space" that elicits certain emotions (e.g. fear, affability, great thought?) and behavior; how is campus "constructed"? We ask our students to think globally, which is good, yet our "own world" is a great laboratory for exploring ideas and solving problems (**See last page of syllabus with sample list of possible research questions relating to campus**).

Major Course Components

1. Reading and discussion of research and creative activity, specifically interdisciplinary and collaborative research.
2. Guest presentations by OSU professors from different disciplines who have been involved with or directed interdisciplinary and/or collaborative projects.
3. Student formulation and execution of their own projects focused on the OSU campus and its immediate environs (including regular sharing of work and final product dissemination and critique).

The GE Requirement

This three-credit, cross-disciplinary seminar, helps satisfy the 6 credit "Open Options" degree requirement.

COURSE GOALS:

Students demonstrate an understanding of a topic of interest through scholarly activities that draw upon multiple disciplines and through their interactions with students from different majors.

This course is designed to help students understand research, in general, and interdisciplinary and collaborative research, in particular. Importantly, this understanding will be acquired not simply from reading and discussion and faculty presentation of research (all helpful, hopefully), but from student involvement in formulating and executing interdisciplinary projects, including writing up and/or presenting the results of creative activity. Students will correspondingly participate in scholarly activities that entail interaction with students from different majors and engagement with ideas and methods from multiple disciplines.

EXPECTED LEARNING OUTCOMES:

1. Students understand the benefits and limitations of different disciplinary perspectives.
2. Students understand the benefits of synthesizing multiple disciplinary perspectives.
3. Students synthesize and apply knowledge from diverse disciplines to a topic of interest.

The course will address these learning outcomes by helping students develop the following skills:

1. Critical/Problem Solving Skills: Students will develop their ability to identify and formulate a relevant research problem (or focus of creativity) and corresponding methodology. They will likewise better understand generating "data" or "findings," interpreting results, and articulating reasonable conclusions.

2. Collaborative Skills: Students will cultivate an ability to work with others in a proactive (rather than passive) research context, enhancing intellectual and social skills required for problem solving. Students will correspondingly understand the benefits and limitations of different disciplinary perspectives, including synthesizing and applying knowledge from diverse disciplines to a research topic of interest.

3. Research Writing and/or Productive Creativity: Students will demonstrate an ability to see a project to completion, realizing a tangible end result (e.g. art project or research paper; oral presentation) that can be shared and critiqued by interested others.

Required Texts and Other Course Material

BOOK:

The Craft of Research, Third Edition, by Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams (Chicago: University of Chicago Press, 2008) [276 pp.]

ARTICLES AND BOOK CHAPTERS:

*items on syllabus (see "Schedule of Topics and Assigned Reading") to be made available on Carmen

Evaluation, Grading, and Miscellaneous Regulations:

This course will be conducted as a seminar. Students will be expected to 1) read critically, and 2) come to class ready to share ideas in a vigorous yet respectful manner. It is imperative that you do the

assigned reading as per the syllabus (See below "Schedule of Topics and Assigned Readings"). **25% of your final grade will be based on your class participation throughout the semester. Another 10% of your final grade will reflect two, separately graded, "discussion facilitations"** (for most class periods students will help take the lead in guiding class discussion of the assigned reading for the day; your grade will hinge on your formulation of relevant and thoughtful questions raised by the reading. Discussion facilitation assignments will be made the first week of class. Note – no later than one hour before class on the day you are facilitating, you need to send me your discussion facilitation questions, so I can prepare a handout).

NOTE: It is perhaps obvious that regular attendance is a must. In the case of a medical or other emergency, students should send me an email and provide some documentation indicating that s/he was unable for medical or other reasons to attend class. Poor class attendance (missing more than two classes) will necessarily impact negatively your class participation grade.

As noted in the course description above, the professor will work with students to realize small research groups or teams of upwards of 4 people, ideally from different disciplines or majors. Teams will be formed and identified by the end of week 4 of the semester. At the end of Week 6 each team will submit in writing a brief written statement (one page) of the research question to be pursued by the group as a whole, together with a written statement (2-3 pages) from each individual team member outlining her/his own particular research topic and proposed methodology. Ideally, each team will formulate an overall research topic or "problem" (e.g. "what's in the Olentangy River at Drake Union?"), which will be addressed in a different way or from a different perspective/discipline by each individual member of the team. In the case of the "what's in the Olentangy River at Drake Union?," for instance, one member of the team majoring in chemistry might formulate a research project focused on say, organic or inorganic compounds. Another member of the team, say from anthropology, might focus on the "residues of human behavior," while yet another member of the team majoring in biology might address the question from the perspective of particular flora, bacteria, or invertebrates. A fourth member of the team, perhaps from art, might suggest yet another way in which to reflect on or portray "what's in the Olentangy River?" During weeks 6-12 of the semester regular class periods will be devoted to small group discussions where team members and the class as a whole will share the results of their ongoing research. Ideally, each team member will assist and draw from the findings of other team members.

Each member of a team -- while working together with other members of her/his team on a larger question -- nevertheless will formulate and execute their own particular research project, the results of which will be presented at the end of the semester. The presentation of this individual research will include a 15 minute oral presentation as well as a research paper of approximately 15-20 pages, including bibliography (Students in the Arts or Humanities may choose another research "product;" obviously those so interested should talk with the professor). **Student research papers, which are due no later than 5 pm, Wed of finals week (50%), and the oral presentation of research findings (15%), will together amount to 65% of the student's final grade.** As noted, the final weeks of the semester largely will be devoted to student oral presentation of research.

Grading Scale:

A	93-100;
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72

D+ 67-69
D 60-66
E 0-59

NOTE: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (http://studentaffairs.osu.edu/info_for_students/csc.asp)

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Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/

SCHEDULE OF TOPICS AND ASSIGNED READINGS

Week 1 ABOUT RESEARCH AND CREATIVITY

A. The Craft of Research, Third Edition (Chicago: University of Chicago Press, 2008) by Booth et al., Section I, Research, Researchers, and Readings, pp. 1-29; *"Is The Scientific Paper a Fraud?" from The Strange Case of the Spotted Mice (New York: Oxford University Press, 1996) by Peter Medawar, pp. 33-40.
B. The Craft of Research by Booth et al., Section II, Asking Questions, Finding Answers, pp. 29-68;* "Hypothesis and Imagination" from The Strange Case of the Spotted Mice (New York: Oxford University Press, 1996) by Peter Medawar, pp. 12-23.

Week 2 COMING UP WITH GOOD RESEARCH QUESTIONS OR CREATIVE PROJECTS

A. *"The Act of Creation" from The Strange Case of the Spotted Mice (New York: Oxford University Press, 1996) by Peter Medawar, pp. 40-51; The Craft of Research by Booth et al., Section II, Asking Questions, Finding Answers, pp. 68-103.
B. *"Conversation with Jan Thorn Prikker concerning the cycle 18 October 1977, 1989" from The Daily Practice of Painting Writings 1962-1993 Gerhard Richter, ed. Hans-Ulrich Obrist, pp. 183-207 (Cambridge: MIT Press, 1998) [24 pp.]
C.

Week 3 FORMULATING THE RIGHT QUESTION

A. The Craft of Research by Booth et al., Section III, Making A Claim and Supporting It, pp. 103-152.
B. The Craft of Research by Booth et al., Section III, Making A Claim and Supporting It, pp. 152-171.

Week 4 MATTERS OF EXECUTION

A. The Craft of Research by Booth et al., Section IV, Planning, Drafting, and Revising, pp. 171-203.
B. The Craft of Research by Booth et al., Section IV, Planning, Drafting, and Revising, pp. 203-232.

Note: Preliminary identification of research teams and general topics DUE this class period

Week 5 SHARING THE RESULTS OF RESEARCH

A. The Craft of Research by Booth et al., Section IV, Planning, Drafting, and Revising, pp. 232-271
B. The Craft of Research by Booth et al., Some Last Considerations, pp. 273-313.

Week 6 INTERDISCIPLINARITY AND COLLABORATION AS PROCESSES

A. The Interdisciplinary Research Process" by Rick Szostak (pp. 3-19) and "Conclusion" by William H. Newell (pp. 299-314) from Case Studies in Interdisciplinary Research, Allen F. Repko, William H. Newell, and Rick Szostak (Los Angeles: Sage, 2012). [30 pp.]

B. "Collaboration" by Ann Hamilton and Kathryn Clark, pp. 625-628, and "The Spiral Jetty" by Robert Smithson, pp. 530-534, from Theories and Documents of Contemporary Art, A Sourcebook of Artist's Writings, ed. Kristine Stiles and Peter Selz (Berkeley: University of California Press, 1996). [6 pp.]

Note: Statements of Team and Individual Topics and Methodologies DUE

Week 7 INTERDISCIPINARITY AND THE HUMANITIES

A. IRB, Ethics and Successful Projects
B. "Texts in History" from Interdisciplinarity, by Joe Moran (London: Routledge 2002), pp,. 114-148.
Individual team and whole class discussions of Research

Week 8 A CASE STUDY OF COLLABORATIVE RESEARCH IN THE HUMANITIES

A. *Guest Lecture. Interdisciplinarity and the Humanities (D. Reff on NEH-funded project preparing English-language edition of Andres Perez de Ribas' Historia de los Triuphos de Nuestra Santa Fe [1645]). Preface, The Historia and Its Translation," pp. 3-10, and "Critical Introduction," 11-47, from History of the Triumphs of Our Holy Faith Amongst the Most Barbarous and Fierce Peoples of the New World, by Andres Perez de Ribas. Trans. Daniel T. Reff, Maureen Ahern, and Richard R. Danford (Tucson: University of Arizona Press, 1999). [45 pp.]
B. Individual team and whole class discussions of Research

Week 9 CASE STUDY FROM THE ARTS AND STUDENT RESEARCH

A. *Guest Lecture. {TBA -- to be arranged}
B. Individual team and whole class discussions of research

Week 10 CASE STUDY FROM ENGINEERING AND MEDICINE AND STUDENT RESEARCH

A. *Guest Lecture {TBA}
B. Individual team and whole class discussions of research

Week 11 CASE STUDIES FROM BIOLOGY AND STUDENT RESEARCH

A. *Guest Lecture {TBA)
B. Individual team and whole class discussions of research

Week 12 STUDENT PRESENTATIONS OF RESEARCH

A. Presentations
B. Presentations

Week 13 STUDENT PRESENTATIONS OF RESEARCH

A. Presentations
B. Presentations

Week 14 STUDENT PRESENTATIONS OF RESEARCH

A. Presentations
B. Presentations

****Note: Research Papers Due the Wednesday of Finals Week

Examples of Possible Student Group Research "Problems" or Projects:

1. What exactly (dead or alive!) is in the Olentangy River at Lane Avenue? Does anybody really know?
2. What plants and animals call the campus home? It's possible at any given time to spot a raccoon, hawks, squirrels, and all sorts of waterfowl on campus, including the oval. It might be interesting and relevant (who knows that maybe we want or need more or fewer critters on campus) to know who else attends Ohio State! What's life like on the oval after dark?
3. As an institution and society we value integration. What's the reality with respect to the greater campus area? Is it the case that minorities or foreign students or other groups at OSU self-segregate? Why do students, be they grad or undergrad, choose to live where they do?
4. Who are the homeless along High Street. What characterizes their lives? How do they contribute (or "take away") from life at Ohio State?
5. OSU spends millions of dollars a year on energy consumption. Where does it all go? What would satellite imagery reveal?
6. What is "the student diet"? Where, when, and what do students eat? Is there a pattern? Is it meaningful?
7. Our campus is seemingly designed for some purpose(s) (think great thoughts?). How do students feel at various times and places on campus? Are there places of "fear", "sociability", "and great thought"? Is campus gender neutral? Do women and men experience "the campus" similarly? What about other groups?
8. Campus is a pretty big place. Some places in the winter seem colder than others; is that possible? Does campus have really micro, micro-climates? What about air quality on campus?
9. What does an Ohio State football game do to blood pressure? Is going to a game good or bad for your physical health? Can you measure "crowd excitement"? What is "the meaning(s)" of a football game?
10. Campus is criss-crossed every day by trucks, cars, busses, etc. What kinds of patterns (with any consequences?) obtain with respect to vehicular traffic on campus?
11. The university has sculpture and art galleries and displays. What "work" do they do? Does anybody see or care about "art on campus"? Does "art" make a difference? Can it make a difference?
12. OSU has a relatively long history (over a century), "if you think about it." But does anybody think about it? What is a "sense of history;" how is it constituted and experienced at The Ohio State University

GE Rationale - Cross-Disciplinary Seminar
University Honors 2596H

a) How do the course objectives address the GE category expected learning outcomes?

This course is designed to help students understand research, in general, and interdisciplinary and collaborative research, in particular. Importantly, this understanding will be acquired not simply from reading and discussion and faculty presentation of research (all helpful, hopefully), but from student involvement in formulating and executing interdisciplinary projects, including writing up and/or presenting the results of creative activity. Students will correspondingly participate in scholarly activities that entail interaction with students from different majors and engagement with ideas and methods from multiple disciplines. Thus, students will learn in this class to 1) understand the benefits and limitations of different disciplinary perspectives in research, 2) understand, particularly after conducting research in interdisciplinary teams, how to synthesize multiple disciplinary perspectives, and 3) apply this knowledge to a particular topic of interest in their group assignment.

b) How do the readings assigned address the GE category expected learning outcomes?

The course begins with readings that address research in general. By week 6 of the semester, the readings have become more focused on articles and readings about interdisciplinary and cross-disciplinary research/creative activity. These readings address the learning outcomes by providing students with 1) explications of different disciplinary perspectives, 2) an understanding of how researchers draw from and synthesize multiple disciplinary perspectives, and 3) examples of the application of interdisciplinary research.

c) How do the topics address the GE category expected learning outcomes?

The weekly topics in this course serve to give a student both theoretical knowledge and concrete examples of interdisciplinary and cross-disciplinary research. Students will learn about different types of research, in part by focusing on case studies. These case studies will come in the form of readings, as well as guest lecturers by OSU faculty from different disciplines (e.g. engineering, health sciences, humanities, arts) who are conducting interdisciplinary and cross-disciplinary research on campus. The topics and speakers will be designed to help students 1) understand the pros and cons of employing different disciplinary perspectives in research, 2) how researchers deploy and synthesize multiple disciplinary perspectives, and 3) provide real-world examples of the application of this knowledge to research topics.

d) How do the written assignments address the GE category expected learning outcomes?

As noted on the syllabus, the professor will work with students to realize small research groups or teams of upwards of four people, ideally from different disciplines or majors. Teams will be formed and identified by the end of week 4 of the semester. At the end of Week 6, each team will submit in writing a brief written statement (one page) of the research question to be pursued by the group as a whole, together with a written statement (2-3 pages) from each individual team member outlining her/his own particular research topic and proposed methodology. Ideally, each team will

formulate an overall research topic or "problem" (e.g. "what's in the Olentangy River at Drake Union?"), which will be addressed in a different way or from a different perspective/discipline by each individual member of the team. In the case of "what's in the Olentangy River at Drake Union?" for instance, one member of the team majoring in chemistry might formulate a research project focused on say, organic or inorganic compounds. Another member of the team, say from anthropology, might focus on the "residues of human behavior," while yet another member of the team majoring in biology might address the question from the perspective of particular flora, bacteria, or invertebrates. A fourth member of the team, perhaps from art, might suggest yet another way in which to reflect on or portray "what's in the Olentangy River?" During weeks 6-12 of the semester regular class periods will be devoted to small group discussions where team members and the class as a whole will share the results of their ongoing research. Ideally, each team member will assist and draw from the findings of other team members. The written and oral presentations by individual students and research teams during the concluding weeks of the semester will bring together all three learning outcomes for this GE category by helping students demonstrate each of the following ELOs:

1. Students understand the benefits and limitations of different disciplinary perspectives.
2. Students understand the benefits of synthesizing multiple disciplinary perspectives.
3. Students synthesize and apply knowledge from diverse disciplines to a topic of interest.

GE Assessment Plan – Cross Disciplinary Seminar
University Honors 2596H

a) Description of the specific methods the faculty will use to demonstrate that the aggregate of their students are achieving the goals and expected learning outcomes of this GE category. Thus, if the faculty plans to use direct measures such as embedded questions on exams, pre and post-tests, or a particular essay assignment, provide some examples. If the faculty plans on using indirect measures such as opinion surveys or student self-evaluations, give concrete examples as well. (Ideally, a plan should include both direct and indirect measures.)

Student papers, oral presentations, and the quality of student interaction throughout the semester, will provide key indicators of how well the students have met the expected learning outcomes of the GE Cross-disciplinary seminar. The quality and complexity of student work (both written and oral) will be assessed to determine how well the students 1) understood the benefits and limitations of different disciplinary perspectives within their group, 2) whether they were able to synthesize or draw from multiple disciplinary perspectives, and 3) whether the knowledge from diverse disciplines proved critical to the results of each research project. In addition, because students will be presenting and sharing their research during the final weeks of the semester, peer evaluation will form an important part of assessment. Finally, the Honors program will administer a survey to students at the end of the term, which will request reflection (i.e. what worked; what did not) on how well the course addressed the ELOs for the GE category. It is imagined that such a "written evaluation" of the course would be done each time the course is offered, to help insure its success.

b) Explanation of the level of student achievement expected: What will the faculty define as "success" in terms of student achievement of learning outcomes? For example, for an embedded question, he/she might define "success" as a certain percentage of students answering the question correctly. For an essay, he/she might define success as particular average overall score based on a scoring rubric.

Student research papers and oral presentations will provide perhaps the clearest measure of student realization of the expected learning outcomes. Individual and group projects will be assessed by the instructor with an eye to both the number of students and the extent to which they have demonstrated some understanding of cross-disciplinary research, as evidenced by individual and group research projects. It is imagined that students who have successfully completed the class will build on their experience by pursuing in their junior and senior years further research, be it within or across disciplinary boundaries.

c) Description of follow-up/feedback process: Once the faculty collects the data on student achievement, how will he/she use this information to make course improvements? How will the information be archived?

It is difficult to know, in advance, how much assistance/guidance students will require in formulating interdisciplinary research projects. The assessment undertaken at the end of each semester will be scrutinized for insights or guidance in revising the syllabus and otherwise amending the course content and structure to best insure that students with different needs and backgrounds will find the course truly instructive. For instance, the assessment of research at the conclusion of the course may suggest more accessible readings or perhaps earlier and more concentrated discussions of how to formulate a research problem (or creative activity).

Request to Offer Course in Spring, 2013
University Honors 2596H

This is an official request to offer University Honors 2596H (Interdisciplinary and Collaborative Research) in Spring Semester, 2013. Many of OSU's current first-year students would benefit from having taking this course before the end of their first years. We feel that if we are able to offer the course in Spring, 2013, it may facilitate some of our brightest first-year students getting involved in research earlier in the college career than normal. Thank you for your consideration of this request.