GRAD INTERDISCPL STUDIES (GIS) (GIS)

GIS 501 Responsible Conduct of Researc 1 cr
This course is designed to expose future professionals to a variety of topics concerning Responsible Conduct in Research including issues concerning Research Integrity as well as standards and policies affecting research and life in Academia. The weekly sessions include lectures, open discussions, and analyses of case studies.

GIS 502 Innovation in Technology Commericalization: I-Corps 3 cr
This course will teach the National Science Foundation I-Corps curriculum of Lean Launch and Business Model canvas. It delivers best practices for innovative, team-based entrepreneurship in a semester-long format that provides real-world, hands-on learning experiences in how to successfully transfer knowledge into products and processes that benefit society. Significant time will be devoted outside the classroom to testing hypotheses on each part of the team?s business hypothesis and potential customers and partners. Typically, graduates of this curriculum increase their chance of winning a grant from 17% to 60%, a greater than three-fold increase in the odds of success.

GIS 503 Fundamentals in Teaching 0 cr
How do you know if your students ?got it?? What instructional strategies help students to ?get it?? In this course, you?ll be introduced to the science of learning and instructional fundamentals for the college or university classroom. Application of evidence-based learning theory, instructional strategies, and inclusive pedagogies will be explored. Through readings, reflections, and micro-teach assignments, students in this course will explore the role of metacognition, motivation, assessment, and feedback in teaching. Upon successful completion of this course, students will be able to design, develop, and deliver an effective lesson in a college class. The course consists of three phases and it is informed by the following framework: 1. Theory 2. Practice 3. Reflection The first phase, which is geared towards informing the learners with theoretical knowledge about the science of learning, consists of six modules and it is self-paced. The second phase is of a practical nature, where the learners would have the opportunity to practice the theoretical knowledge that they gained in the first phase. Finally, the third phase is discussion-based. It aims at providing the learners with the space to reflect upon their FiT journey. After exposing the learners to the various learning theories and allowing them to bring them into practice, they are encouraged to reflect and share their experiences with their fellow learners in a discussion setting. Below you can find the course outline along with the learning assessment plan.

GIS 504 Fundamentals in Teaching Part 2: Course Design and Assessment 0 cr
Part two of the Certificate of College and University Teaching, learners in this course will create a clear and consistent module and assessment design that encourages student engagement with the content, students, and instructor regardless of how the course is delivered. Moving beyond the fundamentals of teaching to explore student engagement practices, transparent assessment design, and strategies to develop a course that respects and celebrates diverse talents and ways of learning to promote a sense of belonging, cultivate curiosity and build a community of learners. Upon successful completion of this course, students will be able to design, deliver, and assess an effective lesson, module, and ultimately a full course.
Prerequisite: (GIS 503 Minimum Grade of S)

GIS 799 Dissertation 1-6 cr
An investigation of an original problem related to Chemical and Biomolecular Engineering conducted under the guidance of the student?s Ph.D. research advisor. Requires approval of the student?s research advisor.