The MS in Robotics and Autonomous Systems requires a minimum of 30 credit hours. For the concentration in Systems Engineering, these credit hours must reflect one of the following options:
- 30 credit hours and a portfolio, or
- 30 credit hours including the required Applied Project course (EGR 593), or
- 30 credit hours including the required Thesis course (EGR 599) and a thesis

**Coursework**

**Required Core Courses** (6 credit hours)*
- MAE 501 Linear Algebra in Engineering
- MAE 547 Modeling and Control of Robots  *MAE 501 is a prerequisite

**Concentration Courses** (6 credit hours)*
- EGR 550 Mechatronic Systems
- and one of the following:
  - EGR 557 Foldable Robotics
  - EGR 555 Mechatronics Device Innovation
  - EGR 598 System Control and Optimization
  - EGR 598 Applied AI and Machine Learning
  - EGR 598 Robotics Systems II
  - SES 598 Autonomous Exploration Systems

**Elective Courses** (12 - 18 credit hours)**
- At least two courses (6 credit hours) must be chosen from outside the student’s concentration area among the courses listed here: [https://ras.engineering.asu.edu/courses/](https://ras.engineering.asu.edu/courses/)

The electives must be graduate courses in science, engineering, mathematics, or others approved by the Graduate Program Committee. For the full list of approved electives under this program, please visit: [https://docs.google.com/spreadsheets/d/1r30F-xdfxmLa8XPIv5rgm1ZBwWDufuilqFomSfKfA-0/edit#gid=0](https://docs.google.com/spreadsheets/d/1r30F-xdfxmLa8XPIv5rgm1ZBwWDufuilqFomSfKfA-0/edit#gid=0)

**Culminating Experience** (0 - 6 credits)
- Select one (1) culminating experience:
  - Portfolio (0 credits)
  - EGR 593 Applied Project (3 credits)
  - EGR 599 Thesis (6 credits)

*Courses are subject to change and are not typically offered every semester. See program website, graduate advising, or department with questions.

**Electives offered through the other Fulton Schools of Engineering may require override requests; these requests are reviewed by the academic unit who owns the course. The Polytechnic School cannot guarantee that students would be granted overrides for these courses.