MISSISSIPPI STATE UNIVERSITY

Bagley College of Engineering

Distance Education Graduate Courses

Spring 2024

ASE 6153	Advanced Performance	Mon / Wed / Fri	12:00pm - 12:50pm
ASE 6423	Int Comput Fluid Dyn	Mon / Wed / Fri	09:00am - 09:50am
ASE 6813	Adv Orbital Mechanics	Tues / Thurs	12:30pm - 1:45pm
ASE 6990 / 501	Special Topic in ASE - Intro to Hypersonic Aerothermodynamics	TBA	TBA
ASE 6990 / 502	Special Topic in ASE - Applied Aerodynamics	TBA	TBA
ASE 8353	Turbulent Flow	Mon / Wed / Fri	08:00am - 08:50am
CE 6433	Foundations	Mon / Wed / Fri	08:00am - 08:50am
CE 6513	Engr. Hydrology	TBA	TBA
CE 6583	Stream Reconnaissance	Tues / Thurs	09:30am - 10:45am
CE 6733	Const Eng Equipt & Mthds	Tues / Thurs	09:30am - 10:45am
CE 6863	Water & Waste Engr.	Mon / Wed	12:30pm - 01:45pm
CE 6973	Concrete Structures	Mon / Wed / Fri	10:00am – 10:50am
CE 8463	Slopes & Embankments	Tues / Thurs	05:00pm - 06:15pm
CE 8503	Data Analysis for CEE	Tues / Thurs	08:00am - 09:15am
CE 8683	Finite Element Analy	Mon / Wed / Fri	09:00am - 09:50am
CE 8713	Green Building Systems	Tues / Thurs	02:00pm - 03:15pm
CHE 6173	Polymer Science & Technology	Mon / Wed / Fri	12:00pm - 12:50pm
CHE 8011	Chem En Seminar	Fridays	03:00pm - 04:50pm
CHE 8123	Chem Kinetics Dyn	Tues / Thurs	02:00pm - 03:15pm
CHE 8523	Adv Tran Pheno	Tues / Thurs	03:30pm - 04:45pm
		Tuesdays	06:00pm - 08:50pm
CSE 6173	Cryptography	Tues / Thurs	11:00am - 12:15pm
CSE 6214	Intro to Software Eng	Tues / Thurs	12:30pm - 01:45pm
CSE 6363	Software Reverse Engineering	Tues / Thurs	02:00pm - 03:15pm
CSE 6383	Network Security	Mon / Wed / Fri	11:00am - 11:50am
CSE 6623	Computational Biology	Tues / Thurs	09:30am - 10:45am
CSE 6693	Intro to Machine Learning	Mon / Wed	12:30pm - 01:45pm
CSE 6733	Operating Systems I	Tues / Thurs	12:30pm - 01:45pm
CSE 8011	Seminar	Mondays	10:00am - 10:50am
CSE 8273	Software Reqts Eng	Tues / Thurs	11:00am - 12:15pm
CSE 8433	Adv Cmptr Graphics	Mon / Wed	03:30pm - 04:45pm
CSE 8713	Advanced Cyber Operations	TBA	TBA
CSE 8813	Theory of Computation	Mon / Wed	12:30pm - 01:45pm
CSE 8843	Seg/Parallel Alrthm	Mon / Wed	03:30pm - 04:45pm

CSE 8990	Special Topic in CS - Machine Learning and Modeling for Data Science	TBA	TBA
ECE 6193	Automotive Engineering	Tues / Thurs	08:00am - 09:15am
ECE 6333	RF & Microwave Engineering	Tues / Thurs	09:30am - 10:45am
ECE 6443	Sensor Processing for AVs	Mon / Wed	03:30pm - 04:45pm
ECE 6633	Pwer Distrib Systems	Tues / Thurs	12:30pm - 01:45pm
ECE 6713	Computer Architecture	Tues / Thurs	02:00pm - 03:15pm
ECE 6743 / 501	Digital Sys Design	Mon / Wed	09:00am - 09:50am
ECE 6743 / 502	Laboratory (Digital Sys Design)	TBA	TBA
ECE 8433	Statistical Signal Processing	Tues / Thurs	12:30pm - 01:45pm
ECE 8683	Power Sys Opt & Control	Tues / Thurs	09:30am - 10:45am
ECE 8743	Advanced Robotics	Tues / Thurs	11:00am - 12:15pm
ECE 8990 / 501	Special Topic in ECE - Optimization for Machine Learning	Mon / Wed	02:00pm - 03:15pm
ECE 8990 / 502	Special Topic in ECE - IoT and IoT Security	Mon / Wed	12:30pm - 01:45pm
ECE 8990 / 503	Special Topic in ECE - Medical Telemetry	Tues / Thurs	02:00pm - 03:15pm
ECE 9100	Graduate Seminar	TBA	TBA
EM 6123	Intro Finite Element	TBA	TBA
EM 6133	Composite Materials	Mon / Wed / Fri	01:00pm - 01:50pm
EM 8113	Theory of Cont Media	Mon / Wed / Fri	10:00am - 10:50am
EM 8313	Advanced Dynamics	TBA	TBA
GE 8003	MENG Capstone	TBA	TBA
GE 8303	Intro Military Engineering	Tues / Thurs	12:30pm - TBA
IE 6533	Project Mgt	TBA	TBA
IE 6543	Logistics Engineering	TBA	TBA
IE 6553	Eng Law & Ethics	TBA	TBA
IE 6613	Eng Statistics I	TBA	TBA
IE 6623	Eng Statistics II	TBA	TBA
IE 6733	Linear Programming I	TBA	TBA
IE 6773	Sys Simulation I	TBA	TBA
IE 6933	Information System in IE	TBA	TBA
IE 6990 / 501	Special Topic in IE - Facilities & Planning	Mon / Wed / Fri	08:00am - 08:50am
IE 6990 / 542	Special Topic in IE - Issues in Peak Performance	TBA	TBA
IE 6990 / 553	Special Topic in IE - Data Science in the Sport Ecosystem Part I	TBA	TBA
IE 6990 / 554	Special Topic in IE - Positive Mental Health and Happiness	TBA	TBA
IE 8153	Cognitive Engr	TBA	TBA
IE 8753	Network Flow & Dynamic Prog	TBA	TBA
IE 8913	Engr Economy II	TBA	TBA
ME 6193	Automotive Engineering	Tues / Thurs	08:00am - 09:15am
ME 6233	Fundamentals of FEA	Mon / Wed	12:30pm - 01:45pm
ME 6353	Alt Energy Sources	Mon / Wed / Fri	11:00am - 11:50am

ME 6393	Power Generation Systems	Mon / Wed / Fri	10:00am - 10:50am
ME 8253	Fatigue in Engin Design	Tues / Thurs	11:00am - 12:15pm
ME 8373	Integrate Comp Mat'l Eng	Mon / Wed	02:00pm - 03:15pm
ME 8823	Viscous Flow II	Tues / Thurs	12:30pm - 01:45pm

Course Descriptions

ASE 6153 **Advanced Performance** **Mon / Wed / Fri** **12:00pm - 12:50pm**

Instructor: Calvin Walker

(Section 501) (Prerequisite: ASE 2113 or consent of instructor) Three hours lecture. Performance methods use for current aeronautical vehicles. Configurations considered are sailplanes, V/STOL aircraft, subsonic/supersonic transports, and fighters.
Method of Delivery: Asynchronous Online

ASE 6423 **Int Comput Fluid Dyn** **Mon / Wed / Fri** **09:00am - 09:50am**

Instructor: Vilas Jagannath Shinde

(Section 501) (Prerequisite: Consent of instructor). Three hours lecture. Elementary aspects of computational fluid dynamics (CFD); review of numerical analysis and fluid mechanics as pertinent to CFD; numerical solution to selected fluid dynamic problems.
Method of Delivery: Asynchronous Online

ASE 6813 **Adv Orbital Mechanics** **Tues / Thurs** **12:30pm - 1:45pm**

Instructor: Eric Collins

(Section 501) (Prerequisite: ASE 3813). Three hours lecture. Orbital mechanics; perturbations and numerical integration. Global positioning system, launch performance and optimization.
Method of Delivery: Asynchronous Online

ASE 6990 / 501 **Special Topic in ASE - Intro to Hypersonic Aerothermodynamics** **TBA** **TBA**

Instructor: Davy Belk

(Section 501) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

ASE 6990 / 502 **Special Topic in ASE - Applied Aerodynamics** **TBA** **TBA**

Instructor: Shreyas Narsipur

(Section 502) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

ASE 8353 **Turbulent Flow** **Mon / Wed / Fri** **08:00am - 08:50am**

Instructor: Adrian Sescu

(Section 501) (Prerequisite: ASE 8343). Three hours lecture. Origins of turbulence; stability statistical theory of turbulence; isotropic and non-isotropic turbulence; equations of turbulent flow; turbulent boundary layer; free turbulent flow.
Method of Delivery: Asynchronous Online

CE 6433 **Foundations** **Mon / Wed / Fri** **08:00am - 08:50am**

Instructor: Osman Okuyucu

(Section 501) (Prerequisite: Grade of C or better in CE 3413; or consent of major advisor). Three hours lecture. Introduction to exploration and engineering evaluation of subsoil and groundwater conditions for selection and design of foundations for structures and earth masses.
Method of Delivery: Asynchronous Online

CE 6513 **Engr. Hydrology** **TBA** **TBA**

Instructor: John Ramirez Avila

(Section 501) (Prerequisite: grade of C or better in CE 3503; or consent of major advisor). Three hours lecture. Hydrologic processes; rainfall-runoff analysis; groundwater flow; frequency analysis; hydrologic design.
Method of Delivery: Asynchronous Online

CE 6583 **Stream Reconnaissance** **Tues / Thurs** **09:30am - 10:45am**

Instructor: John Ramirez Avila

(Section 501) (Prerequisite: Grade of C or better in CE 3503; or consent of major advisor). Three hours lecture. Stream channel form and sedimentary features. Understanding how water flows into trough streams and channel form and function. Hydrologic, hydraulic and geomorphic channel evolution processes.
Method of Delivery: Asynchronous Online

CE 6733 **Const Eng Equipt & Mthds** **Tues / Thurs** **09:30am - 10:45am**

Instructor: Robert Bennett

(Section 501) (Prerequisite: Grade of C or better in IE 3913, Senior standing or consent of instructor; or consent of major advisor). Three hours lecture. Aspects of planning, operation and management of civil engineering support equipment, site logistics, equipment cost engineering, power systems and environmental considerations of equipment use.
Method of Delivery: Asynchronous Online

CE 6863 **Water & Waste Engr.** **Mon / Wed** **12:30pm - 01:45pm**

Instructor: Benjamin Magbanua Jr.

(Section 501) (Prerequisite: CE 3823 with grade of C or better; or consent of major advisor). Three hour lecture. Evaluation of municipal water and wastewater characteristics and flows; application of various unit processes/unit operations for the treatment of municipal water and wastewater.
Method of Delivery: Asynchronous Online

CE 6973 **Concrete Structures** **Mon / Wed / Fri** **10:00am – 10:50am**

Instructor: Seamus Freyne

(Section 501) (Prerequisite: Grade of C or better in CE 3603). Three hours lecture. Loads on structures. Analysis, design, and study of concrete structures using the ACI specifications. Focus on beams and columns.
Method of Delivery: Asynchronous Online

CE 8463 **Slopes & Embankments** **Tues / Thurs** **05:00pm - 06:15pm**

Instructor: Jeremiah Stache

(Section 501) (Prerequisite: Consent of Major Advisor). Analysis and design of geotechnical systems placed on an angle from the horizontal.
Method of Delivery: Asynchronous Online

CE 8503 **Data Analysis for CEE** **Tues / Thurs** **08:00am - 09:15am**

Instructor: Seamus Freyne

(Section 501) (Prerequisite: Consent of Major Advisor). Three hours lecture. Analysis and interpretation of civil and environmental engineering data. Empirical, analytic, and statistical decomposition of spatial and temporal data to determine meaning.
Method of Delivery: Asynchronous Online

CE 8683 **Finite Element Analy** **Mon / Wed / Fri** **09:00am - 09:50am**

Instructor: Philip Gullett

(Section 501) (Prerequisite: Consent of Major Advisor). Three hours lecture. Energy and elasticity principles. Development of planar three-dimensional and curved elements. Applications to plates and shells. Use of computer programs.
Method of Delivery: Asynchronous Online

CE 8713 **Green Building Systems** **Tues / Thurs** **02:00pm - 03:15pm**

Instructor: Jun Wang

(Section 501) (Prerequisite: Consent of Major Advisor). Three hour lecture. Understanding negative impacts of construction on the societal sustainability and using life-cycle assessment, systems analysis and economic valuation for mitigation.
Method of Delivery: Asynchronous Online

CHE 6173 **Polymer Science & Technology** **Mon / Wed / Fri** **12:00pm - 12:50pm**

Instructor: Julie Jessop

(Section 501) (Prerequisite: C or better in CH 4513 and MA 1723). Three hours lecture. Introduction to societally important polymeric materials and issues with a broad exposure to topics in polymer chemistry, properties, and processing.
Method of Delivery: Synchronous Online

CHE 8011 **Chem En Seminar** **Fridays** **03:00pm - 04:50pm**

Instructor: Amin Amirlatifi

(Section 501) (Prerequisite: Graduate standing). Library assignments and reports on the current chemical engineering literature.
Method of Delivery: Synchronous Online

CHE 8123 **Chem Kinetics Dyn** **Tues / Thurs** **02:00pm - 03:15pm**

Instructor: Hossein Toghiani

(Section 501) (Prerequisite: consent of instructor). Three hours lecture. Theory and interrelations of phenomemological chemical kinetics and molecular reaction dynamics.
Method of Delivery: Synchronous Online

CHE 8523 **Adv Tran Pheno** **Tues / Thurs** **03:30pm - 04:45pm**

Instructor: Santanu Kundu **Tuesdays** **06:00pm - 08:50pm**

(Section 501) Three hours lecture. (Prerequisite: Graduate standing). Fundamental principles in momentum, heat, and mass transport. Conservation equations. Continuity, motion, energy equations, and multicomponent mass equation of change.
Method of Delivery: Asynchronous Online

CSE 6173 **Cryptography** **Tues / Thurs** **11:00am - 12:15pm**

Instructor: Mahalingam Ramkumar

(Section 501) (Prerequisite: CSE 2383 Data Structures and Algorithms). Three hours lecture. Discrete probability, Information theory, Symmetric Cryptography, Introductory Number Theory, Asymmetric Cryptography, Standard Cryptographic Primitives, Cryptographic Protocols.
Method of Delivery: Synchronous Online

CSE 6214 **Intro to Software Eng** **Tues / Thurs** **12:30pm - 01:45pm**

Instructor: Charan Gudla

(Section 501) (Prerequisite: CSE 2383 with a grade of C or better). Three hours lecture. Two hours laboratory. Introduction to software engineering; planning, requirements, analysis and specification, design; testing; debugging; maintenance; documentation. Alternative design methods, software metrics, software project management, reuse, and reengineering.
Method of Delivery: Synchronous Online

CSE 6363 **Software Reverse Engineering** **Tues / Thurs** **02:00pm - 03:15pm**

Instructor: Stephen Torri

(Section 501) (Prerequisite: Grade of C or better in CSE 3183). Three hours of lectures per week. Software specification recovery and malicious software analysis. Tools and techniques for analyzing compiled programs and communications without documentation.
Method of Delivery: Synchronous Online

CSE 6383 **Network Security** **Mon / Wed / Fri** **11:00am - 11:50am**

Instructor: George Trawick

(Section 501) (Prerequisites: CSE 4173/6173 Cryptography; and credit or registration in CSE 4153/6153). Three hours lecture. Basic and advanced concepts in cryptography and network security: symmetric and asymmetric cryptography, key management, wired and wireless network security protocols, network systems security.
Method of Delivery: Synchronous Online

CSE 6623 **Computational Biology** **Tues / Thurs** **09:30am - 10:45am**

Instructor: Andy Perkins

(Section 501) (Prerequisite: BCH 4113/6113 or equivalent and CSE 1384 or CSE 4613/6613). Three hours lecture. Computational analysis of gene sequences and protein structures on a large scale. Algorithms for sequence alignment, structural and functional genomics, comparative genomics, and current topics.
Method of Delivery: Synchronous Online

CSE 6693 **Intro to Machine Learning** **Mon / Wed** **12:30pm - 01:45pm**

Instructor: Zhiqian Chen

(Section 501) (Prerequisites: CSE 1284 with a C or better, and IE 4613 Eng Statistics I, MA 4543 Intro to Math Stat I, or MA 4523 Intro to Probability). Provides an overview of the most important machine learning and data mining methods, and how to apply to large data sets.
Method of Delivery: Synchronous Online

CSE 6733 **Operating Systems I** **Tues / Thurs** **12:30pm - 01:45pm**

Instructor: Stephen Torri

(Section 501) (Prerequisites: C or better in CSE 3723 and CSE 3183, or C or better in CSE 2383 and ECE 3724). Three hours lecture. Historical development of operating systems to control complex computing systems; process management, communication, scheduling techniques; file systems concepts and operation; data communication, distributed process management.
Method of Delivery: Synchronous Online

CSE 8011 **Seminar** **Mondays** **10:00am - 10:50am**

Instructor: Shahram Rahimi

(Section 501) One hour seminar. Reports on recent advances and problems in computer science by guest speakers, faculty, and students; student participation, general discussion.
Method of Delivery: Synchronous Online

CSE 8273 **Software Reqts Eng** **Tues / Thurs** **11:00am - 12:15pm**

Instructor: Tanmay Bhowmik

(Section 501) (Prerequisites: CSE 4214/6214 with grade of C or better). Three hours lecture. An in-depth study of current research and practice in requirements elicitation, requirements analysis, requirements specification, requirements verification and validation, and requirements management.
Method of Delivery: Synchronous Online

CSE 8433 **Adv Cmptr Graphics** **Mon / Wed** **03:30pm - 04:45pm**

Instructor: T. Jankun-Kelly

(Section 501) (Prerequisites: CSE 4413/6413). Three hours lecture. Realistic, three-dimensional image generation; modeling techniques for complex three-dimensional scenes; advanced illumination techniques; fractal surface modeling; modeling and rendering of natural phenomena.
Method of Delivery: Synchronous Online

CSE 8713 **Advanced Cyber Operations** **TBA** **TBA**

Instructor: Sudip Mittal

(Section 501) Three hours lecture. This course is designed to develop the students' knowledge of cyberspace operations concepts and methodologies. Graduates should be able to analyze, synthesize, and evaluate management, engineering, and operational approaches to solve complex problems within cyberspace, defensive and offensive.
Method of Delivery: Asynchronous Online

CSE 8813 **Theory of Computation** **Mon / Wed** **12:30pm - 01:45pm**

Instructor: Ioana Banicescu

(Section 501) (Prerequisite: CSE 3813). Three hours lecture. Study of abstract models of computation, unsolvability, complexity theory, formal grammars and parsing, and other advanced topics in theoretical computer science.
Method of Delivery: Synchronous Online

CSE 8843 **Seg/Parallel Alrthm** **Mon / Wed** **03:30pm - 04:45pm**

Instructor: Ioana Banicescu

(Section 501) (Prerequisite: CSE 4833/6833). Three hours lecture. Complexity of sequential algorithms, theory of complexity, parallel algorithms.
Method of Delivery: Synchronous Online

CSE 8990 **Special Topic in CS - Machine Learning and Modeling for Data Science** **TBA** **TBA**

Instructor: John Swan II

(Section 501) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

ECE 6193 **Automotive Engineering** **Tues / Thurs** **08:00am - 09:15am**

Instructor: Joonsik Hwang

(Section 501) Three hours lecture. Fundamentals of automotive engineering, including power units, mechanical systems, electrical systems, and industrial and systems engineering aspects. (Same as CHE/IE/ME 4193/6193).
Method of Delivery: Asynchronous Online

ECE 6333 **RF & Microwave Engineering** **Tues / Thurs** **09:30am - 10:45am**

Instructor: Junming Diao

(Section 501) (Prerequisite: Grade of C or better in ECE 3323 or consent of instructor). Three hours lecture. Introduction to RF and microwave engineering, unguided and guided wave types, transmission lines, waveguides, microwave networks, impedance matching techniques, and microwave components.
Method of Delivery: Asynchronous Online

ECE 6443 **Sensor Processing for AVs** **Mon / Wed** **03:30pm - 04:45pm**

Instructor: John Ball

(Section 501) (Prerequisite: ECE 3443 or permission of instructor). Three hours lecture. Introduction to sensors and sensor processing for advanced driver assistance systems (ADAS).
Method of Delivery: Asynchronous Online

ECE 6633 **Pwer Distrib Systems** **Tues / Thurs** **12:30pm - 01:45pm**

Instructor: Yong Fu

(Section 501) (Prerequisite: Grade of C or better in ECE 3614). Three hours lecture. Distribution of power from transmission system to users; primary and secondary feeders; voltage regulation; distribution transformers; protective device coordination; system design; load management.
Method of Delivery: Asynchronous Online

ECE 6713 **Computer Architecture** **Tues / Thurs** **02:00pm - 03:15pm**

Instructor: Chaomin Luo

(Section 501) (Prerequisites: Grade of C or better in ECE 3724). Three hours lecture. Detailed design and implementation of a stored-program digital computer system. Designs for the CPU, I/O subsystems, and memory organizations. ALU design and computer arithmetic.
Method of Delivery: Asynchronous Online

ECE 6743 / 501 **Digital Sys Design** **Mon / Wed** **09:00am - 09:50am**

Instructor: Bryan Jones

(Section 501) (Prerequisites: Grade of C or better in ECE 3724. Credit or registration in ECE 3424 or ECE 3244). Two hours lecture. Three hours laboratory. Hierarchical digital design using available design software. Computer aided design workstations will be used to give students access to state-of-the-art design techniques.
Method of Delivery: Asynchronous Online

ECE 6743 / 502 **Laboratory (Digital Sys Design)** **TBA** **TBA**

Instructor: Bryan Jones

(Section 502) (Prerequisites: Grade of C or better in ECE 3724. Credit or registration in ECE 3424 or ECE 3244). Two hours lecture. Three hours laboratory. Hierarchical digital design using available design software. Computer aided design workstations will be used to give students access to state-of-the-art design techniques.
Method of Delivery: Asynchronous Online

ECE 8433 **Statistical Signal Processing** **Tues / Thurs** **12:30pm - 01:45pm**

Instructor: Ali Gurbuz

(Section 501) (Prerequisite: MA 4533/6533 or consent of instructor). Three hours lecture. Detection theory and design, statistical decisions, Bayes and Neyman-Pearson detection, asymptotic performance, signal processing applications.
Method of Delivery: Asynchronous Online

ECE 8683 **Power Sys Opt & Control** **Tues / Thurs** **09:30am - 10:45am**

Instructor: Yong Fu

(Section 501) (Prerequisite: Grade of C or better in ECE 4613 or ECE 6613). Three hours lecture. Power generation characteristics; network modeling; economic dispatch; unit commitment; security constrained unit commitment; hydrothermal coordination.
Method of Delivery: Asynchronous Online

ECE 8743 **Advanced Robotics** **Tues / Thurs** **11:00am - 12:15pm**

Instructor: Chaomin Luo

(Section 501) Three hours lecture. Rotations and their parameterization, Lie group theory, and shape determination of continuum robots.
Method of Delivery: Asynchronous Online

ECE 8990 / 501 **Special Topic in ECE - Optimization for Machine Learning** **Mon / Wed** **02:00pm - 03:15pm**

Instructor: Chun-Hung Liu

(Section 501) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)
Method of Delivery: Asynchronous Online

ECE 8990 / 502 **Special Topic in ECE - IoT and IoT Security** **Mon / Wed** **12:30pm - 01:45pm**

Instructor: Yu Luo

(Section 502) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)
Method of Delivery: Asynchronous Online

ECE 8990 / 503 **Special Topic in ECE - Medical Telemetry** **Tues / Thurs** **02:00pm - 03:15pm**

Instructor: Ryan Green

(Section 503) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)
Method of Delivery: Asynchronous Online

ECE 9100 **Graduate Seminar** **TBA** **TBA**

Instructor: Qian Du

(Section 501) Presentations and discussions by faculty, guest speakers, and graduate students on current topics in the areas of electrical and computer engineering. Must be taken three times before graduation for doctoral degree. Repeatable up to three times.
Method of Delivery: Asynchronous Online

EM 6123 **Intro Finite Element** **TBA** **TBA**

Instructor: Joshua Marshall

(Section 501) (Prerequisite: Consent of Instructor). Three hours lecture. Introduction to the mathematical theory, formulation, and computer implementation of the finite element method. Application to one-and two-dimensional problems in engineering mechanics.
Method of Delivery: Asynchronous Online

EM 6133 **Composite Materials** **Mon / Wed / Fri** **01:00pm - 01:50pm**

Instructor: Han-Gyu Kim

(Section 501) (Prerequisites: EM 3213 and MA 3253.) Three hours lecture. Stress, strain, constituative relations for anisotropic material, lamina properties, laminate properties, composite beams and plates.
Method of Delivery: Asynchronous Online

EM 8113 **Theory of Cont Media** **Mon / Wed / Fri** **10:00am - 10:50am**

Instructor: Davy Belk

(Section 501) (Prerequisite: MA 3353 or consent of the instructor). Three hours lecture. An introduction to the general theory of continuous media and its application to the theories of elasticity and fluid mechanics.
Method of Delivery: Asynchronous Online

EM 8313 **Advanced Dynamics** **TBA** **TBA**

Instructor: Joshua Marshall

(Section 501) (Prerequisites: EM 2433 and MA 3253). Three hours lecture. Fundamental considerations, Hamilton's principle, Lagrange's equations, rigid body dynamics.
Method of Delivery: Asynchronous Online

GE 8003 **MENG Capstone** **TBA** **TBA**

Instructor: Kari Reeves (P) / Tamra Swann

(Section 501) Three hours lecture. An individualized professional project course open only to candidates for the Master of Engineering. Formal written paper and presentation are required.
Method of Delivery: Asynchronous Online

GE 8303 **Intro Military Engineering** **Tues / Thurs** **12:30pm - TBA**

Instructor: Gary Johnston (P) / Tamra Swann

(Section 501) Three hours lecture. An introduction course on the history and development of military engineering. A background on the development of the missions associated with military engineering and how risks associated with military operations adapts or changes common engineering practices.
Method of Delivery: Asynchronous Online

IE 6533 **Project Mgt** **TBA** **TBA**

Instructor: Adam Piper

(Section 501) (Prerequisites: Grade of C or better in IE 4613). Three hours lecture. Use of CPM, PERT, and GERT for planning, managing and controlling projects. Computer procedures for complex networks.
Method of Delivery: Asynchronous Online

IE 6543 **Logistics Engineering** **TBA** **TBA**

Instructor: Vidanelage Dayarathna

(Section 501) (Prerequisite: IE 4613 and senior or graduate standing, Co-requisites: IE 4733 or MA 4733). Three hours lecture. Analysis of complex logistics networks. Integration of supply, production, inventory, transportation, and distribution. Strategies for reducing logistics costs and lead times. Customer-supplier partnerships.
Method of Delivery: Asynchronous Online

IE 6553 **Eng Law & Ethics** **TBA** **TBA**

Instructor: Robert Green

(Section 501) (Prerequisite: Senior standing in engineering). Three hours lecture. The engineer and his relations to the law, to the public, and the ethics of his profession. Includes contracts, patents, copyrights, sales agreements, engineering specifications.
Method of Delivery: Asynchronous Online

IE 6613 **Eng Statistics I** **TBA** **TBA**

Instructor: Haifeng Wang

(Section 501) (Prerequisite: MA 1723). Three hours lecture. Introduction to statistical analysis. Topics include: probability, probability distributions, data analysis, parameter estimation, statistical intervals, and statistical inferences.
Method of Delivery: Asynchronous Online

IE 6623 **Eng Statistics II** **TBA** **TBA**

Instructor: Vidanelage Dayarathna

(Section 501) (Prerequisite: Grade of C or better in IE 4613). Three hours lecture. Continuation of IE 4613/6613. Introduction to engineering applications of regression, experimental design and analysis, and nonparametric methods.
Method of Delivery: Asynchronous Online

IE 6733 **Linear Programming I** **TBA** **TBA**

Instructor: Nazanin Morshedlou

(Section 501) (Prerequisites: MA 3113). Three hours lecture. Theory and application of linear programming; formulating optimization models; simplex algorithm, duality and sensitivity analysis, integer programming; branch-and-bound algorithm; real-life applications of linear and integer programming models (Same as MA 4733/6733).
Method of Delivery: Asynchronous Online

IE 6773 **Sys Simulation I** **TBA** **TBA**

Instructor: Adam Piper

(Section 501) (Prerequisite: Grade of C or better in IE 4934, IE 4933 or equivalent programming course, Co-requisite: IE 4623). Three hours lecture. The principles of simulating stochastic systems with an emphasis on the statistics of simulation and the use of discrete-event simulation languages.
Method of Delivery: Asynchronous Online

IE 6933 **Information System in IE** **TBA** **TBA**

Instructor: Vidanelage Dayarathna

(Section 501) (Prerequisite: Grade of C or better in CSE 1233, CSE 1284 or equivalent). Three hours lecture. An introduction to the design and development of information systems for use in industrial engineering applications.
Method of Delivery: Asynchronous Online

IE 6990 / 501 **Special Topic in IE - Facilities & Planning** **Mon / Wed / Fri** **08:00am - 08:50am**

Instructor: Seunghan Lee

(Section 501) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

IE 6990 / 542 **Special Topic in IE - Issues in Peak Performance** **TBA** **TBA**

Instructor: Staff

(Section 542) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

Course Dates: 01/16/2024 – 03/04/2024

IE 6990 / 553 **Special Topic in IE - Data Science in the Sport Ecosystem Part I** **TBA** **TBA**

Instructor: Adam McLean

(Section 553) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

Course Dates: 03/06/2024 – 05/01/2024

IE 6990 / 554 **Special Topic in IE - Positive Mental Health and Happiness** **TBA** **TBA**

Instructor: Kari Reeves

(Section 554) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
Method of Delivery: Asynchronous Online

Course Dates: 03/06/2024 – 05/01/2024

IE 8153 **Cognitive Engr** **TBA** **TBA**

Instructor: Lesley Strawderman

(Section 501) Three hours lecture. Implications of human perceptual, cognitive, and psycho-motor capabilities on the design of systems for effective, efficient and safe human-machine performance.
Method of Delivery: Asynchronous Online

IE 8753 **Network Flow & Dynamic Prog** **TBA** **TBA**

Instructor: Junfeng Ma

(Section 501) (Prerequisites: MA 2733 and IE 4613). Three hours lecture. Applications of network optimization problems and simplex algorithm; and dynamic programming to industrial/ management problems. Study of serial/non-serial multistage deterministic and stochastic systems. Principles of optimality.
Method of Delivery: Asynchronous Online

IE 8913 **Engr Economy II** **TBA** **TBA**

Instructor: Adam Piper

(Section 501) (Prerequisites: IE 3913 and IE 4613). Three hours lecture. Advanced principles and methods for engineering analysis of industrial problems. Topics include criteria for decisions, project investment and analysis, and elements of risk and uncertainty.
Method of Delivery: Asynchronous Online

ME 6193 **Automotive Engineering** **Tues / Thurs** **08:00am - 09:15am**

Instructor: Joonsik Hwang

(Section 501) Three hours lecture. Fundamentals of automotive engineering, including power units, mechanical systems, electrical system and industrial and systems engineering aspects. (Same as CHE/ECE/IE 4193/6193).
Method of Delivery: Asynchronous Online

ME 6233 **Fundamentals of FEA** **Mon / Wed** **12:30pm - 01:45pm**

Instructor: Matthew Priddy

(Section 501) Three hours lecture. This course focuses on the implementation of the finite element (FE) method with commercially-available FE software and the basic mathematical theory of finite element analysis. Topics include mechanical response with a survey of thermal analysis and advanced topics (e.g., nonlinear problems and dynamic loading).
Method of Delivery: Asynchronous Online

ME 6353 **Alt Energy Sources** **Mon / Wed / Fri** **11:00am - 11:50am**

Instructor: Morgan Green

(Section 501) (Prerequisite: ME 3313). Three hours lecture. Analysis and design of systems using energy derived from solar, hydro, geothermal, wind, ocean, waste, and biomass sources.
Method of Delivery: Asynchronous Online

ME 6393 **Power Generation Systems** **Mon / Wed / Fri** **10:00am - 10:50am**

Instructor: Staff

(Section 501) (Prerequisites: ME 3313 and ME 3523). Three hours lecture. Evaluation and optimization of power generation systems with emphasis on optimization methods, system simulation, and economics. Energetic, economic, and environmental issues as well as exergy analysis may be incorporated in this course.
Method of Delivery: Asynchronous Online

ME 8253 **Fatigue in Engin Design** **Tues / Thurs** **11:00am - 12:15pm**

Instructor: Youssef Hammi

(Section 501) Three hours lecture. Prediction and prevention of fatigue failure in metallic materials.
Method of Delivery: Asynchronous Online

ME 8373 **Integrate Comp Mat'l Eng** **Mon / Wed** **02:00pm - 03:15pm**

Instructor: Doyl Dickel

(Section 501) (Prerequisites: EM 3213 and ME 3403). Three hours lecture. Survey course of various length scale computational analysis related to materials modeling. Emphasis upon projects and exercises.
Method of Delivery: Asynchronous Online

ME 8823 **Viscous Flow II** **Tues / Thurs** **12:30pm - 01:45pm**

Instructor: Shanti Bhushan

(Section 501) (Prerequisite: ME 8813 or equivalent). Three hours lecture. Numerical solution techniques for viscous flow equations. Turbulence and turbulence modeling. Current literature and topics.
Method of Delivery: Asynchronous Online

MISSISSIPPI STATE UNIVERSITY
Registration Information

Admissions

All students participating in the off-campus program should contact Tamra Swann (662-325-3786 / tswann@bagley.msstate.edu) to get information on the Admissions and Registration process. Tamra Swann is the Bagley Distance Education Coordinator at MSU and will assist students in pursuing their degrees.

While some graduate degree program application deadlines have already passed, students that are interested in the Master of Engineering program, especially the Military Engineering concentration, have until December 1st to finish their application and all materials must be received by December 15th.

Students that are not already in a degree program or have no interest in pursuing a degree may apply as an unclassified student to take courses next semester. Up to 9 hours of graduate credit taken as an unclassified student may be earned for use toward a graduate degree. It is strongly recommended that those interested in enrolling as an unclassified student next semester apply by December 1st and submit all required materials by December 15th. The university may still accept unclassified applications for Spring 2024 until 11:59 PM (CST) before the first day of class, but they cannot guarantee there will be enough time to secure the proper unclassified student overrides and gain permission to attend from the instructor. For more information regarding deadlines, please see https://www.bagley.msstate.edu/distance/deadlines/.

Applications can be initiated at www.grad.msstate.edu.

Tuition for Spring 2024

To view the graduate tuition fees for MSU's distance education program courses, please check the 'Online Education' tab at https://www.controller.msstate.edu/accountservices/tuition/.

Applicants to the MENG – Military program for the Spring 2024 semester can have their application fee paid by the College of Engineering. A complete list of fellowship opportunities follows:

1. The first 20 students applying to the Master of Engineering or Master of Engineering - Military for the Spring, Summer, and Fall 2024 semesters can request their application fees be paid by the program.
2. Ten (10) students who apply during this time and successfully complete their first engineering course by December 31st, 2024, will receive a $1,500 fellowship toward their second course. Successful completion of a course requires an A or B posted on their university transcript.
3. Ten of these students participating in engineering classes which require textbooks can receive up to $250 in funding toward their textbook. Students must provide a copy of the syllabus and a screenshot of the book including purchasing and shipping cost.

Important Dates

January 16th	Classes begin
January 22nd	Last day to drop a course without a grade (5th class day) 11:59 p.m.
January 23rd	Last day to register or add a course (6th class day) 5:00 p.m.
April 29th	Classes end
May 2nd	Final exams begin

For more information about the Bagley College of Engineering and the degree programs they offer, please see https://www.bagley.msstate.edu/.