**GRADUATE EDUCATION (GRAD)**

**GRAD 402. INDEPENDENT STUDY. (1-16 Credits)**
Lab/Field trip fee.
*This course is repeatable for 16 credits.*

**GRAD 420. GRADUATE SCHOOL PREPARATION. (1 Credit)**
Applying for graduate or professional school can be a daunting task. How and where to apply, how to choose an advisor, what to look for in a school, and how to obtain funding are hurdles to overcome during the application process. Supplemental materials will be provided as part of the course materials.

**GRAD 430. INTRODUCTION TO SCIENTIFIC DIVING. (4 Credits)**
Incorporates academic, confined water and open water training to prepare the student to manage the task loading associated with performing scientific tasks underwater. Introduces the diver to basic techniques and equipment used in underwater data collection. Qualifies the student for acceptance into the OSU Scientific Diving Program as a Scientific Diver-in-Training, at the discretion of the DSO and OSU Diving Control Board. Includes field trips.

**GRAD 499. SPECIAL TOPICS. (4 Credits)**
Graduate school preparation.

**GRAD 502. INDEPENDENT STUDY. (1-16 Credits)**
Lab/Field trip fee.
*This course is repeatable for 16 credits.*

**GRAD 505. READING AND CONFERENCE. (1-16 Credits)**
Reading and discussions on special topics. Graded P/N.
*This course is repeatable for 16 credits.*

**GRAD 506. PROJECTS. (1-16 Credits)**
Graded P/N.
*This course is repeatable for 16 credits.*

**GRAD 509. PRACTICUM. (1-16 Credits)**
Graded P/N.
*This course is repeatable for 16 credits.*

**GRAD 511. DESIGNING A PATH FOR SUCCESS. (1 Credit)**
Graduate student learners will be oriented onto paths that will help lead them toward degree completion and success. Students will receive foundational knowledge about graduate school requirements, effective mentor/mentee relationships, financing their education, research integrity and professional conduct, innovation and commercialization, and other soft skills essential for their progress through their graduate program.
*Equivalent to: WGSS 511, WGSS 512, WGSS 513*

**GRAD 512. CURRENT ISSUES IN HIGHER EDUCATION. (3 Credits)**
Explores current, work-relevant issues in higher education nationally. Development of plan to stay current with important issues.

**GRAD 513. PROFESSIONAL DEVELOPMENT IN COLLEGE AND UNIVERSITY TEACHING. (1-3 Credits)**
Self-directed learning experience, providing structure and context for professional development opportunities in teaching, such as workshops, seminars, webinars, symposia, and other relevant programming. Designed to encourage and reward continuing investment in the development of knowledge and skill sets as educators. Consists of participating in self-selected teaching-related programming (in-person or online), as well as reading, writing, and reflecting on your chosen experiences.
*This course is repeatable for 3 credits.*

**GRAD 520. RESPONSIBLE CONDUCT OF RESEARCH. (2 Credits)**
Covers 10 topics in responsible conduct of research: ethical decision making; human subjects; animal welfare; data acquisition, sharing and ownership; research misconduct; conflicts of interest; authorship; peer review; mentor/trainee responsibilities; and collaborative science. Weekly writing assignments. Useful to all students who conduct scholarly activity. Provides transcript-visible training in research ethics relevant to the Graduate Learning Outcome established by Faculty Senate to be able to conduct scholarly and professional activities in an ethical manner.

**GRAD 521. RESEARCH DATA MANAGEMENT. (2 Credits)**
Careful examination of all aspects of research data management best practices. Designed to prepare students to exceed funder mandates for performance in data planning, documentation, preservation and sharing in an increasingly complex digital research environment. Open to students of all disciplines.

**GRAD 522. PREPARING AN IRB SUBMISSION. (1 Credit)**
Workshop-style course resulting in applications that are ready for IRB review. Ethical issues in research will be discussed. Students will draft all submission materials outside of class and participate in the critique of each other’s protocols and consent forms. IRB approval will not be granted as part of this class. Graded P/N.

**GRAD 530. INTRODUCTION TO SCIENTIFIC DIVING. (4 Credits)**
Incorporates academic, confined water and open water training to prepare the student to manage the task loading associated with performing scientific tasks underwater. Introduces the diver to basic techniques and equipment used in underwater data collection. Qualifies the student for acceptance into the OSU Scientific Diving Program as a Scientific Diver-in-Training, at the discretion of the DSO and OSU Diving Control Board. Includes field trips.

**GRAD 542. THE INCLUSIVE CLASSROOM: DIFFERENCE, POWER AND DISCRIMINATION. (3 Credits)**
An examination of multidisciplinary scholarship on difference, power, discrimination; critical pedagogies; and curriculum transformation. Discussions of theory and research are coupled with practical hands-on opportunities for students to develop and hone their teaching and course development skills. CROSSLISTED as WGSS 542.
*Equivalent to: WGSS 542*

**GRAD 550. INTRODUCTION TO ONLINE COURSE DEVELOPMENT AND FACILITATION. (2 Credits)**
Prepares students to develop and teach distance courses. Students explore practical aspects of course development and facilitation: a brief history of distance education and pedagogical theory; course design principles; engagement of adult learners; active learning; and investigation of how online instruction, in addition to offering flexibility and convenience, also offers distinct pedagogical benefits. Open to students in all disciplines.

**GRAD 560. THEORIES OF TEACHING AND LEARNING IN HIGHER EDUCATION. (3 Credits)**
Examination and analysis of theories and research related to teaching and learning in higher education contexts with emphasis on theoretical applications for GTAs, instructors, and other who teach in the college and university classroom.
GRAD 561. COURSE DESIGN AND METHODS FOR COLLEGE & UNIVERSITY TEACHING. (3 Credits)
Exploration of research and research-based practices related to teaching and learning in higher education contexts with emphasis on course design, facilitation, and other instructional techniques for GTAs, instructors, and others who teach in the college and university classroom.
Prerequisites: GRAD 560 with C or better

GRAD 570. TRANSLATING RESEARCH TO INNOVATION. (2 Credits)
Lens of the Market® Stage 1: Research2Innovation is a course that provides teams of STEM professionals (university students, post docs and faculty, National Lab scientists and engineers or corporate R&D scientists and engineers) with a rapid introduction to the vocabulary, skills, tools, and road map needed for scientists and engineers to engage in successfully translating their research into innovations. The course utilizes the student’s own research as the basis for the study.

GRAD 571. TRANSLATING INNOVATION TO MARKET I. (4 Credits)
Uses the team's platform diagram from GRAD 570 to perform a deeper analysis into a set of three market/application pairs. Teams will develop a Star Market analysis using a decision matrix consisting of a set of market-aligned questions and a rubric to determine the potential value for their innovation. This information is parametrized by a market hypothesis consisting of a value proposition and differentiators and a set of aligned value chains.
Prerequisites: GRAD 570 with C or better

GRAD 599. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 99 credits.

GRAD 605. READING AND CONFERENCE. (1-16 Credits)
Reading and discussions on special topics. Graded P/N. This course is repeatable for 16 credits.

GRAD 606. PROJECTS. (1-16 Credits)
Graded P/N. This course is repeatable for 16 credits.

GRAD 607. CAPSTONE SEMINAR. (3 Credits)
Provides a culminating experience required for all graduate students pursuing the Graduate Certificate in College and University Teaching and for other graduate students seeking a structured opportunity to develop their teaching portfolio.
Prerequisites: GRAD 560 with C or better and GRAD 561 [C]

GRAD 609. PRACTICUM. (1-16 Credits)
Graded P/N. This course is repeatable for 16 credits.

GRAD 610. INTERNSHIP. (3 Credits)
Provides a framework for the in-depth internship experiences required of all graduate students pursuing the Graduate Certificate in College and University Teaching and for other graduate students seeking a structured opportunity to reflect on and improve their teaching.
Prerequisites: GRAD 560 with C or better and GRAD 561 [C]