

PURDUE UNIVERSITY GRADUATE SCHOOL

Minutes of the Graduate Council Meeting
January 19, 2023
2:30 p.m.

Fourth Meeting
Zoom

PRESENT: Council Members, Linda J. Mason, chair, Raida Abuizam, Nurgul Aitalieva, Kola Ajuwon, Bradley J. Alge, Yong Bao, Shawn G. Bauldry, Carrie Berger, Stacy K. Betz, Arun Bhunia, Janice S. Blum, Steven J. Burdick, Vetria Byrd, William B. Collins, Joy Colwell, G. Jonathan Day, Eric D. Deemer, Duane D. Dunlap, Emad Elwakil, Catherine A. Golden (Provost's Representative), Richard H. Grant, Jeffrey P. Greeley, Chong Gu, Nancy A. Jackson, Troy D. Janes, Qing Jiang, Mary E. Johnson, Kimberly P. Kinzig, Ann L. Kirchmaier, Douglas J. LaCount, Jiliang Li, Yanjun Li, Qiang Liu, Patti Ludwig-Beymer, Clarence D. Maybee, James L. Mohler, Deputy Chair, Melanie Morgan, Brad E. Oliver, Tina L. Payne, Julia M. Rayz, Paul Salama, Alex Seto, Michael G. Smith, Kristin K. White, Joshua R. Widhalm, Nicole Widmar, Amanda D. Zelechowski

APOLOGIES FOR ABSENCE RECEIVED FROM: Thomas W. Atkinson, Levon Esters, Keith B. Gehres, Kevin D. Gibson, Nilupa Gunaratna, Judith Lewandowski, David Rollock, Abraham Schwab, James E. Tisdale

ABSENCES: Suzanne C. Bart, Erla Heyns, Tong Jin Kim, Rodolfo Pinal, Joseph P. Robinson, Ann Shanahan, Christine Wuenschel

GUESTS: Mary Angrick, Janet Beagle, Debbie Fellure, Mark Haugen, Zhan Pang, Cherie Tague, Sharareh Taghizadeh Vahed, Korena Vawter

I. MINUTES

The November 2022 Graduate Council meeting minutes were approved via the Qualtrics Survey.

II. DEANS REMARKS AND REPORTS

Linda Mason

- To start off the new year, Purdue University has a new President, Provost, and Executive Vice President for Research.
- Five new College Deans positions available.

- The new Advisory Action Council will be looking at:
 - graduate and undergraduate students mental health
 - issues associated with housing for students
 - connection between research and graduate education for students in our traditional Thesis and Dissertation type programs and the value of graduate education
- The split between IUPUI in the campuses and the establishment of two separate university campuses in one location in the graduate world.
- The goal is to make the transition as smooth as possible for students.
- By the end of the semester our goal is to have clarity on the details of how this transition will happen.
- In the graduate world the admission portal has opened when the split happens for new classes entering the Fall of 2024.
- As a reminder, the research credit is not where Dean Mason wants to see the compliance on the research credit.
- Reminder to the Graduate Council members to discuss with the departments the obligation to have discussions with their students and check the box for the Research Deliverables. The consequence for faculty members not doing this and there is a grade appeal with the student on their research credit, the Graduate School will support the students because there is no documentation.
- Students want to have discussions and better clarity on what is expected of them for a satisfactory grade versus an unsatisfactory grade.
- A significant investment was made for a three-to-five-year program on mentoring at the institution on where mentoring is going, how it works, and where it does not work. It was launched with our Mentoring Fellows Program last January to faculty and each college. It was also made operational for the regional campuses.
- Faculty at Purdue do an amazing job with mentoring workshops.
- Purdue is unique in getting graduate faculty status in that it is not a right, but a privilege that faculty are awarded when coming here and attending a workshop to understand what the expectations are.
- We also have the ability to review faculty status, and this is important that students know that we believe in this and that it is an important function that our faculty play in that we believe that there are minimum standards that all faculty need to consider as a graduate faculty member.
- If students, heads, or other faculty members feel that there is an issue associated with someone's mentoring abilities that we can perform a review by giving the signal that we take this seriously.
- We will continue to add individuals from all departments to the Graduate Council membership. Representation is critical to get information out to all departments.
- Dean Mason expressed appreciation to the area committees for approving graduate degrees, certificates, and courses. Without peer review by the Graduate Council, Purdue would not have the standards that we have.

- A special thank you to the Chairs who chair the committees. It is critical to maintain standards at the university to understand what graduate education is about, and how we move forward to make sure that we have the best programs.

Melanie Morgan

- Fellows will be submitting their final reports at the end of January and will be published on the Graduate School Mentoring web page where a host of resources for faculty and students are available. The reports will be posted on this page and will provide guidance on improving mentoring.
- Each year the focus will be shifted. This year the focus is on the Ph.D. Advising Relationship.
- A survey was sent to all departments regarding peer mentoring asking what is being done in terms of formalized peer mentoring programs.
- The Purdue Graduate Student Government (PGSG) are exploring pyramid traces that were a large part of some of the information that we learned diving into mentoring this year.

III. AREA COMMITTEE REPORTS (Area Committee Chairs)

Graduate Council Document 23A Graduate Council Documents Recommended for Approval. See Appendix B. Voted via Qualtrics survey.

IV. PRESENTATION

Catherine Golden presented an overview on the committees Academic Proposal Process Transformation (APPT).

- Transformative Education 2.0 project launched July 2022
 - Increase predictability of time to complete by proposal type
 - Increase integrity and quality of the process
- Phase I of the redesign focuses on course and curricula proposal once University workflow starts
- Phase I Launch: Fall 2023 – Spring 2024

V. PURDUE GRADUATE STUDENT GOVERNMENT -- PRESIDENT'S REPORT

Alex Seto, President of the Purdue Graduate Student Government (PGSG)

- PGSG held a number of successful events last semester
- PGSG will hold the Spring Picnic
- The Student Housing Action Committee created a Housing Survey that will be sent to all graduate students. We hope to have data to explain the housing and transportation situation for graduate students.

VI. CLOSING REMARKS

- Dr. James Mohler noted that the Executive Committee will meet following the Graduate Council meeting on February 16, 2023.
- Dr. Mohler expressed his appreciation to the Graduate Council for all of their efforts in providing their expertise and peer review of all of the proposals.

The council meeting was adjourned by Dr. Mason at 3:33 p.m.

Linda J. Mason, Chair
Tina L. Payne, Secretary

APPENDIX A

PENDING DOCUMENTS

(January 2023)

BOLDED ITEMS ARE IN REVIEW WITH AN AREA COMMITTEE

Area Committee B, Engineering, Sciences, and Technology (Duane Dunlap, chair;
ddunlap@purdue.edu):

Graduate Council Document 22-23f, ECE 53910, Neural Networks: From Theory To Practice (PNW)

Graduate Council Document 22-23g, ECE 54810, Machine Learning (PNW)

Graduate Council Document 22-23d ECE 60432, Nanophotonic Modeling (PWL)

Area Committee C: Chemistry, Engineering, and Physical Sciences, (Suzanne Bart; chair,
sbart@purdue.edu):

Graduate Council Document 22-45a, CHE 50100, Medical Devices - Development And Clinical Application (PWL)

Graduate Council Document 22-45b, CHE 60000, Approaches To Graduate Research In Chemical Engineering (PWL)

Graduate Council Document 22-45c, CHE 65500, Safety in Chemical Engineering (PWL)

Graduate Council Document 22-46a, EEE 57000, Solid And Hazardous Waste Management (PWL)

Graduate Council Document 22-46b, EEE 69199, Professional Practice Graduate Co-Op I (PWL)

Graduate Council Document 22-46c, EEE 69299, Professional Practice Graduate Co-Op II (PWL)

Graduate Council Document 22-46d, EEE 69399, Professional Practice Graduate Co-Op III (PWL)

Graduate Council Document 22-46e, EEE 69699, Professional Practice Internship (PWL)

Area Committee F, Management Sciences (Nicole, Widmar, chair; nwidmar@purdue.edu):

Graduate Council Document 22-10j, MGMT 67620 Optimization For Data Analysis And Decisions (PWL)

Graduate Council Document 22-10k, MGMT 69600 Theoretical Principles For Deep Learning (PWL)

DEGREE(S):

Area Committee A, Behavioral Sciences (G. Jonathan Day, chair; gjday@purdue.edu):

Graduate Council Document 22-47a, New Degree Doctor of Psychology, submitted by the Department of Psychology, PNW (MS in Psychology will be created as an exit degree)

CERTIFICATE(S):

Area Committee A, Behavioral Sciences (G. Jonathan Day, chair; gjday@purdue.edu):

Graduate Council Document 23-1a, Graduate Certificate in Leadership Development Program - Generalizable Skills Instruction, submitted by the Department of Curriculum and Instruction, PWL

Graduate Council Document 23-1b, Graduate Certificate in Leadership Development Program - Special Needs submitted by the Department of Curriculum and Instruction, PWL

APPENDIX B

GC Document 23-A

DOCUMENTS RECOMMENDED FOR APPROVAL BY THE GRADUATE COUNCIL JANUARY 2023

GRADUATE COURSE PROPOSALS:

Area Committee B, Engineering, Sciences, and Technology (Duane Dunlap, chair; ddunlap@purdue.edu):

Graduate Council Document 22-23f, **ECE 53910, Neural Networks: From Theory To Practice** (PNW) Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s): ENGR 15100 or equivalent MATLAB background; AND ECE 15200 or equivalent C-based programming background AND MA 26100 Multivariate Calculus.

This course introduces artificial neural networks (ANNs), which are a subset of machine learning and artificial intelligence. Topics include the ANN mathematics and linear algebra used to model input and output data, optimization algorithms for weight training, the supervised learning process, regression and classification problems, and an introduction to deep neural networks, including their applications in computer vision and natural language processing. Assignments include programming ANNs algorithmically in MATLAB and from built-in machine learning libraries in Python.

<https://purdue.curriculog.com/proposal:21626/form>

Graduate Council Document 22-23g, **ECE 54810, Machine Learning** (PNW) Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s): ENGR 15100 or equivalent or ECE 15200 or equivalent AND MA 26100 AND MA 26500. Co-requisite(s): ECE 30200 or equivalent statistics background.

This course introduces the fundamental concepts and algorithms of machine learning (ML) with their implementations and applications to practical problems consisting of modeling and prediction. Students will gain knowledge on the formulation of learning representation, over-fitting, generalization; clustering, classification, regression, and probabilistic modeling. Topics include linear regression, supervised and unsupervised learning, dimensionality reduction, Naïve Bayes, feedforward neural networks, deep convolutional neural networks, and the state-of-the-art machine learning libraries. Permission from instructor required.

<https://purdue.curriculog.com/proposal:21618/form>

Area Committee F, Management Sciences (Nicole, Widmar, chair; nwidmar@purdue.edu):

Graduate Council Document 22-10j, **MGMT 67620 Optimization For Data Analysis And Decisions** (PWL) Lecture 1 time per week for 150 minutes for 8 weeks or Lecture 2 times per week for 150 minutes for 8 weeks. Credit 2 or 3.

This course covers optimization theory and algorithms for data analysis and decision making. The topics covered include polyhedral analysis, duality, first-order methods, relaxation techniques, and computational aspects of optimization. The course will use business applications to demonstrate usefulness of the methods.

<https://purdue.curriculog.com/proposal:22061/form>

Graduate Council Document 22-10k, **MGMT 69600 Theoretical Principles For Deep Learning** (PWL) Lecture 1 time per week for 180 minutes for 8 weeks or Lecture 3 times per week for 90 minutes for 8 weeks or Lecture 2 times per week for 190 minutes for 8 weeks or Lecture 1 time per week for 270 minutes for 8 weeks. Distance. Credit 2 or 3.

This course aims to expose you to one of the most active contemporary research directions within machine learning: theoretical principles for deep learning. Despite its undisputedly useful empirical breakthroughs, their understanding is still in many ways nascent. This course provides the latest theoretical aspects of deep learning and representation learning, accompanied by a mixture of reading group sessions and student projects. This is an advanced graduate course designed for master's and Ph.D.-level students and assumes a substantial degree of quantitative research background.

<https://purdue.curriculog.com/proposal:22010/form>

DEGREE(S):

Area Committee A, Behavioral Sciences (G. Jonathan Day, chair; gjday@purdue.edu):

Graduate Council Document 22-47a, New Degree Doctor of Psychology, submitted by the Department of Psychology, PNW (MS in Psychology will be created as an exit degree)

<https://purdue.curriculog.com/proposal:21200/form>

CERTIFICATE(S):

Area Committee A, Behavioral Sciences (G. Jonathan Day, chair; gjday@purdue.edu):

Graduate Council Document 23-1a, Graduate Certificate in Leadership Development Program - Generalizable Skills Instruction, submitted by the Department of Curriculum and Instruction, PWL

<https://purdue.curriculog.com/proposal:19261/form>

Graduate Council Document 23-1b, Graduate Certificate in Leadership Development Program - Special Needs submitted by the Department of Curriculum and Instruction, PWL
<https://purdue.curriculog.com/proposal:19253/form>

NEW DOCUMENTS RECEIVED
(After the January 19, 2023 Graduate Council Meeting)

GRADUATE COURSE PROPOSALS:

Area Committee A, Behavioral Sciences (G. Jonathan Day, chair; gjday@purdue.edu):

Graduate Council Document 23-12c, **PSY 58001, Ethics And Professional Issues In Psychology** (PNW) Lecture 1 time per week for 150 minutes. Credit 3.

This course will examine legislation, policies, regulations, and ethical codes applicable to psychology. The ethical decision-making process will be explored, with particular emphasis on ethical professional practice in a variety of settings.

<https://purdue.curriculog.com/proposal:21477/form>

Graduate Council Document 23-12a, **PSY 68010, Survey Of Industrial Psychology** (PWL)

Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s): Any undergraduate Statistics course and any undergraduate Social Science Research Methods course.

This seminar is designed to familiarize doctoral students with the basic areas of Industrial Psychology and Human Resource Management. The course will include a discussion and analysis of book chapters and journal articles related to key topics. The goal of this seminar is to help students develop frameworks for organizing the myriad conceptual, professional, and technical issues associated with Industrial Psychology / Human Resource Management. Development of these frameworks is requisite for effective acquisition and integration of information provided in future seminars and development of research ideas.

<https://purdue.curriculog.com/proposal:21927/form>

Graduate Council Document 23-12b, **PSY 68020, Survey Of Organizational Psychology**

(PWL) Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s): Any undergraduate Statistics course and any undergraduate Social Science Research Methods course.

The main objective of this course is to introduce doctoral students in the Industrial and Organizational Psychology program (and related disciplines) to the major areas of research in the field of organizational psychology. Additionally, the course aims to provide students an opportunity to: (1) hone their analytic and information presentation skills, and (2) gain practice in developing research ideas. We will discuss classical and contemporary issues in light of both their theoretical and practical implications for the field. The course will include presentations and (synchronous and asynchronous) discussions of assigned readings.

<https://purdue.curriculog.com/proposal:21929/form>

Graduate Council Document 23-12c, **PSY 68110, Research Methods In Industrial-Organizational Psychology I** (PWL) Lecture 2 times per week for 75 minutes. Credit 3.

Intensive analysis of application of various research and statistical methods to the study of human behavior in organizational settings. This course is the first part of a two-semester sequence which covers issues in research design and data analysis techniques common to I-O psychology and other applied fields. We will review the overall research process and various types of research. We will review the various threats to the validity of conclusions that can be drawn from quantitative research and how design features can help address these threats. We will spend time in class critiquing research articles. Permission from department required.

<https://purdue.curriculog.com/proposal:21944/form>

Graduate Council Document 23-12d, **PSY 68120, Research Methods In Industrial-Organizational Psychology II** (PWL) Lecture 2 times per week for 75 minutes. Credit 3.

Prerequisite(s): PSY 68110 (or equivalent) and Basic Statistics.

This course is the second part of a two-semester sequence that covers core research methods in the social sciences focusing on Industrial/Organizational psychology, Organizational Behavior, and allied fields of Social and Personality psychology. This course sequence is designed for doctoral students who intend to conduct quantitative empirical research publishable in scholarly journals. This course begins with the philosophy of science, developing and evaluating theory, reviewing and summarizing relevant research. Topics include the examination of research methods applicable to survey data, multilevel data, and longitudinal data. The course concludes with a discussion of 'methods' (strategies) for publishing in scholarly journals. Permission from department required.

<https://purdue.curriculog.com/proposal:21930/form>

Area Committee B, Engineering, Sciences, and Technology (Duane Dunlap, chair; ddunlap@purdue.edu):

Graduate Council Document 23-13a, **CE 57910, Foundations Analysis And Design** (PNW) Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s). CE 32300.

Exploration and engineering evaluation of subsoil and groundwater conditions for selection and design of foundations for structures and earth masses.

<https://purdue.curriculog.com/proposal:21956/form>

Graduate Council Document 23-14a, **CGT 57000, Information Visualization** (PWL)

Lecture 1 time per week for 150 minutes. Credit 3. Prerequisite(s). Students should have finished their undergraduate study in domains that are closely related to one or more of the following: business analysis, statistics, knowledge management, computer science, software engineering, interaction design, human centered computing, scientific visualization or information visualization.

This course provides a systematic, comprehensive framework to study principles, design choices, and development toolkits on information visualization design and development. It focuses on creating innovative and intuitive visualization solutions to provide users with

peripheral awareness of meaningful information from a complex data set. Employing a user-centric approach, this course studies and analyzes visualization design and development from data, tasks, and visualization and interactions. The students will learn perception theories on visualization and use visual elements such as space and color to encode data, compare, evaluate, choose among different visualization forms and interaction methods. Through a project-based learning approach, students will conduct case studies on various visualization designs, analyze the user, data, tasks, and design choices in the visualizations, and finally design and develop information visualization solutions as course projects.

<https://purdue.curriculog.com/proposal:19225/form>

Graduate Council Document 23-8a, CS 52200, High-Performance Computing (PFW)

Lecture 1 time per week for 165 minutes. Credit 3.

This course is an introductory course on high performance computing. High-performance computing refers to the use of everything from software to hardware to speed up computations. As the CPU clock speed of desktop and commodity processors has decayed due to physical limitations, more creative use of software and parallel hardware is required to further speed up data processing. To program and accelerate applications on the new high performance computing devices, we must understand both the computational architecture and the principles of program optimization. The driving outcome for this course is for students to understand and utilize high performance computing concepts, architectures, and tools to develop and run optimized code for shared- and distributed-memory parallel programming models. Topics usually include parallel programming models, performance analysis, shared memory programming, parallel algorithm design, programming with message-passing, and advanced topics such as CUDA and hybrid programming.

<https://purdue.curriculog.com/proposal:22675/form>

Graduate Council Document 23-8b, CS 56100, Software Testing (PFW) Lecture 1 time per week for 165 minutes. Credit 3.

Software testing is widely used for detecting faults, errors, and various issues in software. This course introduces the fundamentals of software test management life cycle, including test plan, design, test automation, test coverage criteria, and how to test software in cutting-edge software development environments. The first half of the course will focus on the fundamentals of the test management life cycle and test automation. The second half of the course will build upon those skills and allow the students to design and develop test suites. Students will learn how to design and automate the execution of software tests. Students will also learn how to generate test suites that meet coverage and other adequacy criteria.

<https://purdue.curriculog.com/proposal:22789/form>

Graduate Council Document 23-9a, ECE 61220, Advanced VLSI Design (PWL)

Lecture 3 times per week for 50 minutes. Credit 3. Prerequisite(s): ECE 55900 or equivalent.

The objective of this course is to train the students with advanced digital circuit design techniques that can be instrumental in achieving higher energy efficiency and resilience to process variations in scaled technologies.

<https://purdue.curriculog.com/proposal:20950/form>

Graduate Council Document 23-10a, MSE 53500, Lean Manufacturing Of Materials (PWL)

Lecture 3 times per week for 50 minutes. Credit 3.

This course provides perspectives on materials processing and product innovation with an economic lens on efficiency and elimination of waste. It includes an historical perspective of manufacturing via the transition from mass to lean production in the automotive industry; and extends manufacturing and product development in context of emerging trends in automation (e.g., control and PAT, I4.0), modular design, supply chain, and sustainability. The class covers lean tools, focusing on value stream analyses and optimization using simulations. As an elective, the course accommodates a range of student interest profiles. It includes both individual and interest-based group assignments. The mix of students adds to the effectiveness of group exercises. A term paper enables individuals to do a deeper dive into specific interests. Overall, the course has shown to be adaptable over a broad range of students representing a variety of departments and professional backgrounds.

<https://purdue.curriculog.com/proposal:22609/form>

Graduate Council Document 23-10b, MSE 57400, Sports Engineering And Entrepreneurship (PWL) Lecture 2 times per week for 75 minutes. Credit 3.

This course provides an introduction at the graduate level to sports engineering and entrepreneurship. Students will be immersed in the state-of-the-art of the industry and interact with renown experts in the field. This course is a comprehensive exploration of the key areas of sports engineering (digitalization, equipment and apparel, fan experience, data, etc.) with an emphasis on the future of the industry. The course includes the development of a business plan for a start-up in sports engineering, encouraging students to critically think about where they see opportunities for innovation based on knowledge gained in the course. This is not only for students looking to start their own business, but for any student interested in working in sports engineering field.

<https://purdue.curriculog.com/proposal:21427/form>

Area Committee C: Chemistry, Engineering, and Physical Sciences, (Suzanne Bart; chair, sbart@purdue.edu):

Graduate Council Document 23-7a, ABE 54700, Models And Microbiomes (PWL) Lecture 1 time per week for 170 minutes. Credit 3.

Determine the use of computational, physical, and biological models for studying and engineering microbiomes. Study peer-reviewed literature and synthesize findings in the form of oral and written deliverables. Background in microbiology either from coursework or research and interest in microbiomes recommended.

<https://purdue.curriculog.com/proposal:22076/form>

Graduate Council Document 23-15a, BME 52500, Neural Engineering (IUPUI) Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s): MATH 17100 and ENGR 29700 and BME 22201 and BME 24101 or equivalents or permission of instructor.

Neural engineering is an emerging engineering discipline that combines the various disciplines of engineering with the biological, physical and material sciences to find the means to access, understand, manipulate, and perhaps enhance the nervous system and the information it contains. The aim of this course is to provide an introduction to the field of neural engineering and will start with the introduction of the neuron, the bioelectric phenomenon and the neural / electronic interfaces placed in the extracellular space on the peripheral nervous system. These topics will be reinforced through hands on practical experiments using electrodes for stimulation and recording.

<https://purdue.curriculog.com/proposal:23240/form>

Graduate Council Document 23-6a, FS 58100, Microbial Genomics And Metabolism (PWL) Lecture 2 times per week for 75 minutes. Credit 3.

Microbial genomics and metabolism will introduce students to how genomes are assembled, how microbial functional predictions are made, and how systems biology techniques are used to query microbial function in diverse ecosystems. Students will participate in activities including classroom lecture, group discussion, reading of primary literature, hands-on computational assignments, exams, and student projects. Basic knowledge of microbiology and molecular biology is expected. Department approval required.

<https://purdue.curriculog.com/proposal:23402/form>

Area Committee E: Life Sciences, (Richard Grant, chair; rgrant@purdue.edu):

Graduate Council Document 23-5a, BIOL 52601, Eukaryotic Microbiology (PFW) Lecture 2 times per week for 75 minutes. Credit 3. Prerequisite(s): BIOL 43700 C- equals the lowest passing grade.

This upper-level course examines the origin, evolution, and diversity of major eukaryotic microbial groups including algae, fungi, and parasites (protozoans and helminths). Lecture topics include recent classification and taxonomic schemes, ecology of important lineages, and relevance to wildlife, animals and humans. Eukaryotic microbes are considered as the primary

cause of human diseases throughout the world. We will analyze the complex life cycle of pathogenic fungi and parasites. We will also examine some of the Neglected Tropical Diseases (NTDs) that are a group of diseases causing significant problems often resulting in death in more than 1 billion people worldwide. We will discuss the origin and transmission patterns of fungal and parasitic diseases as well as evolutionary and ecological approaches that are now crucial to much research in the area of infectious diseases. Permission of department required.

<https://purdue.curriculog.com/proposal:22336/form>

Graduate Council Document 23-11a, FNR 57000, Amphibian Ecology And Conservation

(PWL) Lecture 2 times per week for 50 minutes. Laboratory 1 time weekly for 170 minutes.

Credit 3. Prerequisite(s): Undergraduate level FNR 24150 Minimum Grade of C- and Undergraduate level FNR 24250 Minimum Grade of C- and Undergraduate level BIOL 28600 Minimum Grade of C-.

This course will address the ecology and conservation of amphibians at the global scale. Lectures will cover diversity and natural history, phylogenetic relationships, basic biology and ecology, and conservation concerns and strategies. Class materials come from a text and primary literature. Labs will focus on important characteristics of species, families and orders of amphibians, including both North American and non-North American species. Class will also discuss and debate conservation issues. Course will include guest lectures, potential field trips or a class project. Permission of department required.

<https://purdue.curriculog.com/proposal:22962/form>