AI COURSES

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

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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

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

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

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

CAP 4641 Natural Language Processing 3 Credits
Grading Scheme: Letter Grade
Introduction to the essential concepts, principles, and techniques of Natural Language Processing (NLP). Practical application and theoretical concepts are examined. Topics include information extraction, language construction, grammars, disambiguation, as well as system modeling, classification, and evaluation.
Prerequisite: COP 3530.
Attributes: Artificial Intelligence

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

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

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

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 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

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

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

IDS 2935 Special Topics 1-3 Credits
Grading Scheme: Letter Grade
Introduces selected interdisciplinary topics. Content varies from term to term.

> 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