	MECHANICAL ENGINEERING TECHNICAL ELECTIVES
	UPDATED January 2020
	Thermal Electives (3 credits)
ME 469	Energy Conversion
ME 502	Thermodynamics 2
ME 702	Energy and Sustainability
ME 719	Basic Combustion Theory
	Thermal Design Electives (3 credits)
ME 644	Design of HVAC Systems
ME 731	Advanced Design of Heat Exchangers
ME 745	Design of Thermal Systems
	Mechanical Design Electives (3 credits)
ME 541	Mechanical Engineering Design 2
ME 637	Computer – Aided Engineering
ME 639	Appl Finite Element Methods
ME 729	Computer- Aided Analysis of Mech Systs
	Mechanical Electives (3 credits)
ME 469	Energy Conversion
ME 502	Thermodynamics 2
ME 581	Intro of Corrosion
ME 602	Engineering for the Environment
ME 637	Computer – Aided Engineering
ME 644	Design of HVAC Systems
ME 650V	Conduction of Heat Transfer
ME 650W	Intro to Micro-electro-mech Systems
ME 651	Biomaterials
ME 660	Polymer Material and Engineering
ME 665	Selection Mats Design/ Manufacturing
ME 667	Mech Props of Materials
ME 670	Intro to Nano Tech

ME 672 & L	Manufacturing of Composites
ME 673	Recovery of Engineering Materials
ME 680 & L	Laser Materials Process and Design
ME 702	Energy and Sustainability
ME 709	Injury Biomechanics
ME 710	Six Sigma for Mechanical Engineers
ME 719	Basic Combustion Theory
ME 725	Mechanical Vibration and Acoustics
ME 728	Advanced Electronic Materials
ME 729 & L	Computer – Aided Analysis of Mech Systs
ME 730	Modeling of Engineering Systems
ME 731	Advanced Design of Heat Exchangers
ME 737	Robotics and Control
ME 739	Advanced Machine Design
ME 745	Design of Thermal Systems
ME 747	Microcomputer Based Mechanical Systems
ME 749	Applications of FEM in Mechanical Engineering
ME 750AE	Computational Modeling for Fluid Flow & Heat Transfer
ME 750AF	Autonomous Vehicles
ME 750AG	Indoor Air Pollution & Simulation
ME 750AI	Phase Transformation in Materials
ME 752	Failure Analysis Methods and Tools
ME 753	Advanced Materials for Energy Systems
ME 758	Non Linear Ctrl Electro- Mech Systems
ME 760	Fracture Mechanics
ME 762	Polymeric Composite Materials
ME 775	Introduction to Microelectro Mechanical Systems
ME 782	Engineering Applications of CFD and Heat Transfer
	Open Electives (3 credits)
ME 469	Energy Conversion
ME 502	Thermodynamics 2
ME 541	Mechanical Engineering Design 2
ME 581	Intro of Corrosion
ME 602	Engineering for the Environment
ME 637	Computer – Aided Engineering
ME 644	Design of HVAC Systems
ME 650V	Conduction of Heat Transfer

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ME 745	Design of Thermal Systems
ME 747	Microcomputer Based Mechanical Systems
ME 750AE	Computational Modeling for Fluid Flow & Heat Transfer
ME 750AF	Autonomous Vehicles
ME 750AG	Indoor Air Pollution & Simulation
ME 750AI	Phase Transformation in Materials
ME 752	Failure Analysis Methods and Tools
ME 753	Advanced Materials for Energy Systems
ME 758	Non Linear Ctrl Electro- Mech Systems
ME 760	Fracture Mechanics
ME 762	Polymeric Composite Materials
ME 775	Introduction to Microelectromechanical Systems
ME 782	Engineering Applications of CFD & Heat Transfer
BIOL 418	General Ecology
CHEM 514	Inorganic Chemistry
CHEM 523	Analytical Chemistry
CHEM 524	Instrumental Methods of Chemical Analys
CHEM 531	Organic Chemistry I
CHEM 532	Organic Chemistry II

CHEM 545	Physical Chemistry I
CHEM 603	Industrial & Polymer Chemistry
CHEM 661	Introductory Biochemistry
PHYS 551	Topics in Modern Physics
PHYS 621	Analytical Mechanics
PHYS 623	Advanced Mechanics
PHYS 641	Thermo physics
PHYS 651	Quantum Mechanics I
PHYS 661	Introduction to Atomic Physics
PHYS 681	Solid State Physics
AE 415	Intro to Space Dynamics
AE 424	Aerodynamics I
AE 502	Aerospace Propulsion I
AE 508	Systems Dynamics
AE 525	Flight Structures I
AE 527	Numerical Methods in Engineering
AE 716	Compressible Fluid Flow
AE 719	Computational Fluid Dynamics
AE 722	Finite Element Analys of Structures I
AE 731	Theory of Elasticity
AE 733	Advanced Mechanics of Materials
AE 737	Mechanics of Damage Tolerance
AE 753	Mech Laminated Composites
AE 773	Intermediate Dynamics
AE 777	Vibration Analysis
EE 383	Signals and Systems
EE 463	Appl Engr Electromagnetics
EE 488	Electric Machines/Transformers
EE 492	Electron Circuits I
EE 493	Electron Circuits II
EE 588	Advanced Electric Motors
EE 598	Electric Power Systems Analysis
EE 784	Digital Controls Systems
IME 524	Engr Probability/ Statistics I
IME 556	Information Systems
IME 557	Safety Engineering
IME 558	Manuf Methods/ Materials 2
IME 658	Forming Process
IME 664	Engineering Management

IME 676	Aircraft Manufacturing & Assembly
IME 724	Statistical Methods for Engineers
IME 754	Reliability/ Maintainability
IME 755	Design of Experiments
IME 768	Metal Machining: Theory & Applications
IME 775	Computer Integrated Manufacturing
IME 778	Computer Integrated Manufacturing
BME 335	Biomedical Computer Apps
BME 452	Biomechanics
BME 462	Intro to Bio fluids
BME 477	Introduction to Biomaterials
BME 480	Bioinstrumentation
BME 482	Design of Bio devices
BME 771	Poly-processing and Technology
BME 779	Tissue Engineering