The Graduate School

Today's professionals face an increasingly complex, diverse, globally-connected, and competitive world. In addition to demonstrating mastery in their fields of study, employers expect graduates to demonstrate competencies in interdisciplinary collaboration, interpersonal communication, team building, problem solving, as well as effective teaching, writing, and research. The certificates and services offered by the Office of Interdisciplinary Graduate and Professional Studies (IGPS) empower scholars and practitioners to integrate research with practice to achieve professional, organizational, and civic success.

IGPS offers an interdisciplinary master's degree and multiple graduate certificates. Visit our website for more information.

AADV-Academic Advising Courses

AADV 600. Academic Advising Foundations. 3 Hours.
The purpose of this course is to provide current or aspiring academic advising professionals with a learning environment to enhance their understanding and ability to apply historical developments and theoretical foundations to their advising practices. Students will demonstrate their understanding of NACADA's core conceptual and informational competencies as well as their ability to apply core relational components of the academic advising profession, the pillars of academic advising, and CAS Standards within the practice.

AADV 610. Assessment in Academic Advising. 3 Hours.
The purpose of this course is to enhance learners' understanding of and ability to apply assessment within academic advising practices. Learners will articulate why individual and programmatic assessment is important to academic advising practices and will demonstrate their ability to synthesize assessment data into meaningful suggestions for academic advising practice, procedures, and/or policy development.
Prerequisites: AADV 600 [Min Grade: B]

AADV 620. Diversity, Equity, Inclusion, and Advocacy in Academic Advising. 3 Hours.
This course explores the relevance and value of diversity, equity, inclusion, and advocacy within the academic advising profession. Learners will study the skills and environmental factors associated with developing inclusive and equitable academic advising experiences for diverse student populations. A strong component of this course is preparing learners about principles of advocacy so that they are prepared to foster efficacious academic advising sessions, practices, programs, and policies in their campuses.

AADV 621. Advising Hidden and Targeted Populations. 3 Hours.
This course delves into the study and analysis of targeted and hidden student populations in higher education. The course covers both theoretical and practical aspects, with a particular focus on how academic advisors can apply their knowledge to assist these student populations.

AADV 622. Academic Advising Administration. 3 Hours.
This course reviews issues related to the administration of academic advising. With a focus on practical skills and actionable insights, students will examine American higher education's organization and administrative structures, legal and ethical considerations, academic advising program integration with institution mission and strategic plans, evaluation and assessment, and academic advisor support and growth.

AADV 630. Special Topics Seminar in Academic Advising. 1-3 Hour.
This course will provide you with opportunities to practice a specific skill or competency associated with career success or advancement within the academic advising field. Academic Advisors serve to support the academic, career, and personal development and success of students as they persist towards degree completion. The purpose of this seminar is to provide you with opportunities to enhance your abilities to support students in developmentally appropriate ways that align with their academic, career, and/or personal goals. The primary difference between AADV 630 and AADV 640 relates to the learning activity formats and modes of content delivery. Seminars are facilitated by the instructor and delivered/created through the discourse and engagement of learners in the course. Workshops are designed with structured hands-on, skill practice sessions delivered by the instructor and experienced by the learners.

AADV 631. Academic Advising and Transfer Students. 3 Hours.
Academic Advisors serve to support the academic, career, and personal development and success of students as they persist towards degree completion. The purpose of this seminar is to provide you with opportunities to enhance your abilities to support transfer students in developmentally appropriate ways that align with their academic, career, and/or personal goals.

GRD-Graduate School Courses

GRD 600. Core Issues in Aging. 3 Hours.
A multidisciplinary approach will be used to consider dimensions of the aging process. This course explores individual and societal meanings of aging and old age through the study of the biological, psychological and sociological changes accompanying aging as well as current issues and controversies in the study of aging.

GRD 617. Critical Thinking and Integrity. 3 Hours.
This course examines the traditions and foundational concepts of critical thinking. Students will engage with diverse perspectives to question assumptions, evaluate evidence, and thoughtfully apply critical thinking skills across contexts.

GRD 690. IGS Capstone: Research to Practice. 1-6 Hour.
As the final course for the Interdisciplinary Graduate Studies (IGS) degree, this Capstone course emphasizes the research-to-practice cycle for professional practitioners through a Capstone project. The course is designed to help students develop the skills and knowledge needed to understand, critique, and apply research in their professional practices. For the Capstone project, students will select a significant topic or issue from their professional experience that connects their two graduate certificates. Based on this topic, they will develop an intervention grounded in research. Throughout the course, students will participate in readings, discussions, and various learning activities, culminating in the public presentation of their final program, project, practice, or policy proposal. This course may only be taken during the semester when the student is completing their IGS program.

GRD 703. Special Topics. 1-4 Hour.
This course addresses topics of current interest related to professional development.

GRD 704. Specialized Instruction. 1-9 Hour.
This individualized course addresses particular communication needs of students actively writing theses, dissertations, articles for publication, and grant proposals. Individual plans approved by instructor are required.

GRD 705. Teaching at the College Level. 2-3 Hours.
Introduces many of the basic principles needed to teach effectively at the college level and addresses current issues relevant to college teaching. Topics include creating a learning environment, course and syllabus design, active learning approaches, evaluation and grading, and using technology to enhance learning.

GRD 706. Grants and Fellowships 101. 1 Hour.
Grants and Fellowships 101 is designed to equip learners with the essential skills and knowledge needed to navigate the complex world of grant writing and fellowships. This course provides a comprehensive overview of how to identify and categorize various granting opportunities, differentiate grant writing from other forms of academic writing, and develop strong, competitive grant proposals. Through practical exercises, students will gain hands-on experience in drafting, revising, and evaluating grant sections and components. Additionally, the course emphasizes the importance of feedback in refining grant proposals, preparing students to solicit and respond to critiques effectively.

GRD 709. Writing Fellowships. 3 Hours.
This course is designed for current graduate students and postdoctoral scholars who are seeking to enhance their skills in writing successful grant applications. Writing Fellowships provides a comprehensive overview of the grant application process, from understanding funding agencies to developing and submitting proposals. Learners will gain insights into various external funding agencies, will develop a broad understanding of the administrative processes involved in grant management, will learn about the essential components needed for a compelling grant application and will create a complete grant application tailored to an external funding agency. Learners will acquire the skills necessary to navigate the competitive landscape of grant funding successfully.

GRD 710. Career Workshop for Graduate Students. 1 Hour.
This workshop introduces a variety of career choices for students working on advanced degrees in the life sciences. Topics may include sources of career information, self-assessment, resume construction, interviewing, using new technologies in job searches, career choices, the hidden job market, networking, and negotiating.

GRD 711. Special Topics. 1-3 Hour.
This course addresses topics of current interest related to professional communication, career development, and ethics.

GRD 713. Mentoring 101. 1 Hour.
This seminar will cover the science and theory on mentoring, including the mentor-mentee relationship, issues of gender, culture, age, and other power differentials; contemporary mentoring strategies as they relate generally and specifically to situations and fields; applying different mentoring models to real life/workplace.

GRD 715. Preparing TAs to Be Effective Teachers. 2 Hours.
Prepares teaching assistants to meet the educational needs of undergraduate students by developing effective teaching practices. Topics include preparing to teach, presenting material effectively, handling questions, handling difficult students and situations, leading laboratory sections, and ethical issues related to teaching.

GRD 716. Developing a Teaching Portfolio. 2 Hours.
This hybrid course guides students in developing a Teaching Portfolio for improving teaching practices and enhancing job search potential. The web-based curriculum introduces essential elements of the portfolio and guides students in drafting a personal Philosophy of Teaching.

GRD 717. Principles of Scientific Integrity. 3 Hours.
Surveys ethical issues and principles in the practice of science.

GRD 729. Writing Your Journal Article in 12 Weeks. 3 Hours.
Introduces writers to a systematic approach to writing a journal article, including essential structures, stylistic conventions, and smart strategies for planning and completing projects under a deadline. Writers begin with their own working manuscripts (unpublished course paper, thesis, dissertation, etc.), identify a target journal, and draft short, strategic sections, based on peer review and instructor feedback, to create a final submission, per author's guidelines. For anyone with active publishing goals.

GRD 730. Developing and Managing Your Professional Image. 3 Hours.
This course is designed to raise student awareness of their professional image. Topics include professional perception, polishing professional image, adjusting to professional contexts, and professional image and social media.

GRD 735. Leadership 101. 1 Hour.
This course introduces foundational leadership theories and concepts, emphasizing the role of mentorship in effective leadership practice.

GRD 740. UAB Prep Scholar Workshop. 1-3 Hour.
This course will provide extensive professional development activities to prepare UAB PREP Scholars for entry into graduate school.

GRD 741. UAB PREP Scholar Workshop I. 1-3 Hour.
This course will provide writing and other enrichment activities to prepare UAB PREP Scholars for entry into graduate school.

GRD 742. UAB PREP Scholar Workshop III. 1-3 Hour.
This course will provide extensive professional development activities to prepare UAB PREP Scholars for entry into graduate school.

GRD 743. Critical Thinking and Quantitative Concepts. 3 Hours.
The goal of this course is to enhance students' critical thinking skills in the context of rigorous experimental design and quantitative analysis. Specifically, students will engage in activities that explore robust and unbiased approaches toward analysis, interpretation, and reporting of experimental results.

GRD 745. Communication and Diversity Leadership. 3 Hours.
Upon completion of the course, students will be able to explain, analyze, and apply approaches to leading and communicating in diverse communities.

GRD 746. Critical Decisions in Mentoring. 3 Hours.
This course explores the critical thinking skills related to the decision making processes for mentors.

GRD 755. CIRTL Teaching Practicum. 3 Hours.
This CIRTL course provides students a structured observation and practicum experience in which they shadow a faculty member as he/she teaches a semester-long course and engage in a variety of guided teaching activities.

GRD 759. CIRTL Teaching-as-Research in STEM Courses. 3 Hours.
This CIRTL course introduces Teaching-as-Research project design and guides students through the TAR planning process.

GRD 760. CIRTL Teaching-as-Research Project. 3 Hours.
This CIRTL course is designed for students who are conducting a Teaching-as-Research project.

GRD 763. CIRTL Individualized Teaching and Learning Project. 1-3 Hour.
This CIRTL individualized course provides students with opportunities to engage in teaching and learning projects related to undergraduate STEM (science, technology, engineering, and math) education. Individual plans approved by the instructor are required.

GRD 770. Intro to Biostats. 2-3 Hours.
This course is intended to provide graduate students with an introduction to biostatistics. The emphasis in this course will be upon understanding statistical concepts and applying and interpreting tests of statistical inference. Content will include but not be limited to: choosing the correct test for a given research design, data and data files, data screening, scaling, visual representations of data, descriptive statistics, correlation and simple regression, sampling distributions, and the assumptions associated with and the application of selected inferential statistical procedures (including t-tests, Chi-square, and ANOVA). Computer software (SPSS) will be employed to assist in the analysis of data for this course. Students should have access to a computer, SPSS software, and the Internet.

GRD 771. ePortfolio Workshop. 1 Hour.
Learn how to Build a personalized website to host your Teaching and/or Mentoring Portfolio or for personal branding/ promotion.

GRD 772. Emotionally Intelligent Leadership. 1-2 Hour.
This course provides students with opportunities to explore the relationships among emotional intelligence (EI), leadership, and professional development.

GRD 776. Blazer Fellows Introduction to Professional Development. 3 Hours.
GRD 776 is a 3-credit course for Blazer Fellows to introduce professional development tools and skills that will be necessary and useful for doctoral students' professional career.

GRD 790. Research/Lab Rotation. 1-10 Hour.
Graduate Lab Rotation Used by MD/PhD Students first summer semester.

IGS-Interdisc Graduate Courses

IGS 690. Capstone: Research to Practice. 3 Hours.
This is the Capstone course for the Interdisciplinary Graduate Studies degree. The course addresses the research to practice cycle for professional practitioners. Focuses on developing skills and knowledge for understanding, critiquing, and applying research to practice, as well as the role of practitioners in identifying additional areas of needed research. Course may only be taken during the semester in which the learner is completing their IGS program. Learners will demonstrate their understanding, as well as abilities to apply and evaluate, critical thinking skills, deconstruct research reports, and synthesize a program or project proposals in order to facilitate success within their professional field. Learners are required to engage in readings, discussions, learning activities, and ultimately disseminate their final program, project, practice or policy proposal publicly.

LEAD-Leadership Courses

LEAD 500. Introduction to Leadership Theory and Behavior. 3 Hours.
This course introduces the academic study of leadership. Students will examine and evaluate leadership theories and concepts, and consider the relevance of leadership models for their own experiences.

LEAD 520. Ethics in the Workplace. 3 Hours.
This course provides a foundation for ethical leadership practice in the workplace and society. Students will explore different ethical perspectives, examine case studies, and reflect on how leadership can contribute to the common good.

LEAD 540. Team Development and Dynamics. 3 Hours.
This course introduces teams and teamwork. Students will consider how to develop and improve teams.

LEAD 560. Leadership and Professional Development Workshop. 1-3 Hour.
Subject matter in this course will vary to in order to promote workshop specific leadership skill acquisition not addressed in other LEAD courses based upon assessed needs.

LEAD 580. Initiating Transformational Change. 3 Hours.
This course examines individual and organizational transformation. Students will explore how to initiate and support learning, development, and change.

LEAD 590. Addressing Leadership Challenges. 3 Hours.
This course explores how to effectively diagnose interpersonal, organizational, or societal challenges and develop effective leadership responses to these challenges. This course serves as a capstone for the Leadership and Professional Development Certificate.
Prerequisites: LEAD 500 [Min Grade: C] and LEAD 520 [Min Grade: C] and LEAD 540 [Min Grade: C]

MENT-Mentoring Leadership Courses

MENT 719. Introduction to Mentoring and Leadership. 3 Hours.
This course covers the principles of mentoring and leadership, focusing on the student's ability to demonstrate, analyze, and evaluate contemporary mentoring and leadership practices. Application positions students to tailor practices to their respective fields, articulate a mentoring and leadership philosophy and develop new career skill sets while producing a mentoring and leadership portfolio.

MENT 730. Developing and Managing Your Professional Image. 3 Hours.
This course is designed to raise student awareness of their professional image. Topics include professional perception, polishing professional image, adjusting to professional contexts, and professional image and social media.

MENT 746. Critical Decisions in Mentoring. 3 Hours.
This course explores the critical thinking skills related to the decision making processes for mentors.

RECM-Research Communication Courses

RECM 701. Oral and Visual Communication. 3 Hours.
This course is designed to enhance students' skills in effectively communicating scientific research through oral and visual means. Students will learn the principles of public speaking, presentation design, and visual storytelling to engage diverse audiences. The course covers techniques for creating compelling presentations, utilizing visual aids such as infographics and data visualizations, and delivering clear and impactful oral presentations. Emphasis will be placed on tailoring communication strategies to different audience types, including academic peers, policymakers, and the general public. Through practical exercises, peer reviews, and real-world applications, students will develop the confidence and proficiency needed to convey complex scientific concepts in an accessible and engaging manner.

RECM 707. Presenting Effectively. 1 Hour.
Provides an overview of giving effective oral presentations in academic and professional settings. Topics include analyzing audience and purpose, characteristics of an effective delivery, strategies for planning and design, handling questions and answers, boosting confidence, and using technology in presentations. One-day workshop.

RECM 708. Writing Successfully. 1 Hour.
Addresses issues involved in writing for academic and professional settings. Topics include analyzing audience and purpose, addressing common writing problems, developing effective writing practices, writing for publication, communicating research to the general public, and productivity strategies for writers. One-day workshop.

RECM 722. Storytelling and Narratives for Research Communication. 3 Hours.
This course explores the art of crafting written narratives that bridge the gap between complex research and diverse audiences. Students will learn to integrate storytelling techniques into scientific writing, creating compelling and accessible content across genres such as popular science articles, research summaries, policy briefs, and press releases. The curriculum emphasizes the interplay of clarity, creativity, and ethical responsibility in communicating scientific ideas. Through hands-on exercises, iterative drafting, and peer feedback, participants will develop skills to engage readers, evoke curiosity, and foster understanding. By the end of the course, students will produce a portfolio of impactful science stories.

RECM 727. Writing & Reviewing Research. 3 Hours.
Introduces writers to research writing “best practices,” criteria for evaluating writing, plus editing and peer review. Writers analyze and write short, strategic texts (on their own topics) in 5 research genres – critiques, annotated bibliographies, introductions, empirical, and review articles – based on peer and instructor feedback, for a draft presentation or proposal. For anyone writing course papers, theses, and/or proposals.

RECM 729. Writing a Journal Article in 12 Weeks. 3 Hours.
Introduces writers to a systematic approach to writing a journal article, including essential structures, stylistic conventions, and smart strategies for planning and completing projects under a deadline. Writers begin with their own working manuscripts (unpublished course paper, thesis, dissertation, etc.), identify a target journal, and draft short, strategic sections, based on peer review and instructor feedback, to create a final submission, per author’s guidelines. For anyone with active publishing goals.

RECM 739. Research Communication Portfolio. 3 Hours.
This portfolio course integrates portfolio curation with the creation of a comprehensive research communication project. Students will demonstrate their mastery of research communication by developing a professional portfolio that showcases their ability to engage diverse audiences across formats. Additionally, students will conceptualize, design, and execute an independent communication project, applying storytelling, ethical practices, and audience-specific strategies. The course culminates in a portfolio and project presentation, highlighting each student’s unique communication philosophy and approach.

RECM 745. Research Communication and Diverse Audiences. 3 Hours.
This course focuses on the written and oral communication of scientific and technical knowledge to diverse audiences, including those facing high levels of technical uncertainty and normative diversity, such as climate change, vaccine acceptance, and genetically modified crops. We will explore various forms of scientific communication, emphasizing the importance of conveying complex information to nonexperts about scientific processes, outcomes, and implications. Given the pervasive role of science and technology in modern life, effective communication is essential in numerous settings, including medical offices, community meetings, classrooms, museums, journalism, and legislative bodies. This course will address key questions: What constitutes effective science communication? What skills and competencies are necessary? How can we enhance our communication, understand our audiences, and improve our effectiveness as science communicators?.

RLM-Research Lab Management Courses

RLM 706. Grants and Fellowships 101. 1 Hour.
This course introduces the extramural funding process. Topics include types of awards, funding sources, components of an application, the review process, and writing effective grant proposals. One- day workshop.

RLM 773. Research Lab Management. 3 Hours.
Research Lab Management is a comprehensive course designed to prepare students for the multifaceted responsibilities of managing a research laboratory. This course covers the essential elements required to develop and effective research lab management plan, including leadership and mentoring styles, regulatory compliance, and data management policies. Learners will engage in practical exercises to asses and design personalized management plans, ensuring they are well-equipped to lead and mentor within a research environment. Peer assessments and feedback sessions will further enhance their ability to critically evaluate and refine management strategies.

RLM 774. Introduction to Regulatory Compliance. 1 Hour.
Enrolled participants will examine regulatory compliance issues related to basic research needs, including but not limited to animal use, human subjects and export control. Completion of in-class activities will be used to measure attainment of learning objectives.

RLM 775. Research Lab Safety. 1 Hour.
This course provides a comprehensive overview of environmental and health safety regulations as they pertain to research laboratories. Students will gain a thorough understanding of the regulatory agencies responsible for overseeing these regulations and learn how to apply them within a laboratory setting. Key components of the course include identification of regulatory agencies, application of regulations, risk assessment, and lab safety plan development. By the end of this course, students will be equipped with the knowledge and skills necessary to maintain a safe and compliant research laboratory environment.