

Electrical Engineering (Option A)

September 2020 (for students who entered first year in September 2018)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|-------------|----------------------|-------------|--------------------------|-------------|---|-------------|--|-------------|---------------------------|-------------|--------------------------------|-------------|--|-------------|--------------------------------------|-------------|--|-------------|--|-------------|--|-------------|-----------------------------|-------------|--------------------------|-------------|-------------------|-------------|----------------------------|-------------|---------------------------|-------------|----------------------|-------------|-------------------------|-------------|---------------------------------------|-------------|-----------------------------------|-------------|----------------------|-------------|---------------------------|------------|---------------------------|
| <p>Year 2</p> <p>Term A</p> <p>AM 2270A Applied Mathematics for Engineering II CS 1027A Computer Science Fundamentals II ECE 2205A Electric Circuits I ECE 2277A Digital Logic Systems ECE 2240A Electrical Laboratory Writ 2130F Building Better (Communication) Bridges: Rhetoric & Professional Communication for Engineers</p> <p>Term B</p> <p>AM 2276B Applied Mathematics for Elec. & Mech. Engineering III ECE 2231B Introduction to Electronics ECE 2233B Circuits and Systems ECE 2236B Magnetic Circuits and Transmission Lines ECE 2242B Principles of Design in Electrical Engineering MME 2234B Heat Transfer and Dynamics</p> <p>Year 3</p> <p>Term A</p> <p>AM 3415A Applied Math for Electrical Engineering ECE 3330A Control Systems ECE 3332A Electric Machines ECE 3337A Electronic Circuits SS 2141A Applied Probability and Statistics for Engineers One 0.5-credit non-technical elective from approved list (either term)</p> <p>Term B</p> <p>ECE 3331B Introduction to Signal Processing ECE 3333B Electric Power Systems I ECE 3336B Electromagnetic Theory ECE 3370B Communication Electronics I ECE 3375B Microprocessors and Microcomputers ECE 3399B Principles and Practices of Design of Electronic Systems</p> <p>Year 4</p> <p>Term A</p> <p>ECE 4416 Electrical/Computer Engineering Project ECE 4429A Advanced Digital Signal Processing ECE 4437A Communications Theory One 0.5-credit non-technical elective from approved list Two 0.5-credit technical electives</p> <p>Term B</p> <p>ECE 4416 Electrical/Computer Engineering Project ES 4498G Engineering Ethics, Sustainable Development & the Law One 0.5-credit non-technical elective from approved list Three 0.5-credit technical electives</p> | <p>NOTES:</p> <p>Non-technical electives: Please choose 1.0 credits (one 1.0-credit or two 0.5-credit courses) from the 1000 level and one 0.5-credit course from the 2000 (or higher) level.</p> <p>Technical Electives Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.</p> <table border="1"> <tr><td>ECE 3349A/B</td><td>Introduction to VLSI</td></tr> <tr><td>ECE 3380A/B</td><td>Advanced Digital Systems</td></tr> <tr><td>ECE 4430A/B</td><td>Selected Topics in Electrical Engineering I</td></tr> <tr><td>ECE 4431A/B</td><td>Selected Topics in Electrical Engineering II</td></tr> <tr><td>ECE 4432A/B</td><td>Radiation and Propagation</td></tr> <tr><td>ECE 4433A/B</td><td>Digital Communications Systems</td></tr> <tr><td>ECE 4436A/B</td><td>Networking: Principles, Protocols and Architecture</td></tr> <tr><td>ECE 4438A/B</td><td>Advanced Image Processing & Analysis</td></tr> <tr><td>ECE 4439A/B</td><td>Conventional, Renewable & Nuclear Energy</td></tr> <tr><td>ECE 4445A/B</td><td>Introduction to Digital Image Processing</td></tr> <tr><td>ECE 4451A/B</td><td>Advanced Topics in Wireless Communications</td></tr> <tr><td>ECE 4455A/B</td><td>Biomedical Systems Analysis</td></tr> <tr><td>ECE 4456A/B</td><td>Power Systems Protection</td></tr> <tr><td>ECE 4457A/B</td><td>Power Electronics</td></tr> <tr><td>ECE 4460A/B</td><td>Real-Time Embedded Systems</td></tr> <tr><td>ECE 4464A/B</td><td>Electric Power Systems II</td></tr> <tr><td>ECE 4468A/B</td><td>Systems Optimization</td></tr> <tr><td>ECE 4469A/B</td><td>Applied Control Systems</td></tr> <tr><td>MME 4452A/B</td><td>Robotics and Manufacturing Automation</td></tr> <tr><td>MME 4473A/B</td><td>Computer Integrated Manufacturing</td></tr> <tr><td>MME 4482A/B</td><td>Fundamentals of MEMS</td></tr> <tr><td>MME 4487A/B</td><td>Mechatronic System Design</td></tr> <tr><td>SE 4460A/B</td><td>Machine Learning & Design</td></tr> </table> | ECE 3349A/B | Introduction to VLSI | ECE 3380A/B | Advanced Digital Systems | ECE 4430A/B | Selected Topics in Electrical Engineering I | ECE 4431A/B | Selected Topics in Electrical Engineering II | ECE 4432A/B | Radiation and Propagation | ECE 4433A/B | Digital Communications Systems | ECE 4436A/B | Networking: Principles, Protocols and Architecture | ECE 4438A/B | Advanced Image Processing & Analysis | ECE 4439A/B | Conventional, Renewable & Nuclear Energy | ECE 4445A/B | Introduction to Digital Image Processing | ECE 4451A/B | Advanced Topics in Wireless Communications | ECE 4455A/B | Biomedical Systems Analysis | ECE 4456A/B | Power Systems Protection | ECE 4457A/B | Power Electronics | ECE 4460A/B | Real-Time Embedded Systems | ECE 4464A/B | Electric Power Systems II | ECE 4468A/B | Systems Optimization | ECE 4469A/B | Applied Control Systems | MME 4452A/B | Robotics and Manufacturing Automation | MME 4473A/B | Computer Integrated Manufacturing | MME 4482A/B | Fundamentals of MEMS | MME 4487A/B | Mechatronic System Design | SE 4460A/B | Machine Learning & Design |
| ECE 3349A/B | Introduction to VLSI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 3380A/B | Advanced Digital Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4430A/B | Selected Topics in Electrical Engineering I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4431A/B | Selected Topics in Electrical Engineering II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4432A/B | Radiation and Propagation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4433A/B | Digital Communications Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4436A/B | Networking: Principles, Protocols and Architecture | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4438A/B | Advanced Image Processing & Analysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4439A/B | Conventional, Renewable & Nuclear Energy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4445A/B | Introduction to Digital Image Processing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4451A/B | Advanced Topics in Wireless Communications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4455A/B | Biomedical Systems Analysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4456A/B | Power Systems Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4457A/B | Power Electronics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4460A/B | Real-Time Embedded Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4464A/B | Electric Power Systems II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4468A/B | Systems Optimization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECE 4469A/B | Applied Control Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MME 4452A/B | Robotics and Manufacturing Automation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MME 4473A/B | Computer Integrated Manufacturing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MME 4482A/B | Fundamentals of MEMS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MME 4487A/B | Mechatronic System Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SE 4460A/B | Machine Learning & Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |