AI | ARTIFICIAL INTELLIGENCE

Not all courses are offered every semester. Refer to the schedule of courses for each term's specific offerings.
More Info (https://one.uf.edu/soc/)

Unless otherwise indicated in the course description, all courses at the University of Florida are taught in English, with the exception of specific foreign language courses.

Contact

Email (ai@ufl.edu) | 352.294.1895

P. O. Box 113175
University of Florida
Gainesville, FL 32611

324 Tigert Hall | Map (https://campusmap.ufl.edu/#/index/0026)

ABE 4662 Quantification of Biological Processes 3 Credits
Grading Scheme: Letter Grade
Quantitative description and analysis of biological processes pertaining to microbes, plants, animals and ecosystems. Biological transport phenomena, bioenergetics, enzyme kinetics, metabolism, bioregulation, circulatory and muscle systems, agroecosystems. Analytical and experimental laboratory for development of quantitative skills.
Prerequisite: (ABE 2062 or BSC 2010) and (EGN 3353C or CWR 3201).
Attributes: Artificial Intelligence

ADV 3001 Advertising Strategy 3 Credits
Grading Scheme: Letter Grade
Overview of the strategic planning process required to develop a successful strategic, persuasive communication plan such as an advertising, integrated marketing communications, or social marketing campaign. Case studies and projects teach the skills needed to address a variety of communications management issues and engage audiences in diverse marketplaces.
Prerequisite: MAR 3023 and ADV 3008 with minimum grades of C and ADV major.
Attributes: Artificial Intelligence

ADV 3500 Digital Insights 3 Credits
Grading Scheme: Letter Grade
Acquiring, evaluating, and analyzing information for advertising decisions. Emphasizes understanding the scientific method, developing explicit and measurable research objectives, selecting appropriate methodologies, and analyzing data.
Prerequisite: MAR 3023 and ADV 3008 with minimum grades of C and STA 2023 and ADV major.
Attributes: Artificial Intelligence

ADV 4300 Media Planning 3 Credits
Grading Scheme: Letter Grade
Provides an in-depth overview of the media planning process. Emphasizes the value of various media channels and evaluation methods to design innovative and integrated media strategies to reach and engage diverse audiences.
Prerequisite: 3JM ADV; minimum grades of C in ADV 3001 and ADV 3500.
Attributes: Artificial Intelligence

AGG 4502 Nanotechnology in Food, Agriculture, and Environment 3 Credits
Grading Scheme: Letter Grade
Application of nanotechnology in crop production, food processing and preservation, and environmental remediation; behavior of engineered nanoparticles in plant, soil and the environment, and environmental toxicology and regulations of engineered nanoparticles.
Prerequisite: SWS 3022.
Attributes: Artificial Intelligence

ALS 3200C AI in Agricultural and Life Sciences 3 Credits
Grading Scheme: Letter Grade
Artificial intelligence (AI) is used to solve problems in research and industry. Provides an understanding of and practical, hands-on experience building and using AI systems. Gain the skills and knowledge needed to use AI to solve real-world problems in agricultural and life sciences.
Prerequisite: (BSC 2891 or STA 2023 or STA 3032 or EEL 3872) with minimum grades of C.
Attributes: Artificial Intelligence

AOM 4434 Precision Agriculture 3 Credits
Grading Scheme: Letter Grade
Principles and applications of technologies supporting precision farming and planning for natural resource data management. Global positioning systems (GPS), geographic information systems (GIS), variable rate technologies (VRT), data layering of independent variables, automated guidance, Internet, information access and computer software for management.
Prerequisite: Junior standing or higher.
Attributes: Enable-AI

AOM 4455 Agricultural Operations and Systems 3 Credits
Grading Scheme: Letter Grade
Quantitative and managerial techniques for management and planning of technical resources in agriculture. Applications of queuing theory, project scheduling, optimization, and expert decision systems.
Prerequisite: ((MAC 1147) or (MAC 1114 & MAC 1140) or (MAC 2233)) & CGS 2531.
Attributes: Artificial Intelligence

APK 4721 AI in Action: Problem Solving in Health, Fitness and Human Performance 3 Credits
Grading Scheme: Letter Grade
In this classroom-based undergraduate research experience (CURE) course, students will collaborate on a research project addressing real-world challenges found in the industry-related roles in Applied Physiology and Kinesiology. Using AI to develop innovative solutions, students will gain practical experience and industry-relevant skills for careers in health, fitness, and human performance fields.
Prerequisite: APK4050 Research Methods.
Attributes: Artificial Intelligence

ARC 3181 Advanced Topics in Digital Architecture 3 Credits
Grading Scheme: Letter Grade
Continued investigation of computer-aided design programs currently utilized by professional practices.
Prerequisite: ARC 2180.
Attributes: Artificial Intelligence

ART 3959C Video Art 3 Credits
Grading Scheme: Letter Grade
Explores video with an emphasis on editing and building a personal vocabulary through the electronic image.
Prerequisite: ART 2680C and must be a (BFA Art or BA Art or BFA Graphic Design major) and must have passed sophomore portfolio review.
Attributes: Artificial Intelligence

ART 4612C Digital Media Workshop 3 Credits
Grading Scheme: Letter Grade
Bridges the study of digital media and broadly envisioned professional practices in the field. Emphasis on portfolio and project development for transition to advanced study or professional, expressive or applied practices in integrated media.
Prerequisite: Must be BFA Art or BA Art or BFA Graphic Design major and must have passed sophomore portfolio review.
Attributes: Artificial Intelligence

ART 4645C Sensors and Electronics-Based Art 3 Credits
Grading Scheme: Letter Grade
Physical computing HCI (human computer interaction) explores how devices respond to and interact with human physical action. Students will create artwork that explores physical interfaces beyond mouse/keyboard/screen interactions through the use of microcontrollers and sensors.
Prerequisite: Must be BFA Art or BA Art or BFA Graphic Design major and must have passed sophomore portfolio review.
Attributes: Artificial Intelligence

BCN 4594 Building Energy Modeling 3 Credits
Grading Scheme: Letter Grade
As energy becomes a more precious commodity, it is crucial to design and operate high performance buildings. A solid foundation of energy engineering and sustainability principles is essential to achieving these higher performance standards.
Prerequisite: junior standing or higher.
Attributes: Artificial Intelligence

BME 4760 Biomedical Data Science 3 Credits
Grading Scheme: Letter Grade
Covers the biomedical applications of data science techniques, which include pre-processing techniques, machine learning data analysis, and data visualization techniques.
Prerequisite: BME 3053C and COP 2271 and COP 2271L and (STA 2023 or STA 3032).
Attributes: Artificial Intelligence

BSC 2891 Python Programming for Biology 3 Credits
Grading Scheme: Letter Grade
Discoveries in biology are driven as much by computer analysis as by laboratory work. Learn the theory and practice of computer programming with emphasis on the practical techniques and problem solving skills required to use computer programming in biological research. Taught completely online.
Attributes: Artificial Intelligence

BSC 4892 AI in Biology 3 Credits
Grading Scheme: Letter Grade
Examines how AI has rapidly become ubiquitous in daily life and been applied to diverse areas of Biology. Focuses on machine learning approaches as well as deep learning methods, including transformers. Covers machine learning methods for tabular data, computer vision, transfer learning, natural language processing, and transformer-based architectures. Classes typically applied coding with Jupyter Notebooks on HiPerGator. Prior Python coding experience required.
Prerequisite: BSC 4452 or BSC 6451 or BSC 2891 or Instructor permission (Python programming experience.)
Attributes: Artificial Intelligence

BSC 4913 Independent Research in Bioinformatics 3 Credits
Grading Scheme: Letter Grade
Mentored research experience at the interface between computational and biological sciences; preparation for competitive graduate-school and industry positions in bioinformatics.
Prerequisite: BSC 2891 or MCB 4320C or BSC 4434C or BSC 4434C with a minimum grade of C.
Attributes: Artificial Intelligence

BSC 4913 Independent Research in Bioinformatics 3 Credits
Grading Scheme: Letter Grade
Mentored research experience at the interface between computational and biological sciences; preparation for competitive graduate-school and industry positions in bioinformatics.
Prerequisite: BSC 2891 or MCB 4320C or BSC 4434C or BSC 4434C with a minimum grade of C.
Attributes: Artificial Intelligence

CAP 3032 Interactive Modeling and Animation 1 3 Credits
Grading Scheme: Letter Grade
Introduces programming and data structures for interactive two-dimensional multimedia applications. Representing form and transforms in two dimensions, capturing user actions and driving application behavior interactively. Graphical interfaces, image processing, automata and basic artificial intelligence.
Prerequisite: MAC 1147 or equivalent.
Attributes: Artificial Intelligence

CLA 3811 AI in Antiquity and Today 3 Credits
Grading Scheme: Letter Grade
Examines AI's origins in ancient Greece and compares it to AI's acceptance and use in modern society. Pairs discussion of Greek and Roman philosophical and other literary texts on the soul and identity and the boundaries between the natural and artificial with emerging societal issues related to AI, including gender, racism, and slavery.
Prerequisite: Students must be sophomore standing.
Attributes: Artificial Intelligence, General Education - International, Satisfies 4000 Words of Writing Requirement

DCP 4300 AI in the Built Environment 3 Credits
Grading Scheme: Letter Grade
Introduces Artificial Intelligence (AI) and its applications to real world problems in planning, design, and construction of the built environment. Includes application in professional practice in architecture, construction management, interior design, landscape architecture, and urban and regional planning.
Prerequisite: EEL 3872 and PHI 3681.
Attributes: Artificial Intelligence

ECO 4421 Econometrics 4 Credits
Grading Scheme: Letter Grade
Introduces concepts and methods used in empirical economic research. Emphasizes practical use of basic econometric techniques to estimate economic relationships and evaluate policy. Covers topics needed to plan and implement empirical projects, and understand potential problems with the empirical analyses of others.
Prerequisite: STA 2023 and (MAC 2233 or higher) and (ECO 3101 or ECP 3703).
Attributes: Artificial Intelligence

ECO 4422 Econometrics 2 4 Credits
Grading Scheme: Letter Grade
Introduces advanced concepts and methods employed in empirical economic analysis. Focuses on identification of causality using regression techniques. Examines regression discontinuity and difference-in-differences identification strategies.
Prerequisite: ECO 4421 OR (STA 4210 AND ECO 3101) OR (STA 4210 AND ECP 3703).
Attributes: Artificial Intelligence

EEE 4773 Fundamentals of Machine Learning 3 Credits
Grading Scheme: Letter Grade
Overview of machine intelligence and the role of machine learning in a variety of real-world problems. Probability and statistics to handle uncertain data. Topics covered include: learning models from data in both a supervised and unsupervised fashion, linear models and non- linear models for classification, and linear dimensionality reduction.
Prerequisite: EEL 3135 and EEL 3850 with minimum grades of C.
Attributes: Artificial Intelligence

EEL 3872 Artificial Intelligence Fundamentals 3 Credits
Grading Scheme: Letter Grade
An overview of Artificial Intelligence (AI), approaching the concept from its origins to expectations for the future. The course will focus on various AI technologies, how to build Machine Learning models, and how to apply AI tools to solve real-world problems. Some concepts that will be introduced in the course are types of AI and Machine Learning, Hacking and the IoT, AI today, and its outlook for the future.
Prerequisite: Junior standing or above, or instructor permission.
Attributes: Artificial Intelligence

EEL 4665C Intelligent Machines Design Laboratory 4 Credits
Grading Scheme: Letter Grade
Design simulation, fabrication, assembly and testing of intelligent robotic machines. Laboratory.
Prerequisite: (EEL 3744C or EML 3005) or instructor permission.
Attributes: Artificial Intelligence

ESI 4610 Introduction to Data Analytics 3 Credits
Grading Scheme: Letter Grade
Provides a basic understanding of the skills necessary for managing and analyzing data. The concepts covered include exploratory data analysis, data manipulation, data cleaning, data wrangling, and machine learning models. A basic understanding of data management with SQL is also provided. All the technical skills will be motivated by different examples involving data. Python is the programming language used.
Prerequisite: COP2273 or COP2271 and ESI 3215C with minimum grades of C.
Attributes: Artificial Intelligence

EXP 4174C Laboratory in Sensory Processes 4 Credits
Grading Scheme: Letter Grade
Collect, analyze, and evaluate data on specific problems related to sensory and perceptual abilities.
Prerequisite: (EXP 3104 or EXP 3604) and STA 2023.
Corequisite: STA 3024.
Attributes: Artificial Intelligence

FIN 3403 Business Finance 4 Credits
Grading Scheme: Letter Grade
The acquisition and management of funds by business. A minimum grade of B is required in FIN 3403 to register for required finance major courses.
Prerequisite: (ACG 2021 and junior standing or higher) or (ACG 2021 and ECO 2023 and sophomore standing).
Attributes: Artificial Intelligence

FOS 4427C Principles of Food Processing 4 Credits
Grading Scheme: Letter Grade
Principles of processing foods: cooling, freezing, heating, dehydrating, concentrating, irradiating, fermenting and the use of chemicals.
Prerequisite: FOS 4410C.
Attributes: Artificial Intelligence

GEO 2351 Geographical Sciences and Sustainability 3 Credits
Grading Scheme: Letter Grade
Examines the most critical environmental issues facing the world today; emphasizes the sustainability of both human and physical systems in the 21st century utilizing cutting-edge geographic technologies: spatial analysis, GIS, and satellite imagery.
Prerequisite: any Biological Sciences or Physical Sciences General Education course.
Attributes: Artificial Intelligence

GEO 4167C Intermediate Quantitative Analysis for Geographers 3 Credits
Grading Scheme: Letter Grade
Surveys various multivariate techniques commonly used to analyze geographic data. Emphasis on hypothesis testing, inference, multiple regression, analysis of variance and cluster analysis. Introduces time-series regression and grouped estimation procedures, factor analysis, probit/logit modeling and trend-surface interpolation. (WR)
Prerequisite: GEO 3162C or the equivalent.
Attributes: Artificial Intelligence, Satisfies 6000 Words of Writing Requirement

GEO 4169 Spatial Econometrics and Modeling 3 Credits
Grading Scheme: Letter Grade
Introduces regression models capable of dealing with spatial auto-correlation; develop statistical models and estimate with computer software.
Prerequisite: GEO 4167C or equivalent.
Attributes: Artificial Intelligence

GEO 4285 Water, Risk, and Extreme Events 3 Credits
Grading Scheme: Letter Grade
Investigates techniques for evaluating the risks of extreme events related to water in our environment. Presents data and methodologies for estimating the rarity of phenomena including excessive rainfall totals, high and low river levels, coastal storm surge and waves, and drought.
Prerequisite: GEO 3162C or STA 3032 or permission of instructor.
Attributes: Artificial Intelligence, Satisfies 6000 Words of Writing Requirement

GEO 4306C Geography of Vector-borne Diseases 3 Credits
Grading Scheme: Letter Grade
Introduces the spatial epidemiology of vector-borne diseases (VBDs) and geospatial methods for monitoring, mapping and modeling them. Provides hands-on experiences for mapping and modeling risk of VBDs via GIS-based labs.
Prerequisite: GEO 3452 or GIS 3043 or permission of the instructor.
Attributes: Artificial Intelligence

GIS 2002 The Digital Earth 3 Credits
Grading Scheme: Letter Grade
Focuses on how the Earth's surface is visualized, explored, and analyzed in digital formats (e.g. maps, satellite images, aerial photos). Provides an introduction to fundamental concepts of digital geographic data to understand the Earth environment and human society based on the vast quantities of geographic information in our ever-changing world.
Attributes: Artificial Intelligence

GIS 3043 Foundations of Geographic Information Systems 4 Credits
Grading Scheme: Letter Grade
Geographic Information Systems (GIS) as the technology for creation, modification, display, and analysis of spatial information. Develops knowledge of GIS, competence in geographic databases, and familiarity with computer software and hardware.
Prerequisite: Sophomore standing or higher.
Attributes: Artificial Intelligence

GIS 3420C GIS Models for Public Health 3 Credits
Grading Scheme: Letter Grade
Focuses on the design of GIS-based models to address health and healthcare issues. Topics include a conceptual framework, landscape epidemiology models, disease diffusion models, health accessibility, human health behavior and location-allocation of health services. Laboratory section provides hands-on experience applying these models with GIS tools.
Prerequisite: (GIS 3043 or equivalent) & (STA 2023 or GEO 3162C or equivalent) or (Instructor permission)
Attributes: Artificial Intelligence

GIS 4037 Digital Image Processing 4 Credits
Grading Scheme: Letter Grade
Introduces the theory and application of digital imagery data in geographical research with a hands-on, lab-based approach.
Prerequisite: Junior standing or higher.
Attributes: Artificial Intelligence

GIS 4102C GIS Programming 3 Credits
Grading Scheme: Letter Grade
Introduces basic programming concepts; instruction in popular programming languages for geospatial processing, applications, and modeling in ArcGIS environment.
Prerequisite: GIS 3043C or equivalent.
Attributes: Artificial Intelligence

GIS 4113 Introduction to Spatial Networks 3 Credits
Grading Scheme: Letter Grade
Many phenomena of interest in physical, social and cyber environments can be thought of as networks within geographic context. Teaches methods for analyzing these spatial networks, and introduces their applications in geography, transportation, hydrology, epidemiology, social science, etc.
Prerequisite: Entry level knowledge of statistics or instructor permission. Prior experience with ArcGIS is preferred.
Attributes: Artificial Intelligence

GIS 4115C Spatial Surface Modeling and Geostatistics 3 Credits
Grading Scheme: Letter Grade
Teaches principles for modeling and analyzing surfaces of geographic features, such as terrain, temperature, and diseases, with an emphasis on geostatistical (or kriging) analysis. Provides hands-on experiences of using ArcGIS Geostatistical Analyst through lab exercises.
Prerequisite: (STA 2023 or GEO 3162C or equivalent) and GIS 3043 or equivalent or instructor permission.
Attributes: Artificial Intelligence

GIS 4123C GeoAI – Geographic Artificial Intelligence 3 Credits
Grading Scheme: Letter Grade
Integration of Geography and AI, or GeoAI (a subfield of spatial data science), provides novel approaches for addressing a variety of geospatial problems in the natural environment and our human society. Hands-on computing labs using real-world geospatial data to address such AI topics as: image classification, object detection, scene segmentation, simulation and interpolation, retrieval and question answering, on-the-fly data integration, and geo-enrichment.
Prerequisite: Any 3000 level or higher GIS prefix course [GIS3XXX, GIS4XXX] or permission of instructor.
Attributes: Artificial Intelligence

GIS 4324 GIS Analysis of Hazard Vulnerability 3 Credits
Grading Scheme: Letter Grade
Geographic and cartographic techniques for geospatial analysis of risk, vulnerability, and resilience using ArcGIS. Learn to utilize physical and human geographic datasets for multiple hazard contexts including hydrometeorological, climatological, and geophysical hazards.
Prerequisite: GIS 3043 or URP 4273 with minimum grade of C.
Attributes: Artificial Intelligence

GIS 4500 Population GIS 3 Credits
Grading Scheme: Letter Grade
Instruction on geographic and cartographic techniques for geospatial analysis of population, demographic, and socioeconomic data using ArcGIS Pro. Students identify and utilize current and historical secondary population data sources for GIS analysis of population changes, and for mapping of segregation, inequality, and well-being indicators.
Prerequisite: GIS 3043 or GIS 3001C or URP 4273 with minimum grades of C, or GEO 3430 or SYD 4020.
Attributes: Artificial Intelligence

HFT 4442 Artificial Intelligence Revolutions and Applications in Tourism, Hospitality, and Events 3 Credits
Grading Scheme: Letter Grade
Foundational examination of the implications of the artificial intelligence revolution in the tourism, hospitality, and event industry. Includes analyses of AI applications in booking, transportation, theme parks, destination and attraction marketing, economic, social, cultural, and environmental impacts, as well as motivators to travel.
Prerequisite: Junior or Senior Standing.
Attributes: Artificial Intelligence

HFT 4446C GIS and Spatial Analysis for Tourism and Social Data 3 Credits
Grading Scheme: Letter Grade
Utilizes the opportunities provided by dynamically developing methods of geographical information systems (GIS) for visualization and geographic analysis of the data. Students will learn basic skills in working with the industry-standard ESRI ArcGIS software and apply their newly acquired knowledge in solving model problems in tourism research, planning, and development.
Prerequisite: Junior standing or higher
Attributes: Artificial Intelligence

HFT 4746 Smart Cities, Attractions, and Theme Parks 3 Credits
Grading Scheme: Letter Grade
Provides the foundation needed to design smart tourism places. Examines relationships between technology, traveler behavior, and the travel industry. Learn to integrate technology, analytics, marketing, and the design of tourism cities, attractions, and theme parks. Focuses on sustainable/safe/healthy environments with cutting-edge technologies including Artificial Intelligence (AI) and Data Science.
Prerequisite: Junior or Senior Standing.
Attributes: Artificial Intelligence

HOS 4283C Advanced Organic and Sustainable Crop Production 3 Credits
Grading Scheme: Letter Grade
Intensive examination of the methods and techniques necessary for organic and sustainable production and marketing of horticultural products.
Prerequisite: HOS 3281C.
Attributes: Artificial Intelligence

HSA 4191 Health Informatics & Emerging Healthcare Technologies 3 Credits
Grading Scheme: Letter Grade
Provides a fundamental understanding health informatics, healthcare information systems, and emerging healthcare technologies, starting with the core informatics competencies and the foundation of knowledge model.
Prerequisite: PHC 4101 or HSA 3111 or instructor permission.
Attributes: Artificial Intelligence

HUN 4446 Nutrition and Disease: Part 2 3 Credits
Grading Scheme: Letter Grade
Part two of the sequence that focuses on the biochemical and pathophysiological bases of disease/conditions that require specialized nutrition support/medical nutrition therapy.
Prerequisite: HUN 4445 and (BCH 3025 or BCH 4024) and (PCB 4723C or APK 2105C).
Corequisite: DIE 4246.
Attributes: Artificial Intelligence

HUN 4813C Laboratory Techniques in Molecular Nutrition 3 Credits
Grading Scheme: Letter Grade
Laboratory techniques relevant to the study of nutrition, ranging from biochemistry, molecular biology, genomics and bioinformatics.
Prerequisite: CHM 2211 and CHM 2211L;
Corequisite: BCH 3025 or BCH 4024.
Attributes: Artificial Intelligence

ISM 3004 Computing in the Business Environment 4 Credits
Grading Scheme: Letter Grade
Presents fundamental concepts from two perspectives: the individual business computer user and the corporate business computing environment. Introduces common business computing applications; this is not a hands on applications training course. Students use their existing computer skills to complete assignments.
Prerequisite: basic skills for Microsoft Word, PowerPoint, and Excel.
Attributes: Artificial Intelligence

ISM 3013 Introduction to Information Systems 4 Credits
Grading Scheme: Letter Grade
Introduces the role of information systems and technology in an organization with a focus on the use of Access and Excel to solve business problems. Receive the knowledge necessary to earn Microsoft certifications in Access and Excel.
Prerequisite: MAC 2311 or MAC 2233, and sophomore standing.
Attributes: Artificial Intelligence

JOU 3365 Artificial Intelligence in Media and Society 3 Credits
Grading Scheme: Letter Grade
Gain an understanding of artificial intelligence as it applies to the media professions, including journalists reporting on AI. Explore developments in AI technologies as covered by the mass media. Learn to detect exaggeration in descriptions of AI's promise and potential risks and dangers.
Prerequisite: Junior standing or higher.
Attributes: Artificial Intelligence

LAA 1330 Site Analysis 3 Credits
Grading Scheme: Letter Grade
Inventory, analysis and evaluation of site development procedures; emphasis on landscape ecology.
Attributes: Artificial Intelligence

LAA 3394C Advanced Design Communication 3 Credits
Grading Scheme: Letter Grade
Focuses on advanced-level digital tools and techniques used in landscape architecture.
Prerequisite: LAA 2376C and LAA 2379C.
Attributes: Artificial Intelligence

MAN 4504 Operations and Supply Chain Management 4 Credits
Grading Scheme: Letter Grade
Managerial concepts and quantitative tools required in the design, operation, and control of production systems and their relationship to business functions.
Prerequisite: BUL 4310 and FIN 3403 and GEB 3373 and MAC 2233 or MAC 2311 and MAN 3025 and MAR 3023 and QMB 3250 and STA 2023 and (Business major or Accounting major)
Attributes: Artificial Intelligence

MCB 4325C R for Functional Genomics 3 Credits
Grading Scheme: Letter Grade
Introduces the Basics of the R Language and to state of the art methods for functional genomics data analysis. Learn how to write R scripts, choose appropriate statistical tools, and how to use Linux environments to analyze high-throughput genomics data.
Prerequisite: STA 2023 and (BSC 2010 or BSC 2011 or MCB 3020 or MCB 3023 or BCH 4024 or CHM 3218).
Attributes: Artificial Intelligence

MET 4410 Radar and Satellite Meteorology 3 Credits
Grading Scheme: Letter Grade
Overview of radar and satellite remote sensing as used in the atmospheric sciences, including the principles of atmospheric radiative transfer, the retrieval of atmospheric variables, and emphasis on geospatial interpretation of imagery for different weather systems.
Prerequisite: PHY 2049 and MET 3503.
Attributes: Artificial Intelligence

MET 4560 Atmospheric Teleconnections 3 Credits
Grading Scheme: Letter Grade
Atmospheric teleconnections are recurring large-scale patterns of pressure and circulation anomalies. They can influence temperature, rainfall, storm tracks and jet stream location and intensity. Examines how these patterns were discovered, how the index that characterizes the phase of each teleconnection is calculated and the weather associated with different phases.
Prerequisite: MET 3503 or GEO 3250 with a minimum B- grade.
Attributes: Artificial Intelligence

MET 4750 Spatial Analysis of Atmospheric Data using GIS 3 Credits
Grading Scheme: Letter Grade
How atmospheric data are collected and analyzed for meteorologic and climatologic-scale research. Where various types of data are obtained and how to analyze data to answer specific research questions.
Prerequisite: GEO 3250 or MET 3503 or MET 4532
Attributes: Artificial Intelligence

MMC 3420 Consumer and Audience Analytics 3 Credits
Grading Scheme: Letter Grade
Provides practical analytical skill-sets, benefiting those who plan careers in analytics/research, social media, media business, advertising/marketing, and public relations.
Prerequisite: Junior standing or higher.
Attributes: Artificial Intelligence

NUR 4815 Professional Nursing Transformation 3 Credits
Grading Scheme: Letter Grade
Provides an opportunity to apply professional behaviors, clinical reasoning, and evidence-based decision making to address clinical issues related to nursing care. Emphasizes participation in the design and/or implementation of a project relevant to clinical nursing practice and dissemination to peers and stakeholders.
Prerequisite: NUR 4108 and NUR 4768C and NUR 4467C.
Attributes: Artificial Intelligence

NUR 4827 Lead and Inspire 4: Leadership and Innovation in Nursing Practice 2 Credits
Grading Scheme: Letter Grade
Synthesize the roles, functions, and perspectives of the professional nurse utilizing the lead and inspire concepts; emphasizes leadership and innovation to transform professional nursing practice and healthcare systems.
Prerequisite: NUR 4108 and NUR 4467C and NUR 4768C.
Attributes: Artificial Intelligence

PCB 2441 Biological Invaders 3 Credits
Grading Scheme: Letter Grade
This course affords students the ability to critically examine and evaluate the principles of the scientific method, model construction, and use the scientific method to explain natural experiences and phenomena using an introduction to plants and animals that are invading Florida and the U.S.; learning why biological invaders are second only to habitat destruction as threatens to natural ecosystems; what makes some species invasive; how to control or prevent invasions; where international commerce may be regulated; and who is affected by such issues. This course affords students the ability to critically examine and evaluate the principles of the scientific method, model construction, and use the scientific method to explain natural experiences and phenomena.
Attributes: Artificial Intelligence, General Education - Biological Science

PHC 3621 Ethics in Artificial Intelligence: Who's Protecting Our Health 3 Credits
Grading Scheme: Letter Grade
Explores the ethical challenges of using artificial intelligence in Healthcare and the practice of Public Health. Students will examine predictive models used for making important health decisions, addressing factors that contribute to trustworthy artificial intelligence in health, and analyzing potential for bias, risk, and social inequity in assessing and delivering health and public health interventions.
Prerequisite: PHC 3793.
Attributes: Artificial Intelligence

PHC 3793 Higher Thinking for Healthy Humans: AI in Healthcare and Public Health 3 Credits
Grading Scheme: Letter Grade
Covers history, foundational concepts, and methods on Artificial Intelligence (AI), focusing on public health and healthcare applications, including hands-on practice on graphical/high-level AI software. Doesn't include advanced statistical/machine learning training or programming.
Prerequisite: STA 2023 or equivalent.
Attributes: Artificial Intelligence

PHC 4792 Data Visualization in the Health Sciences 3 Credits
Grading Scheme: Letter Grade
Learn the foundations of information visualization and sharpen skills in understanding, evaluating, and presenting AI-driven public health data. R is primarily used to explore concepts in graphic design, storytelling, data wrangling and plotting, biostatistics, and artificial intelligence.
Prerequisite: STA 2023 or equivalent.
Attributes: Artificial Intelligence

PHI 2631 Ethics and Innovation 3 Credits
Grading Scheme: Letter Grade
Grounding in ethical theory and moral reasoning with a focus on changes at both organizational and societal levels, including, for instance, technological innovations, new business practices, and legal changes. Examines the rights and responsibilities of those making such changes as well as the conditions that facilitate responsible decision making.
Attributes: Artificial Intelligence, General Education - Humanities, Satisfies 4000 Words of Writing Requirement

PHI 3681 Ethics, Data, and Technology 3 Credits
Grading Scheme: Letter Grade
Addresses ethical issues related to data science, algorithmic decision-making, and artificial intelligence. Pairs theoretical discussions of ethics, economics, and policy-making with concrete issues in emerging technologies.
Prerequisite: Sophomore standing or higher or (PHI 2010 or PHI 2100 or PHI 2630, with a minimum grade of C) or (philosophy major or minor) or data science major.
Attributes: Artificial Intelligence

PLS 3223 Plant Propagation 2 Credits
Grading Scheme: Letter Grade
Principles, practices and physiological aspects of the propagation of horticultural and agronomic crops by cuttage, graftage, seedage, micropropagation and other methods.
Prerequisite: BOT 2010C or BSC 2010;
Corequisite: PLS 3223L.
Attributes: Artificial Intelligence

PLS 3223L Plant Propagation Laboratory 1 Credit
Grading Scheme: Letter Grade
Methods of propagating by seeds, bulbs, divisions, layering, cuttings, budding, grafting and micropropagation in a hands-on environment.
Prerequisite: BOT 2010C or BSC 2010.
Attributes: Artificial Intelligence

PSB 4342 Introduction to Cognitive Neuroscience 3 Credits
Grading Scheme: Letter Grade
The biological foundations of human cognition.
Prerequisite: PSB 3340 or instructor permission.
Attributes: Artificial Intelligence

PSB 4343C Laboratory in Cognitive Neuroscience 4 Credits
Grading Scheme: Letter Grade
Practical training in the foundations of cognitive neuroscience with a strong focus on cognitive experiments with human participants. Engage in theoretical work and practical experiments addressing behavioral, cognitive, and physiological processes relationships between biological processes.
Prerequisite: PSB 3340 and EXP 3604 and PSY 3213L and STA 2023.
Attributes: Artificial Intelligence

QMB 3250 Statistics for Business Decisions 4 Credits
Grading Scheme: Letter Grade
Correlation and linear regression, model building, multiple regression, analysis of variance, time series analysis and decision analysis. Regression modeling with computer applications for business problems.
Prerequisite: STA 2023. Open only to students who need this course for their major or who have permission from the WCBA.
Attributes: Artificial Intelligence

QMB 3302 Foundations of Business Analytics and Artificial Intelligence (AI) 4 Credits
Grading Scheme: Letter Grade
Introduces the basics of data analytics and machine learning using the powerful programming language Python. Learn Python basics, how to write programs, and how to use Python to solve real-world problems.
Prerequisite: MAC 2233 OR MAC 2311.
Attributes: Artificial Intelligence

QMB 4701 Managerial Operations Analysis 1 2 Credits
Grading Scheme: Letter Grade
Introduces the concepts and applications of management science; become more confident in understanding and using deterministic analytic models.
Prerequisite: MAC 2233 and STA 2023.
Attributes: Artificial Intelligence

QMB 4702 Managerial Operations Analysis 2 2 Credits
Grading Scheme: Letter Grade
Overview of stochastic applications of management science; learn stochastic modeling techniques and introductory visual basic.
Prerequisite: QMB 4701.
Attributes: Artificial Intelligence

QMB 4930 Special Topics in Operations Analysis/Quantitative Methods 1-4 Credits
Grading Scheme: Letter Grade
Variable content provides an opportunity for in-depth study of topics not offered in other courses and of topics of special current significance.
Prerequisite: department permission.
Attributes: Artificial Intelligence

RTV 3432 Ethics and Problems in Media 3 Credits
Grading Scheme: Letter Grade
Investigation and discussion of social problems, ethics, and responsibilities in media.
Prerequisite: RTV 2100 and RTV 3001 and RTV 2405 and junior standing or higher.
Attributes: Artificial Intelligence

RTV 4420 New Media Systems 3 Credits
Grading Scheme: Letter Grade
Reviews technological development, applications, and implications in media systems; explores relationship between media, technological development and other societal forces to learn to evaluate the future of media systems.
Prerequisite: (RTV 2100 or MMC 2100) and RTV 3001 with minimum grade of C and junior standing or higher or instructor permission.
Attributes: Artificial Intelligence

RTV 4700 Media Law and Policy 3 Credits
Grading Scheme: Letter Grade
Introduction to the laws and regulations affecting the past, present, and future of communication technology, emphasizing free expression, privacy, defamation and intellectual property.
Prerequisite: (RTV 2100 or MMC 2100) and RTV 3001 with minimum grade of C.
Attributes: Artificial Intelligence

RTV 4800 Media Management and Strategy 3 Credits
Grading Scheme: Letter Grade
Concepts and applications in media management and relevant strategic practices, including marketing, business intelligence, finance, management/ leadership, strategic planning, innovations, and decision-making in the context of media related industries.
Prerequisite: RTV 4500 and (RTV 4506 or MMC 3420).
Attributes: Artificial Intelligence

WIS 4570C Wildlife Behavior and Conservation 3 Credits
Grading Scheme: Letter Grade
Concise, current, and thorough grounding to the field (theory, practice, and relevance) of animal behavior, with a strong focus on applications of wildlife behavior to achieve successful wildlife conservation gains.
Prerequisite: BSC 2010
Attributes: Artificial Intelligence

WST 3610 Gender, Race and Science 3 Credits
Grading Scheme: Letter Grade
Feminist theories of nature, science, and technology, and how gender and race are critical to the origins of science, the making of scientists, and the politics of contemporary practice.
Prerequisite: (3 credits of WST) or (sophomore standing or higher).
Attributes: Artificial Intelligence

WST 4002 Data Feminisms 3 Credits
Grading Scheme: Letter Grade
Draws from critical data and algorithm studies and feminist science and technology studies to develop critical tools of inquiry needed to approach data within a context of racialized, gendered, colonial, and classed systems of power. Combines practical data workshops with critical readings to analyze data across key uses in domains such as healthcare, security apparatuses, carceral systems, and digital infrastructures.
Prerequisite: Sophomore standing or higher.
Attributes: Ethical-AI

> AI Policy and Policies, and Policing | 3 credits
> Robots: Threat or Opportunity | 3 credits
> Finding your Voice Era of AI | 3 credits

ISM 3004 Computing in the Business Environment 4 Credits
Grading Scheme: Letter Grade
Presents fundamental concepts from two perspectives: the individual business computer user and the corporate business computing environment. Introduces common business computing applications; this is not a hands on applications training course. Students use their existing computer skills to complete assignments.
Prerequisite: basic skills for Microsoft Word, PowerPoint, and Excel.
Attributes: Artificial Intelligence

ISM 3013 Introduction to Information Systems 4 Credits
Grading Scheme: Letter Grade
Introduces the role of information systems and technology in an organization with a focus on the use of Access and Excel to solve business problems. Receive the knowledge necessary to earn Microsoft certifications in Access and Excel.
Prerequisite: MAC 2311 or MAC 2233, and sophomore standing.
Attributes: Artificial Intelligence

JOU 3365 Artificial Intelligence in Media and Society 3 Credits
Grading Scheme: Letter Grade
Gain an understanding of artificial intelligence as it applies to the media professions, including journalists reporting on AI. Explore developments in AI technologies as covered by the mass media. Learn to detect exaggeration in descriptions of AI's promise and potential risks and dangers.
Prerequisite: Junior standing or higher.
Attributes: Artificial Intelligence

LAA 1330 Site Analysis 3 Credits
Grading Scheme: Letter Grade
Inventory, analysis and evaluation of site development procedures; emphasis on landscape ecology.
Attributes: Artificial Intelligence

MAN 4504 Operations and Supply Chain Management 4 Credits
Grading Scheme: Letter Grade
Managerial concepts and quantitative tools required in the design, operation, and control of production systems and their relationship to business functions.
Prerequisite: BUL 4310 and FIN 3403 and GEB 3373 and MAC 2233 or MAC 2311 and MAN 3025 and MAR 3023 and QMB 3250 and STA 2023 and (Business major or Accounting major)
Attributes: Artificial Intelligence

MET 4410 Radar and Satellite Meteorology 3 Credits
Grading Scheme: Letter Grade
Overview of radar and satellite remote sensing as used in the atmospheric sciences, including the principles of atmospheric radiative transfer, the retrieval of atmospheric variables, and emphasis on geospatial interpretation of imagery for different weather systems.
Prerequisite: PHY 2049 and MET 3503.
Attributes: Artificial Intelligence

MMC 3420 Consumer and Audience Analytics 3 Credits
Grading Scheme: Letter Grade
Provides practical analytical skill-sets, benefiting those who plan careers in analytics/research, social media, media business, advertising/marketing, and public relations.
Prerequisite: Junior standing or higher.
Attributes: Artificial Intelligence

PCB 2441 Biological Invaders 3 Credits
Grading Scheme: Letter Grade
This course affords students the ability to critically examine and evaluate the principles of the scientific method, model construction, and use the scientific method to explain natural experiences and phenomena using an introduction to plants and animals that are invading Florida and the U.S.; learning why biological invaders are second only to habitat destruction as threatens to natural ecosystems; what makes some species invasive; how to control or prevent invasions; where international commerce may be regulated; and who is affected by such issues. This course affords students the ability to critically examine and evaluate the principles of the scientific method, model construction, and use the scientific method to explain natural experiences and phenomena.
Attributes: Artificial Intelligence, General Education - Biological Science

PHC 3793 Higher Thinking for Healthy Humans: AI in Healthcare and Public Health 3 Credits
Grading Scheme: Letter Grade
Covers history, foundational concepts, and methods on Artificial Intelligence (AI), focusing on public health and healthcare applications, including hands-on practice on graphical/high-level AI software. Doesn't include advanced statistical/machine learning training or programming.
Prerequisite: STA 2023 or equivalent.
Attributes: Artificial Intelligence

PHI 3681 Ethics, Data, and Technology 3 Credits
Grading Scheme: Letter Grade
Addresses ethical issues related to data science, algorithmic decision-making, and artificial intelligence. Pairs theoretical discussions of ethics, economics, and policy-making with concrete issues in emerging technologies.
Prerequisite: Sophomore standing or higher or (PHI 2010 or PHI 2100 or PHI 2630, with a minimum grade of C) or (philosophy major or minor) or data science major.
Attributes: Artificial Intelligence

PLS 3223 Plant Propagation 2 Credits
Grading Scheme: Letter Grade
Principles, practices and physiological aspects of the propagation of horticultural and agronomic crops by cuttage, graftage, seedage, micropropagation and other methods.
Prerequisite: BOT 2010C or BSC 2010;
Corequisite: PLS 3223L.
Attributes: Artificial Intelligence

PLS 3223L Plant Propagation Laboratory 1 Credit
Grading Scheme: Letter Grade
Methods of propagating by seeds, bulbs, divisions, layering, cuttings, budding, grafting and micropropagation in a hands-on environment.
Prerequisite: BOT 2010C or BSC 2010.
Attributes: Artificial Intelligence

PSB 4342 Introduction to Cognitive Neuroscience 3 Credits
Grading Scheme: Letter Grade
The biological foundations of human cognition.
Prerequisite: PSB 3340 or instructor permission.
Attributes: Artificial Intelligence

QMB 3250 Statistics for Business Decisions 4 Credits
Grading Scheme: Letter Grade
Correlation and linear regression, model building, multiple regression, analysis of variance, time series analysis and decision analysis. Regression modeling with computer applications for business problems.
Prerequisite: STA 2023. Open only to students who need this course for their major or who have permission from the WCBA.
Attributes: Artificial Intelligence

QMB 3302 Foundations of Business Analytics and Artificial Intelligence (AI) 4 Credits
Grading Scheme: Letter Grade
Introduces the basics of data analytics and machine learning using the powerful programming language Python. Learn Python basics, how to write programs, and how to use Python to solve real-world problems.
Prerequisite: MAC 2233 OR MAC 2311.
Attributes: Artificial Intelligence

QMB 4701 Managerial Operations Analysis 1 2 Credits
Grading Scheme: Letter Grade
Introduces the concepts and applications of management science; become more confident in understanding and using deterministic analytic models.
Prerequisite: MAC 2233 and STA 2023.
Attributes: Artificial Intelligence

QMB 4702 Managerial Operations Analysis 2 2 Credits
Grading Scheme: Letter Grade
Overview of stochastic applications of management science; learn stochastic modeling techniques and introductory visual basic.
Prerequisite: QMB 4701.
Attributes: Artificial Intelligence

RTV 4700 Media Law and Policy 3 Credits
Grading Scheme: Letter Grade
Introduction to the laws and regulations affecting the past, present, and future of communication technology, emphasizing free expression, privacy, defamation and intellectual property.
Prerequisite: (RTV 2100 or MMC 2100) and RTV 3001 with minimum grade of C.
Attributes: Artificial Intelligence

WIS 4570C Wildlife Behavior and Conservation 3 Credits
Grading Scheme: Letter Grade
Concise, current, and thorough grounding to the field (theory, practice, and relevance) of animal behavior, with a strong focus on applications of wildlife behavior to achieve successful wildlife conservation gains.
Prerequisite: BSC 2010
Attributes: Artificial Intelligence

WST 4002 Data Feminisms 3 Credits
Grading Scheme: Letter Grade
Draws from critical data and algorithm studies and feminist science and technology studies to develop critical tools of inquiry needed to approach data within a context of racialized, gendered, colonial, and classed systems of power. Combines practical data workshops with critical readings to analyze data across key uses in domains such as healthcare, security apparatuses, carceral systems, and digital infrastructures.
Prerequisite: Sophomore standing or higher.
Attributes: Ethical-AI