**New York City College of Technology
Interdisciplinary Committee**

**Criteria for an Interdisciplinary Course**

1. **Interdisciplinary Studies Definition**

Interdisciplinary studies involve two or more academic disciplines or fields of study organized around synthesizing distinct perspectives, knowledge, and skills. Interdisciplinary study focuses on questions, problems, and topics too complex or too broad for a single discipline or field to encompass adequately; such studies thrive on drawing connections between seemingly exclusive domains. Usually theme-based, interdisciplinary courses intentionally address issues that require meaningful engagement of multiple academic disciplines. Pedagogical strategies focus on, but are not limited to, inquiry or problem-based learning.

Although many academic disciplines, such as African American Studies and Engineering, are inherently interdisciplinary, to be considered an interdisciplinary course at City Tech the course must be team-taught[[1]](#footnote-1) by more than one faculty member from two or more departments[[2]](#footnote-2) in the College. An interdisciplinary course, by definition, has an interdisciplinary theme as its nucleus. In its essence, such a course brings the analytic methods of two or more academic disciplines to bear on a specific problem or question. Thus, a course in Music History is not likely to be considered interdisciplinary, but a course in Music History from an economist’s perspective might very well lead to such a course. The application of different methods and concepts is the key to assessing whether a course is or is not interdisciplinary. The term interdisciplinary is occasionally used to identify individual projects or assignments, but these, though possibly commendable, fall short in the necessary scope for learning experiences that demand in-depth exposure to the methodologies of distinct intellectual disciplines, and the creative application of these methodologies to specific problems.

Studies show that interdisciplinary courses improve student learning (Elrod & Roth, 2012; Klein, 2010; Lattuca, 2001; Lattuca, Voigt, & Fath, 2004; Project Kaleidoscope, 2011). To foster interdisciplinary learning, the Interdisciplinary Committee has identified goals and outcomes that students taking interdisciplinary courses should be able to achieve.

**Learning Outcomes of Interdisciplinary Courses**

Students will be able to:

* Purposefully connect and integrate across-discipline knowledge and skills to solve problems
* Synthesize and transfer knowledge across disciplinary boundaries
* Comprehend factors inherent in complex problems
* Apply integrative thinking to problem-solving in ethically and socially responsible ways
* Recognize varied perspectives
* Gain comfort with complexity and uncertainty
* Think critically, communicate effectively, and work collaboratively
* Become flexible thinkers

**New York City College of Technology**

**Interdisciplinary Committee**

**Application for Interdisciplinary Course Designation**

**Date \_**3/1/2018**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Submitted by** \_\_Jean Hillstrom\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Department(s) \_\_**Social Science**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Proposal to Offer an Interdisciplinary Course**

1. Identify the course type and title:

X An existing course\_\_SBS 2000 Research Methods for the Behavioral and Social Sciences\_\_\_\_\_

🞎 A new course \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

🞎 A course under development \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Provide a course description An introduction to the research methodologies utilized in the social and behavioral sciences, beginning with the fundamentals of research design, through data collection, analysis, interpretation, and the final reporting of results. Both quantitative and qualitative designs are examined using software to aid in inquiry and analysis.
2. How many credits will the course comprise? \_3\_\_\_\_\_ How many hours? \_3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What prerequisite(s) would students need to complete before registering for the course? Co-requisite(s)?
4. Any Introductory ANTH, ECON, GEOG, GOV, HIS, PSY, SOC, or, any AFR or LTAM 1400 series course, or AFR 1501, 1502, 2402 or 3000, or COMM 2402, or 3401 and MAT 1180 or higher for SBS2000. (ADGA students in certain catalog years will also need the prerequisite of PSY 3407 Psychology of Perception.)
5. Explain briefly why this is an interdisciplinary course. This course is designed to provide students with the knowledge, skills and ability to apply scientific reasoning in the construction of methodology that will address complex questions and problems across various social and behavioral disciplines. Even so, the course was intended to be taught by a single instructor that would present research methods employed in various social and behavioral science disciplines. If any course could lend itself easily to interdisciplinarity, this course seems ideal. Instead of a single instructor presenting the various perspectives, it would be more authentic and beneficial to invite experts from those other disciplines that can speak directly on how research is designed and conducted in their respective fields. Using lecture, in-class discussion and assignments, and group work, students will be exposed to the theories and methods of multiple disciplines while developing integrated, original research projects. Faculty from other disciplines will serve as guest lecturers and will provide students with an understanding of the importance of professional disciplines working in collaboration to generate and disseminate knowledge. In a large majority of the cases, topics covered in this course will integrate knowledge from a variety of social and behavioral methodologies. For example,

(1) The synthesis of theoretical and methodological literature written from a variety of disciplines

(2) Ensuring the ethical treatment of participants, and proper handling of personal information and data

(3) Structured observational research

(4) The understanding of correlational and experimental designs

(5) The construction and evaluation of survey data

However in other cases, topics in the course will integrate knowledge from a limited set of social and behavioral sciences. For example,

(1) How to design evaluations (evaluation research) of social programs (economics, political science, psychology, and sociology)

(2) Archival research (anthropology, economics, history, political science, and others)

(3) Naturalistic observational research (anthropology, sociology, psychology, political science)

(4) Case studies, interviews, oral histories (anthropology, psychology, political science, and history)

(5) Ethnography (anthropology, sociology)

1. What is the proposed theme of the course? What complex central problem or question will it address? What disciplinary methods will be evoked and applied?

The proposed theme of the course addresses the evolution of research design from formulating hypotheses to the development of research designs based on methods of scientific inquiry that will provide answers to questions typically raised in social and behavioral sciences, but not necessarily limited to those fields. My goal for this interdisciplinary course is to encourage students to develop a tool box with a variety of tools so that when a problem requiring an understanding of research methodology arises, they have mastered the use of the tools in their toolbox and can select the tool appropriate to the need. Learning the use of a tool in context (e.g., an economics researcher discussing research methodology tools in the context of their discipline) provides depth of knowledge and the role of the instructor in an interdisciplinary course is to point out similarities and differences in the tools and to encourage their appropriate use. So:

(1) This course will support students in their development of the skills needed to scientifically pose questions based on domain specific AND/OR interdisciplinary theories found across social and behavioral disciplines and to determine ways of incorporating proper methodology to collect, analyze, interpret and report data.

(2) Perspectives from multiple disciplines will be presented by guest lecturers to incorporate an understanding and appreciation of the importance of a scientific approach when investigating problems from a variety of fields, whether disciplinary or interdisciplinary in nature.

1. Which general learning outcomes of an interdisciplinary course does this course address?
Please explain how the course will fulfill the bolded mandatory learning outcome below. In addition, select and explain at least three additional outcomes.

X **Purposefully connect and integrate across-discipline knowledge and skills to solve problems**

Because all areas of social and behavioral sciences (and many other disciplines) utilize some form of the scientific method, this course can purposely connect and integrate concepts and methods from multiple disciplines to the application of interdisciplinary research questions and protocols. For example, a student interested in the study of teen alcoholism prevention might incorporate interviews and archival data (in the way that anthropologists and sociologists might) to present a narrative account of the behavior, a survey and/or correlational method to quantitatively describe potential relationships between behaviors (in the way a psychologist or social worker might), and use evaluation research to determine if intervention programs are working and at what cost (economics) so that changes, if necessary can be made. The examples used in this course to demonstrate modes of scientific inquiry, analysis, and presentation will be taken from across all areas of social and behavioral science and where possible delivered by professors working in the field. Moreover, students are be expected to collaborate with their classmates so that final projects are developed in an interdisciplinary research framework.

X **Synthesize and transfer knowledge across disciplinary boundaries**

All students who take this course will have taken an introductory social and/or behavioral course and therefore will have been introduced to the foundations of research methods for that discipline. The purpose of this course will be to integrate that introductory level of learning across other disciplines that use the scientific method. The skills developed in this course will expose students to a deeper understanding of the scientific process that will broaden their methodological options for use in the creation of a research project for this class, and later can be generalized to meet the challenges presented in other courses and in their professional lives that require critical analysis of a problem.

🞎 Comprehend factors inherent in complex problems

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X Apply integrative thinking to problem solving in ethically and socially responsible ways

Students will complete CITI ethics training and will apply the skills obtained during this training to ensure the use of ethical principles are adhered to when conducting their research project; they will develop an understanding of the ethical implications and consequences of their research and how to properly handle personal information, and how to properly report scientific information to various communities. Students will work collaboratively to incorporate their knowledge into the design of a semester-end research project that will show respect for the perspectives of other disciplines.

X Recognize varied perspectives

Students will acquire an understanding of the varied theoretical principles underlying social and behavioral science and the ability to apply these diverse perspectives to the development of fundamental research design techniques. They will test their ideas using evidence from the social and behavioral sciences as a foundation to form conclusions that are creative and dynamic.

🞎 Gain comfort with complexity and uncertainty

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X Think critically, communicate effectively, and work collaboratively

The course requires that students develop a variety of research skills that span across the social and behavioral sciences and must show the ability to apply these competencies when creating a testable research question that can be answered using scientific methodology. Students will work collaboratively using this knowledge to evaluate and critique their own proposals as well as the proposals of fellow students.

🞎 Become flexible thinkers

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🞎 Other

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**General Education Learning Goals for City Tech Students**

* **Knowledge:** Develop knowledge from a range of disciplinary perspectives, and hone the ability to deepen and continue learning.
* **Skills:** Acquire and use the tools needed for communication, inquiry, creativity, analysis, and productive work.
* **Integration**: Work productively within and across disciplines.
* **Values, Ethics, and Relationships**: Understand and apply values, ethics, and diverse
perspectives in personal, professional, civic, and cultural/global domains.
1. How does this course address the general education learning goals for City Tech students?

1. Knowledge: understand how to use scientific methodology and then generalize this knowledge across different social and behavioral disciplines to test hypotheses.

2. Skills: create and evaluate research using various scientific methodologies across different disciplines.

3. Integration: utilize the skills developed during this course to build upon material presented in other courses outside the boundaries of social and behavioral science.

4. Values, Ethics, and Relationships: develop an understanding of the values, ethics and diverse perspectives that lead to an understanding of the conclusions that are based on scientific evidence through working with others in developing and testing hypotheses.

1. Which department would house this course[[3]](#footnote-3)? \_Social Science\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Would all sections of the course be interdisciplinary? X No 🞎 Yes
	1. Would the course be cross-listed in two or more departments? X No 🞎 Yes
	Explain.

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* 1. How will the course be team-taught[[4]](#footnote-4)? 🞎 Co-taught X Guest lecturers 🞎 Learning community

	If co-taught, what is the proposed workload hour distribution? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	🞎 Shared credits 🞎 Trading credits
	If guest lecturers, for what approximate percentage of the course? X Minimum 20%[[5]](#footnote-5) 🞎 other: \_\_%

	Please attach the evaluation framework used to assess the interdisciplinarity of the course.[[6]](#footnote-6)

1. Following each class lecture session, assignments will be given where students will be required to incorporate the material of the lecture into building the different sections of a final research project, beginning with the formulation of a hypothesis and ending in a presentation of the completed research project.

2. In-class lectures and demonstrations on the appropriate use of the scientific method will be incorporated into face-to-face meetings and students will build on in-class demonstrations by working in groups. For example, data will be collected from a sample of the student population on a topic. In turn, students will be shown how to create and interpret visual displays of data in light of normal distributions. Students will then be given the opportunity to collect data from the class from which they will be required to create and interpret their own visual displays of data.

3. Two in-class quizzes will be given. Approximately one-half of the exams and approximately 25% of the quizzes will require students to answer basic methodological questions from various social and behavioral perspectives, thereby demonstrating their ability to integrate the material beyond one discipline. The same is for the poster presentations.

* 1. What strategies/resources would be implemented to facilitate students’ ability to make connections across the respective academic disciplines?

1. One short supplemental reading for each chapter of the textbook, “Making Sense of the Social World: Methods of Investigation,” by Chambliss and Schutt will present additional opportunities (in addition to those found in the text) for students to learn and understand the application of scientific methodology to a particular field of social and behavioral science.

2. The supplemental readings will coincide with the guest lecture and based on that reading students will be required to work in groups to construct at least one thought-provoking discussion question, for the guest lecturer prior to the class meeting.

1. Would the course be designated as:

X a College Option requirement[[7]](#footnote-7)? X an elective? 🞎 a Capstone course[[8]](#footnote-8)? 🞎 other? Explain.

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1. See “Application for Interdisciplinary Course Designation” question 9b for team-teaching options. [↑](#footnote-ref-1)
2. Exceptions are made for Departments that provide a home for multiple disciplines, such as Humanities and Social Science. [↑](#footnote-ref-2)
3. An interdisciplinary course for the College Option requirement may be housed in a department that is not liberal arts. [↑](#footnote-ref-3)
4. Attach evidence of consultation with all affected departments. [↑](#footnote-ref-4)
5. While an interdisciplinary course must be team-taught, there is no formal percentage requirement, but this minimum is a guideline. [↑](#footnote-ref-5)
6. In the case that a course is equally taught, include proposed plans for faculty classroom observation and student evaluation of teaching. [↑](#footnote-ref-6)
7. To qualify for the College Option, such a course must also meet the New York State definition of a liberal arts and sciences course.
<http://www.highered.nysed.gov/ocue/lrp/liberalarts.htm> [↑](#footnote-ref-7)
8. A course proposed as a Capstone course must be separately approved by the Capstone Experience Committee. [↑](#footnote-ref-8)