

Systems Engineering Concentration Class Check Sheet:

| <u>Course Number</u> | <u>Course Hours</u> | <u>Course Title</u> |
|----------------------|---------------------|-----------------------------------------------------------------------------------|
| ISE 224 | 3 | Intro to Industrial & Systems Engineering |
| MAE 211 or CPE 211 | 2 / 3 | Solid Modeling (MAE 211) or Intro to Computer Programming for Engineers (CPE 211) |
| MAE 271 | 3 | Statics |
| EE 321 | 3 | Electrical Circuit Analysis I |
| ISE 321 | 3 | Engineering Economy |
| ISE 327 | 3 | Management Systems Analysis |
| ISE 328 | 3 | Intro to Systems Engineering |
| ISE 340 | 3 | Operations Research |
| MAE 341 | 3 | Thermodynamics I |
| MAE 370 | 3 | Mechanics of Materials |
| MAE 375 | 1 | Mechanics of Materials Lab |
| ISE 390 | 3 | Probability & Engineering Statistics I |
| ISE 391 | 3 | Probability & Engineering Statistics II |
| ISE 426 | 3 | Design & Analytics of Experiments |
| ISE 428 | 3 | Systems Analysis & Design I |
| ISE 429 | 3 | Systems Analysis & Design II |
| ISE 447 | 3 | Intro to Systems Simulation |
| ISE 480 | 3 | Systems Engineering Modeling |

+ 12 Hours of Systems Engineering Electives

Total hours of 63 / 64 hours

Proposed SE Track: Tech Electives

| Mechanical & Aerospace Systems (12) | | | |
|--------------------------------------------------------|----------------------|---------------------|-------------------------------------------|
| | Course Number | Course Hours | Course Title |
| | MAE 200 | 3 | Principles of Aeronautics & Astronautics |
| | MAE 272 | 3 | Dynamics |
| <i>Choose from one of the following course pairs:</i> | | | |
| | MAE 284 | 3 | Numerical Methods |
| | MAE 488 | 3 | Analysis of Engineering Systems |
| | | | |
| | MAE 330 | 3 | Fundamentals of Astrodynamics |
| | MAE 343 | 3 | Compressible Aerodynamics |
| Electrical & Embedded Computer Systems (12) | | | |
| | EE 202 | 3 | Introduction to Digital Logic Design |
| | CPE 221 | 3 | Computer Organization |
| | CPE 348 | 3 | Introduction to Computer Networks |
| <i>Choose from one of the following courses:</i> | | | |
| | CPE 323 | 3 | Introduction to Embedded Computer Systems |
| | CPE 325 | 1* | Embedded Systems Laboratory |
| | CPE 212 | 3 | Fundamentals of Software Engineering |
| | CPE 449 | 3 | Introduction to Cybersecurity Engineering |

Proposed HC Sys Track: Tech Electives

| Healthcare Systems (12) | | | |
|-----------------------------------------------------------------------------|----------------------|---------------------|------------------------------------------------|
| | Course Number | Course Hours | Course Title |
| | ISE 4xx / 5xx | | Operational Improvement of Healthcare Systems |
| | ISE 4xx / 5xx | | Healthcare Systems Engineering |
| <i>Choose two more courses from the existing ISE Tech Electives options</i> | | | |
| Control Systems (12) | | | |
| | EE 382 | 3 | Analytical Methods for Continuous Time Systems |
| | EE 383 | 3 | Multivariable Analysis Methods |
| | EE 386 | 3 | Introduction to Control of Robotic Systems |
| | EE 486 | 3 | Introduction to Modern Control Systems |