**New York City College of Technology**

**Interdisciplinary Committee**

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**Application for Interdisciplinary Course Designation**

**Date \_\_\_**November 16, 2018**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Submitted by** \_\_\_\_\_\_\_\_\_Laureen Park\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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

1. Identify the course type and title:  
     
   🞎 An existing course\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
     
   **🞎** A new course \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**X** A course under development \_\_\_\_\_ PHIL2202 Symbolic Logic \_\_(has been approved by the department and will now be forwarded to the College Council Curriculum process)\_

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| 1. Provide a course description : The course covers fundamental elements of propositional and quantificational logic, including translating English to symbolic logic, constructing truth tables, and utilizing derivations and proofs. |
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1. How many credits will the course comprise? \_\_3\_\_\_ How many hours? \_\_\_\_\_3\_\_\_\_\_\_\_\_\_\_\_\_
2. What **prerequisite**(s) would students need to complete before registering for the course? Co-requisite(s)?

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| MAT 1190 or higher |

1. Explain briefly why this is an interdisciplinary course. \_\_\_Symbolic Logic studies the underlying logical operations that are at work in both natural and technical languages, as well as studies the proofs of validity and invalidity. It lends itself to a variety of disciplines, including mathematics which uses logic in demonstrating proofs, and computer programming which uses logic as part of its language, as well as the binary system of 0 and 1 or T and F. Faculty from CST, CET, and Mathematics have agreed to serve as guest lecturers.
2. 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 principles of logic is the unifying theme. Though the terminology and goals of each discipline differ, the underlying operations and proofs follow the same patterns. For example, in math rules of derivation are used alongside mathematical formulas to demonstrate proofs. Logic uses the same derivations to determine the validity and invalidity of natural language arguments. In computer programming, Boolean logic is used to write the code determining outputs given a certain set of conditions. Those are the same operations governing natural language arguments. The course also looks at validity and invalidity as it relates to the inductive and deductive methods of science and the question of falsifiability.\_

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**

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| Logic has a long history dating back to the Ancient Greeks, and has been adapted by different disciplines according to their functions and aims. This course seeks to integrate the variety of languages and problems logic is employed for by studying the underlying operations and methods that remain consistent throughout their applications. |

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

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| Guest lecturers will help to transfer the experience and knowledge in employing logic in their disciplines and allow students to synthesize them with the broader logical approach of philosophy. |

**X** Comprehend factors inherent in complex problems

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| Logic is unique in that it studies the fundamental ways in which the human mind resolves complex problems using universal, quantifiable patterns, whether the problem be processing data, demonstrating a mathematical proof, or determining whether an argument is valid or not. |

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

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| Students will learn to work on problems in groups in conformity to academic integrity rules, and learn to collaborate on projects in ways that promote civic engagement and social responsibility. |

**X** Recognize varied perspectives

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| The course will take on a variety of disciplinary perspectives in exploring the various principles of logic. |

**X** Gain comfort with complexity and uncertainty

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| Logic can provide definitive solutions to problems, but often the solution is not obvious and therefore require students to think analytically and creatively in tackling problems. This is especially true in applying rules of derivation. Which, when, and how to apply the many rules take time and patience. |

**X** Think critically, communicate effectively, and work collaboratively

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| Students will be expected to participate frequently in solving problems in logic, and work in groups for frequent discussion as well as on larger projects. On larger projects, I employ a “group contract” which must be signed by all participants that stipulate group learning goals and make explicit the roles each member will play (for example, to facilitate the group work, to facilitate the technology to be used, to check the rubric for compliance, etc.) |

**X** Become flexible thinkers

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| Students will learn to become flexible thinkers by employing different disciplinary frameworks in evaluating logical operations. Terminology and goals can change between frameworks, but with more learning, it becomes clear that there is fluidity between disciplines. |

🞎 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?

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| I specify and elaborate this a lot more on the course outline itself. The course helps students expand and deepen knowledge by studying the deep and universal patterns that underly different disciplinary methods. It promotes skills of communication and inquiry through group work and problem-solving tasks, as well as creativity and analysis, especially when it comes to solving problems by applying rules of derivation. It seeks to integrate different disciplinary perspectives by focusing on commonalities in principles of logic if differences in application. Finally, it seeks to encourage values, ethics, and relationships through group work in conformity to rules of integrity. Students are encouraged to engage in civic-minded ways. |

1. Which department would house this course[[1]](#footnote-1)? \_\_\_\_\_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[[2]](#footnote-2)? 🞎 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? 🞎 Minimum 20%[[3]](#footnote-3) **X** other: 30%  
       
     Please attach the evaluation framework used to assess the interdisciplinarity of the course.[[4]](#footnote-4)
  2. What strategies/resources would be implemented to facilitate students’ ability to make connections across the respective academic disciplines?

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| Students will utilize logical methods, software, and mathematical problems to help facilitate connections between disciplines. |
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1. Would the course be designated as:

**X** a College Option requirement[[5]](#footnote-5)? 🞎 an elective? 🞎 a Capstone course[[6]](#footnote-6)? 🞎 other? Explain.  
I am applying the course for Scientific World.

1. An interdisciplinary course for the College Option requirement may be housed in a department that is not liberal arts. [↑](#footnote-ref-1)
2. Attach evidence of consultation with all affected departments. [↑](#footnote-ref-2)
3. While an interdisciplinary course must be team-taught, there is no formal percentage requirement, but this minimum is a guideline. [↑](#footnote-ref-3)
4. In the case that a course is equally taught, include proposed plans for faculty classroom observation and student evaluation of teaching. [↑](#footnote-ref-4)
5. 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-5)
6. A course proposed as a Capstone course must be separately approved by the Capstone Experience Committee. [↑](#footnote-ref-6)