Technical Elective Requirements – 18 total credit hours

See MNE Advising website for the full description of Technical Elective Requirements:
https://www.mne.kstate.edu/student-success/advising/

This is not an all-inclusive listing. Use your DARS report and consult your advisor.
Solid Mechanics / Machine Design

BAE 345 Properties of Biological Materials (2) S CHM 210/220
BAE 350 Off Road Machinery Systems (2) F CHM 210
BAE 351 Machinery Systems Lab (1) F BAE 350
BAE 450 Off Road Machine Power Components (3) S PHYS 213
BAE 750 Anlys & Dgn of Off-Highway Vehicles (3) S, OD BAE 356 or ME 574
CE 534 Mechanics & Materials Laboratory (1) F, S CE 533
CHE 356 Fundamentals of Electrical Prop. (1) F, S CHE 354
CHE 661 Proc. of Mat. For Solid State Devices (3) F, S CHE 350/352
CHE 681 Engineering Materials II (3) F, S, Su CHE 350/352
IMSE 251 Manufacturing Processes Lab (1) F, S IMSE 250
IMSE 252 Welding Laboratory (1) F, S
IMSE 253 Net Shape Manufacturing Lab (1) F IMSE 250, ME 212
IMSE 254 Machining Lab (1) F IMSE 250, ME 212
IMSE 255 Computer Numerical Control Lab (1) F, S IMSE 253/254
IMSE 541 Statistical Quality Control (3) F STAT 511
IMSE 563 Manufacturing Processes Engrg. (3) S odd IMSE 251, CHE 356, CE 530
IMSE 564 Product & Process Engrg. (3) F IMSE 250, 251, 530
IMSE 610 Occupational Safety Engrg. (3) S even IMSE 251
IMSE 623 Industrial Ergonomics (3) F STAT 510
IMSE 644 Additive Manufacturing (3) F ME 212
ME 610 Finite Element Applications in ME (3) F, S, Su CE 533
ME 623 Industrial Ergonomics (3) F STAT 510
IMSE 662 Computer Aided Manufacturing (3) F IMSE 251, CIS 209/200
or ME 400
ME 730 Control Systems Analysis & Design (3) S ECE 530 or ME 640

Nuclear

BIOCH 521 General Biochemistry (3) F, S, Su CHM 350/531
BIOL 198 Principles of Biology (4) F, S, Su
BIOL 450 Modern Genetics (4) F, S BIOL 198, CHM 230, MATH 100
CHM 230 Chemistry II (4) F, S, Su CHM 210/220
CHM 350 General Organic Chemistry (3) F, S, Su CHM 230/250
ECE 450 Intermediate Dynamics (3) F CHM 351 urgency
ECE 525 Electronics I (3) F, S ECE 410/519
ECE 581 Energy Conversion (3) F, S ECE 410/519
ME 760 Engineering Analysis I (3) F MATH 340 & senior standing
ME 765 Reactor Operations Laboratory (3) F, S SU PHYS 214
NE 612 Principles of Radiation Detection (3) S NE 495
NE 614 Nuclear Reactor Theory (3) F MATH 340, NE 495
NE 616 Nuclear Reactor Thermalhydraulics S NE 495, ME 573
NE 648 Nuclear Reactor Laboratory (3) S NE 612, 630
NE 690 Radiation Protection & Shielding (3) F NE 495, PHYS 214, MATH 340
NE 691 Principles Radiation & Human Health (3) S, Even NE 690, ME 400 or CIS 200
NE 761 Radiation Measurement Systems (3) F odd NE 612

Energy Systems

BAE 651 Air Pollution Engineering (3) S ME 513, 571
ME 523 Thermodynamics II (3) F, S ME 513
ME 563 Machine Design II (3) F, S ME 533
ME 620 Internal Combustion Engines (3) F ME 523
ME 631 Aircraft Propulsion (3) S ME 523, 571, MATH 340
ME 633 Thermo of Modern Power Production (3) F ME 523
ME 720 Intermediate Fluid Mechanics (3) F ME 571, MATH 340
ME 721 Thermal Systems Design (3) F ME 573
ME 722 Human Thermal Engineering (3) F odd ME 573
ME 760 Engineering Analysis I (3) F MATH 340 & senior standing
ME 761 Intermediate Heat Transfer (3) S ME 573
ME 640 Nuclear Reactor Thermalhydraulics S NE 495, ME 573

Project Management & Construction

ACCTG 231 Acct. for Business Ops (3) F, S, Su MATH 100
ACCTG 241 Acct for Investing & Financing (3) F, S, Su ACCTG 231
CNS 220 Construction Materials (2) F, S ARE 100 or CNS 100
FINAN 450 Principles of Finance (3) F, S ECON 110/120, STAT 325/350/510, ACCTG 231, AGEC 120
IMSE 501 Industrial Management (3) F, S
IMSE 541 Statistical Quality Control (3) F STAT 511
IMSE 605 Advanced Industrial Management (3) F IMSE 501 or MANGT 420
MANGT 420 Principles of Management (3) F, S, Su
MANGT 421 Intro to Operations and Supply Chain (3) F, S, Su
MANGT 520 Organizational Behavior (3) F, S, Su MANGT 420, junior standing
MANGT 522 Operations Planning & Control (3) S, OD MANGT 421
MANGT 530 Labor Relations & Negotiations (3) F, S MANGT 420 or junior standing
MKTG 400 Intro to Marketing (3) F, S, Su

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