Mississippi State University
Fall 2022
Course List

ASE 6553	Eng Design Optimization	Tues / Thurs	12:30pm - 01:45pm
ASE 6713	Intro to Unmanned Aircraft	Mon / Wed / Fri	11:00am - 11:50am
ASE 8313	Adv Comp Aerodyn I	Tues / Thurs	03:30pm - 04:45pm
ASE 8343	Incomp Vis Lam Flow	Mon / Wed	02:00pm - 03:15pm
ASE 8413	Comput Fluid Dyn I	Tues / Thurs	02:20pm - 03:35pm
CE 6103	Pavement Mat & Des	Tues / Thurs	08:00am - 09:15am
CE 6523	Open Chan Hydraul	Mon / Wed / Fri	08:00am - 08:50am
CE 6583	Stream Reconnaissance	Tues / Thurs	08:00am - 09:15am
CE 6703	Constr Eng Management	TBA	TBA
CE 6753	Construction Cost Estimating	Mon / Wed	03:30pm - 04:45pm
CE 6883	Engrd. Environmental Sys.	Tues / Thurs	09:30am - 10:45am
CE 6913	Matrix Struct Analysis	Mon / Wed / Fri	12:00pm - 12:50pm
CE 8443	Soil Behavior	Tues / Thurs	03:30pm - 04:15pm
CE 8673	Blast Effects	Tues / Thurs	11:00am - 12:15pm
CE 8803	Un Pro-Op Env Eng I	Mon / Wed / Fri	09:10am - 10:00am
CSE 6153	Data Comm Networks	Mon / Wed	03:30pm - 04:45pm
CSE 6214	Intro to Software Eng	Tues / Thurs	02:50pm - 04:45pm
CSE 6243	Info & Computer Secur	Mon / Wed / Fri	10:00am - 10:50am
CSE 6253	Secure Software Engineering	Mon / Wed	02:00pm - 03:15pm
CSE 6273	Intro to Computer Forensics	Mon / Wed / Fri	09:00am - 09:50am
CSE 6413	Computer Graphics	Tues / Thurs	11:00am - 12:15pm
CSE 6503	Database Management Systems	Tues / Thurs	09:30am - 10:45am
CSE 6683	Machine Learning and Soft Comp	Tues / Thurs	09:30am - 10:45am
CSE 6773	Intro to Cyber Ops	TBA	TBA
CSE 6833	Intro to Algorithms	Mon / Wed	12:30pm - 01:45pm
CSE 8011	Seminar	Mondays	09:00am - 09:50am
CSE 8713	Advanced Cyber Operations	Tuesdays	05:00pm - 07:30pm
CSE 8833	Algorithms	Mon / Wed	03:30pm - 04:45pm
ECE 6413	Digital Signal Process	Mon / Wed	03:30pm - 04:45pm
ECE 6613	Pwr Transmission Sys	Tues / Thurs	09:30am - 10:45am
ECE 6653	Intro to Power Elect.	Tues / Thurs	08:00am - 09:15am
ECE 6673	Fund of HV Engin	Mon / Wed / Fri	12:00pm - 12:50pm
ECE 6713	Computer Architecture	Tues / Thurs	08:00am - 09:15am
ECE 8473	Digital Image Processing	Mon / Wed	02:00pm - 03:15pm
ECE 8743	Advanced Robotics	Tues / Thurs	02:00pm - 03:15pm
ECE 8923	Non-Linear Con Sys	Mon / Wed	02:00pm - 03:15pm
ECE 9100	Graduate Seminar	TBA	TBA
EM 6143	Eng Design Optimization	Tues / Thurs	12:30pm - 01:45pm

EM 8203	Appl Elasticity	Mon / Wed / Fri	01:00pm - 01:50pm
EM 8313	Advanced Dynamics	Tues / Thurs	05:00pm - 06:15pm
IE 6333	Prod Control Sys I	Mon / Wed / Fri	09:00am - 09:50am
IE 6513	Engineering Admin	Mon / Wed / Fri	10:00am - 10:50am
IE 6573	Process Imprvmnt Eng	Tues / Thurs	11:00am - 12:15pm
IE 6613	Eng Statistics I	TBA	TBA
IE 6623	Eng Statistics II	TBA	TBA
IE 6653	Ind Qual Control I	Tues / Thurs	08:00am - 09:15am
IE 6743	Eng Design Optimization	Tues / Thurs	12:30pm - 01:45pm
IE 6753	Systems Engr & Analysis	Tues / Thurs	09:30am - 10:45am
IE 6773	Sys Simulation I	Mon / Wed / Fri	11:00am - 11:50am
IE 6990	Special Topic In IE - Data Mining for Predictive Maintenance Applications	Mon / Wed / Fri	08:00am - 08:50am
IE 8163	Macroergonomics	Mon / Wed	03:30pm - 04:45pm
IE 8623	Adv Data Analytics Cmplx Sys	Mon / Wed	03:30pm - 04:45pm
MA 8203	Appl Math I	Tues / Thurs	02:00pm - 03:15pm
ME 6123	Failure of Eng. Mat'l	Mon / Wed / Fri	01:00pm - 01:50pm
ME 6133	Mechanical Metallurgy	Tues / Thurs	09:30am - 10:45am
ME 6343	Intermed Heat Trans	Mon / Wed	12:30pm - 01:45pm
ME 6373	Air Conditioning	Mon / Wed / Fri	11:00am - 11:50am
ME 6543	Combustion Engines	Tues / Thurs	08:00am - 09:15am
ME 8011	Graduate Seminar	Mondays	02:00pm - 03:50pm
ME 8213	Engineering Anal I	Tues / Thurs	09:30am - 10:45am
ME 8243	Finite Element In ME	Tues / Thurs	11:00am - 12:15pm
ME 8313	Cond Heat Transfer	Tues / Thurs	08:00am - 09:15am
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 6553   **Eng Design Optimization**   **Tues / Thurs**   **12:30pm - 01:45pm**

Instructor: Chuangchuang Sun

(Section 501) Prerequisite: Consent of Instructor. Three hours lecture. Introduction to optimality criteria and optimization techniques for solving constrained or unconstrained optimization problems. Sensitivity analysis and approximation. Computer application in optimization. Introduction to MDO. (Same as EM 4143/6143 and IE 4743/6743)

ASE 6713   **Intro to Unmanned Aircraft**   **Mon / Wed / Fri**   **11:00am - 11:50am**

Instructor: Calvin Walker

(Section 501) Three-hour lecture. This course provides an introduction to various aspects involved in design and operation of unmanned aircraft systems. With the increasing use of UAS in civilian and military roles, future engineers will benefit from a systems perspective of unmanned aircraft systems.

ASE 8313   **Adv Comp Aerodyn I**   **Tues / Thurs**   **03:30pm - 04:45pm**

Instructor: Davy Belk

(Section 501) Prerequisite: ASE 4343 or equivalent. Three hours lecture. Derivation of complete equations for compressible fluid flow; unsteady one-dimensional flows; method of characteristics; flow about two-dimensional and axis-symmetric shapes; integral methods.

ASE 8343   **Incomp Vis Lam Flow**   **Mon / Wed**   **02:00pm - 03:15pm**

Instructor: Carmen Sescu

(Section 501) Prerequisite: Consent of instructor. Three hours lecture. Incompressible Navier-Stokes equations; properties and exact solutions; laminar boundary layer equations; two- and three-dimensional solutions; time-dependent solutions; approximate solutions; boundary layer control.

ASE 8413   **Comput Fluid Dyn I**   **Tues / Thurs**   **02:20pm - 03:35pm**

Instructor: Adrian Sescu

(Section 501) Prerequisite: Consent of instructor. Three hours lecture. Review of relevant numerical analysis; one dimensional methods; compressible inviscid methods, Euler Equation methods, inviscid-viscous interaction methods; current literature.

CE 6103   **Pavement Mat & Des**   **Tues / Thurs**   **08:00am - 09:15am**

Instructor: Isaac Howard

(Section 501) Prerequisite: Grade of C or better in CE 3313; or consent of major advisor. Three hours lecture. Analysis design of both flexible and rigid pavement structures.

CE 6523   **Open Chan Hydraul**   **Mon / Wed / Fri**   **08:00am - 08:50am**

Instructor: Thomas Lynn

(Section 501) Prerequisite: Grade of C or better in CE 3503; or consent of major advisor. Three hours lecture. Continuity, energy and momentum principles in open channel flow, flow resistance, uniform and non-uniform flow, channel controls and transitions, unsteady flow routing.

CE 6583   **Stream Reconnaissance**   **Tues / Thurs**   **08:00am - 09:15am**

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.

CE 6703   **Constr Eng Management**   **TBA**   **TBA**

Instructor: Jun Wang

(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. Construction contracts and law, cost estimating, and project scheduling.

CE 6753   **Construction Cost Estimating**   **Mon / Wed**   **03:30pm - 04:45pm**

Instructor: Jun Wang

(Section 501) Prerequisite: Senior Standing. Three hour lecture. Overview of cost estimates, total cost of a project, direct and indirect costs, labor and equipment cost analysis, materials management, overhead; contingency; and profit, bonds and insurance in construction engineering projects.

CE 6883   **Engrd. Environmental Sys.**   **Tues / Thurs**   **09:30am - 10:45am**

Instructor: Veera Gude

(Section 501) Prerequisite: CE 3503 & CE 3823 with grade of C or better; or consent of major advisor. Three hour lecture. Evaluation and characterization of storm water quality; selection, design and application of various treatment technologies; surface water quality management and modeling; and sustainable engineering.

CE 6913   **Matrix Struct Analysis**   **Mon / Wed / Fri**   **12:00pm - 12:50pm**

Instructor: Philip Gullett

(Section 501) Prerequisite: Grade of C or better in CE 3603, or consent of instructor; or consent of major advisor. Matrix formulation and computer analysis of structures. Linear stiffness analysis of truss and frames structures.

CE 8443   **Soil Behavior**   **Tues / Thurs**   **03:30pm - 04:15pm**

Instructor: Farshid Vahedifard

(Section 501) Prerequisite: Consent of Major Advisor. Three hours lecture. Review of methods of testing to define response; rationale for choosing shear strength and deformation parameters for soils for design applications.

CE 8673   **Blast Effects**   **Tues / Thurs**   **11:00am - 12:15pm**

Instructor: Stanley Woodson

(Section 501) Prerequisite: Consent of Major Advisor. Three hours lecture. Fundamental blast phenomena. Blast loadings on structures and effects on occupants. Design and analysis of structural elements and systems subjected to blast.

CE 8803   **Un Pro-Op Env Eng I**   **Mon / Wed / Fri   09:10am - 10:00am**

Instructor: Veera Gude

(Section 501) Prerequisite: Consent of Major Advisor. Three hours lecture. Theory and application of physical and chemical unit processes and operations available for the treatment of water and wastewater.

CSE 6153   **Data Comm Networks**   **Mon / Wed   03:30pm - 04:45pm**

Instructor: Maxwell Young

(Section 501) Prerequisites: Grade of C or better in CSE 3723 or ECE 3724. Three hours lecture. The concepts and practices of data communications and networking to provide the student with an understanding of the hardware.

CSE 6214   **Intro to Software Eng**   **Tues / Thurs   02:50pm - 04:45pm**

Instructor: Staff

(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.

CSE 6243   **Info & Computer Secur**   **Mon / Wed / Fri   10:00am - 10:50am**

Instructor: George Trawick

(Section 501) Prerequisite: Credit in CSE 3183. Three hours lecture. Topics include encryption systems, network security, electronic commerce, systems threats, and risk avoidance procedures.

CSE 6253   **Secure Software Engineering**   **Mon / Wed   02:00pm - 03:15pm**

Instructor: Stephen Torri

(Section 501) Prerequisite: CSE 2213 and CSE 2383 both with a grade of C or better. Three hours lecture Principles, techniques, and practices involved in building security into software systems including security requirements analysis, secure design, secure coding and security testing, verification and risk.

CSE 6273   **Intro to Computer Forensics**   **Mon / Wed / Fri   09:00am - 09:50am**

Instructor: George Trawick

(Section 501) Prerequisite: Senior standing in CSE/SE/CPE/MIS/CJ. Three hours lecture. Introduction to computer crime and the study of evidence for solving computer-based crimes. Topics: computer crime, computer forensics and methods for handling evidence.

CSE 6413   **Computer Graphics**   **Tues / Thurs   11:00am - 12:15pm**

Instructor: T. Jankun-Kelly

(Section 501) Prerequisites: MA 3113 and grade of C or better in CSE 2383. Three hours lecture. Graphics hardware; algorithms, graphics primitives, windowing and clipping, transformations,3D graphics, shading, hidden surfaces; standards.

| CSE 6503 | **Database Management Systems** | **Tues / Thurs** | **09:30am - 10:45am** |

Instructor: Staff

(Section 501) Prerequisites: CSE 2383 and CSE 2813, both with a grade of C or better. Three hours lecture. Modern database models; basic database management concepts; query languages; database design through normalization; advanced database models; extensive development experience in a team environment.

| CSE 6683 | **Machine Learning and Soft Comp** | **Tues / Thurs** | **09:30am - 10:45am** |

Instructor: Shahram Rahimi

(Section 501) Prerequisite: IE 4613 Engineering Statistics I or MA 4543 Intro Math Stat I or MA 4523 Intro to Probability or equivalent. An introduction to the field of machine learning and soft computing. Covers rule based expert systems, fuzzy expert systems, artificial neural networks, evolutionary computation, and hybrid systems.

| CSE 6773 | **Intro to Cyber Ops** | **TBA** | **TBA** |

Instructor: Sudip Mittal

(Section 501) Three hours lecture. This course is designed to develop the students' knowledge of basic cyberspace operations concepts and methodologies. Graduates should be able to assist in the analysis, synthesis, and evaluation of management, engineering, and operational approaches to solve complex problems within cyberspace, defensive and offensive.

| CSE 6833 | **Intro to Algorithms** | **Mon / Wed** | **12:30pm - 01:45pm** |

Instructor: Maxwell Young

(Section 501) Prerequisites: CSE 2383 and CSE 2813 with a grade of C or better. Three hours lecture. Study of complexity of algorithms and algorithm design. Tools for analyzing efficiency; design of algorithms, including recurrence, divide-and-conquer, dynamic programming and greedy algorithms.

| CSE 8011 | **Seminar** | **Mondays** | **09:00am - 09:50am** |

Instructor: Staff

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

| CSE 8713 | **Advanced Cyber Operations** | **Tuesdays** | **05:00pm - 07:30pm** |

Instructor: Staff

(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.

| CSE 8833 | **Algorithms** | **Mon / Wed** | **03:30pm - 04:45pm** |

Instructor: Ioana Banicescu

(Section 501) Prerequisites: CSE 4833/6833.Three hours lecture. Advanced techniques for designing and analyzing algorithms, advanced data structures, case studies, NP-completeness including reductions, approximation algorithms.

ECE 6413 **Digital Signal Process** **Mon / Wed** **03:30pm - 04:45pm**

Instructor: John Ball

(Section 501) Prerequisite: Grade of C or better in ECE 3443. Three hours lecture. Discrete time signals, Z-Transform, Discrete Fourier Transform, digital filter design including IIR, FIR, and FFT synthesis.

ECE 6613 **Pwr Transmission Sys** **Tues / Thurs** **09:30am - 10:45am**

Instructor: Yong Fu

(Section 501) Prerequisite: Grade of C or better in ECE 3614. Three hours lecture. Transmission of power from generator to distribution system; transmission line design; load flow; symmetrical components; balanced/unbalanced faults; stability.

ECE 6653 **Intro to Power Elect.** **Tues / Thurs** **08:00am - 09:15am**

Instructor: Seungdeog Choi

(Section 501) Prerequisite: Grade of C or better in both ECE 3614 and ECE 3424 or equivalent. Three hours lecture. Introduction to power electronic circuits, with emphasis on design and analysis of power semiconductor converters including DC-DC converters, PWM inverters, and DC power supplies.

ECE 6673 **Fund of HV Engin** **Mon / Wed / Fri** **12:00pm - 12:50pm**

Instructor: Chanyeop Park

(Section 501) Prerequisite: Grade of C or better in ECE 3614.Three hours lecture. Electrical fields, fields in multi-dielectrics, breakdown mechanisms in gases, liquids, and solid dielectrics, laboratory generation of high voltages, high voltage insulators and cables.

ECE 6713 **Computer Architecture** **Tues / Thurs** **08:00am - 09:15am**

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.

ECE 8473 **Digital Image Processing** **Mon / Wed** **02:00pm - 03:15pm**

Instructor: Qian Du

(Section 501) Prerequisites: CS 1233, CS 1284 or equivalent, ECE 4413/ 6413. Three hours lecture. A study of digital image processing principles, concepts, and algorithms; mathematical models; image perception; image sampling and quantization, transforms, image coding.

ECE 8743 **Advanced Robotics** **Tues / Thurs** **02:00pm - 03:15pm**

Instructor: Chaomin Luo

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

ECE 8923 **Non-Linear Con Sys** **Mon / Wed** **02:00pm - 03:15pm**

Instructor: Masoud Karimi-Ghartemani

(Section 501) Prerequisite: ECE 4913/6913 or equivalent. Three hours lecture. A study of techniques available to analyze non-linear systems and a study of associated synthesis procedures.

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.

EM 6143   **Eng Design Optimization**   **Tues / Thurs**   **12:30pm - 01:45pm**

Instructor: Chuangchuang Sun

(Section 501) Prerequisite: Consent of instructor. Three hours lecture. Introduction to optimality criteria and optimization techniques for solving constrained or unconstrained optimization problems. Sensitivity analysis and approximation. Computer application in optimization. Introduction to MDO. (Same as ASE 4553/6553 and IE 4743/6743).

EM 8203   **Appl Elasticity**   **Mon / Wed / Fri**   **01:00pm - 01:50pm**

Instructor: Douglas Bammann

(Section 501) Three hours lecture. Analysis of stress and strain; stress-strain relations; bending and torsion of beams; stress functions; strain energy.

EM 8313   **Advanced Dynamics**   **Tues / Thurs**   **05:00pm - 06:15pm**

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.

IE 6333   **Prod Control Sys I**   **Mon / Wed / Fri**   **09:00am - 09:50am**

Instructor: Wenmeng Tian

(Section 501) Prerequisite: Grade of C or better in IE 4613. Three hours lecture. Principles, analysis, and design of production and inventory planning and control. Demand for forecasting, aggregated planning, inventory management, production scheduling and control systems.

IE 6513   **Engineering Admin**   **Mon / Wed / Fri**   **10:00am - 10:50am**

Instructor: Brian Smith

(Section 501) Prerequisite: Junior or graduate standing in engineering. Three hours lecture. Study of problems confronting the engineering manager. Includes: Organization and communication theory, internal and external relationships and responsibilities, and designing and implementing managerial systems.

IE 6573   **Process Imprvmnt Eng**   **Tues / Thurs**   **11:00am - 12:15pm**

Instructor: Junfeng Ma

(Section 501) Three hours lecture. Introduction to quality and productivity improvement methodologies and tools. The design and implementation of continuous improvement systems in organizations.

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

Instructor: Mohammad Marufuzzaman

(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.

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

Instructor: Mohammad Marufuzzaman

(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.

IE 6653   **Ind Qual Control I**   **Tues / Thurs**   **08:00am - 09:15am**

Instructor: Staff

(Section 501) Prerequisite: IE 4613. Three hours lecture. The theory and application of statistical quality control; statistical process control; and statistical acceptance sampling.

IE 6743   **Eng Design Optimization**   **Tues / Thurs**   **12:30pm - 01:45pm**

Instructor: Chuangchuang Sun

(Section 501) Prerequisite: Consent of instructor. Three hours lecture. Introduction to optimality criteria and optimization techniques for solving constrained or unconstrained optimization problems. Sensitivity analysis and approximation. Computer application in optimization. Introduction to MDO. (Same as ASE 4553/6553 and EM 4143/6143).

IE 6753   **Systems Engr & Analysis**   **Tues / Thurs**   **09:30am - 10:45am**

Instructor: Staff

(Section 501) Prerequisite: Grade of C or better in IE 3913 and IE 4613. Three hours lecture. Systems concepts, methodologies, models and tools for analyzing, designing, and improving new and existing human-made systems.

IE 6773   **Sys Simulation I**   **Mon / Wed / Fri** **11:00am - 11:50am**

Instructor: Raed Jaradat

(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.

IE 6990   **Special Topic In IE - Data Mining for Predictive**   **Mon / Wed / Fri** **08:00am - 08:50am**
                     Maintenance Applications

Instructor: Wenmeng Tian

(Section 501) Credit 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).

IE 8163   **Macroergonomics**   **Mon / Wed**   **03:30pm - 04:45pm**

Instructor: Reuben Burch , V

(Section 501) Three hours lecture. Provides a foundational review of Macroergonomics, examining the personnel, technological, and environmental factors influencing organizations. Addresses the relationship between macro- and micro- ergonomics.

IE 8623   **Adv Data Analytics Cmplx Sys**   **Mon / Wed**   **03:30pm - 04:45pm**

Instructor: Wenmeng Tian

(Section 501) Prerequisite: IE 4623 and IE 4683/6683 or equivalent. Three hours lecture. This course will cover a collection of advanced statistical modeling methods including regression-based methods, classification methods, and functional data analysis for complex engineering systems.

MA 8203   **Appl Math I**   **Tues / Thurs**   **02:00pm - 03:15pm**

Instructor: Shantia Yarahmadian

(Section 501) Prerequisites: MA 3113, MA 3253 or consent of instructor. Three hours lecture. Principles of applied mathematics including topics from perturbation theory, calculus of variations, and partial differential equations. Emphasis of applications from heat transfer, mechanics, fluids.

ME 6123   **Failure of Eng. Mat'l**   **Mon / Wed / Fri**   **01:00pm - 01:50pm**

Instructor: Tonya Stone

(Section 501) Prerequisite: EM 3213. Three hours lecture. The failure of constituent materials using real-world case studies is the focus. Experimental and analytical techniques for failure analysis and prevention are covered. (Same as CE 4323/6323).

ME 6133   **Mechanical Metallurgy**   **Tues / Thurs**   **09:30am - 10:45am**

Instructor: Matthew Priddy

(Section 501) (Prerequisite: ME 3403 or equivalent). Three hours lecture. The mechanical and metallurgical fundamentals of metals are discussed. Mechanical fundamentals cover the stress and strain relationships and metallurgical fundamentals cover the microstructure.

ME 6343   **Intermed Heat Trans**   **Mon / Wed**   **12:30pm - 01:45pm**

Instructor: Ben Xu

(Section 501) Prerequisite: ME 3313. Three hours lecture. Condensation and boiling, analytical and numerical techniques for conduction and convection, gray-body and spectral-dependent radiation, transient and steady-state thermal modeling.

ME 6373   **Air Conditioning**   **Mon / Wed / Fri**   **11:00am - 11:50am**

Instructor: Like Li

(Section 501) Prerequisites: ME 3523 and ME 3313. Three hours lecture. Psychometrics; comfort conditions; determination of heat losses and gains; determination of sizes of elements; energy usage estimating; residential and commercial systems.

ME 6543   **Combustion Engines**   **Tues / Thurs**   **08:00am - 09:15am**

Instructor: Staff

(Section 501) Prerequisites: ME 3523 and ME 3313. Three hours lecture. Application of thermodynamics, heat transfer, and combustion in the determination of performance characteristics of various engines, e.g., internal combustion, jet, and rocket engines.

ME 8011   **Graduate Seminar**   **Mondays**   **02:00pm - 03:50pm**

Instructor: Tonya Stone

(Section 501) Presentation and discussion of research and current mechanical engineering literature by students, faculty, and visiting lecturers. Attendance required for students in Mechanical Engineering Graduate Program.

ME 8213   **Engineering Anal I**   **Tues / Thurs**   **09:30am - 10:45am**

Instructor: Christopher Barrett

(Section 501) Three hours lecture. The formulation of mathematical methods of advanced engineering problems and the use of mathematical techniques for their solution: equilibrium, eigenvalue, and propagation problems.

ME 8243   **Finite Element In ME**   **Tues / Thurs**   **11:00am - 12:15pm**

Instructor: Youssef Hammi

(Section 501) Prerequisites: ME 4403 and EM 3213. Three hours lecture. Concepts and applications of finite element analysis in mechanical engineering problems.

ME 8313   **Cond Heat Transfer**   **Tues / Thurs**   **08:00am - 09:15am**

Instructor: Prashant Singh

(Section 501) Three hours lecture. Closed form analytical and approximate numerical solutions to one, two, and three dimensional steady-state and transient problems in conduction heat transfer.

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.

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.

Mississippi State University
Registration Information

Admissions

All students participating in the off-campus program should contact Tamra Swann to get information on the Admissions and the Registrations process. Unclassified students can transfer a limited number of credits into their degree program. Tamra Swann (662-325-3786) is the Bagley Distance Education Coordinator and will assist students in pursuing their master's degree program.

Students that have not already applied should visit grad.msstate.edu and select the APPLY button to apply as a Graduate Unclassified Fall 2022 student. This is a quick process for students that are not signing up for a full degree program. **Students that choose to apply to a specific program should confirm the deadline dates for that specific program.** Please note that applications do require an undergraduate transcript unless the student previously graduated from MSU. If a student needs to send a transcript, it is recommended that they initiate that process as soon as possible. Students should visit their college's registrar's website to find out how to request their transcript. Visit https://www.grad.msstate.edu/students/admissions/where-to-send-documents to see where to send these documents at MSU.

Registration

Registration for Fall 2022 is ongoing through August 1st for applicants applying for online degree programs. For unclassified students, the registration deadline for Fall 2022 is 11:59 PM (CST) before the first day of class. Applications can be started at https://apply.grad.msstate.edu/

Tuition for Fall 2022

Online tuition for Fall 2022 is $539.00 per graduate credit hour. Fee details can be found at https://www.controller.msstate.edu/accountservices/tuition/ .

Note: The Center of Higher Learning makes every attempt to accurately list tuition rates for our participating universities. It is advisable, however, to check with the University before submitting your final paperwork or payment.

Textbooks

Students wishing to order textbooks can do so by visiting the MSU Bookstore website at https://msstate.bncollege.com/shop/msu/home or calling at (662) 325-8361. Students can also visit the Campus Book Mart website at https://www.campusbookmart.net/cbm/ or call them at (662) 323-7660.

Important Dates

August 17th	Classes begin
August 23rd	Last day to drop a course without a grade (5th class day)
August 24th	Last day to register or add a course (6th class day) 5:00pm
November 29th	Classes end
December 1st	Final exams begin

For questions about registration and schedule changes, contact Tamra Swann at 662.325.3786 or tswann@bagley.msstate.edu.