Department of Aerospace and Mechanical Engineering
MS—Product Development Engineering, Technology Track

General Requirements for Graduation Without Thesis – 27 units total with 3.0 GPA overall:
(All classes must be passed with a grade of C or higher)

- **13 units** Required Courses AME 503, AME 525, ISE 545 and ISE 501
- **6-8 units** Required Technology Technical Electives (See list below)
- **9 units** Approved 400 or 500 level elective courses from AME, ISE or SAE (See lists below)

- No more than 3 classes (9 units) at 400 level
- Only 3 units of AME 590 Directed Research can be taken as elective credit
- For official approval of waivers, substitutions, etc., please contact the faculty advisor for this program- Prof. Stephen Lu (sclu@usc.edu)

**Notes:** Term course typically offered is (F)=Fall  (Sp)= Spring  (Su)=Summer  + Not Regularly Offered
Ex: AME 436 Energy and Propulsion (Sp) is typically offered in the Spring.

### Product Development Technology Track Core Courses

- AME 503 Advanced Mechanical Design (F) (Su)
- AME 525 Engineering Analysis (F)(Sp)(Su)
- ISE 545 Technology Development and Implementation (F)(Sp)(Su)
- ISE 501 Innovative Conceptual Design for New Product Development

### Product Development Technology Technical Electives

#### Recommended Electives:

- AME 408 Computer-Aided Design of Mechanical Systems (F)
- AME 527 Elements of Vehicle and Energy Systems Design (Sp)
- ASTE 520 Spacecraft System Design (F)
- CE 550 Computer-Aided Engineering
- ISE 525 Collaborative Engineering Principles and Practice +
- CE 551 Computer-Aided Engineering Projects +
- SAE 549 Systems Architecting (F)(Sp)(Su)
- ISE 460 Engineering Economy (F)(Sp)(Su)
- ISE 470 Human/Computer Interface Design (Sp)
- ISE 517 Modern Enterprise Systems (F)(Sp)
- ISE 525 Design of Experiments (F)(Sp)
- ISE 528 Advanced Statistical Aspects of Engineering Reliability +
- ISE 555 Invention and Technology Development (Sp)
- ISE 567 Collaborative Engineering Principles and Practice +
- ISE 576 Industrial Ecology: Technology-Environment Interaction (Sp) +
- ISE 585 Strategic Management of Technology (Sp)
- SAE 541 Systems Engineering Theory and Practice (Sp)(Su)
- ISE 511L Mechatronics Systems Engineering +

#### Other Recommended ISE & SAE Electives from Systems Track

- ISE 517 Modern Enterprise Systems (F)(Sp)
- ISE 525 Design of Experiments (F)(Sp)
- ISE 555 Invention and Technology Development (Sp)
- ISE 567 Collaborative Engineering Principles and Practice +
- ISE 585 Strategic Management of Technology (Sp)
- ISE 511L Mechatronics Systems Engineering +
- ISE 527 Quality Management for Engineers (F)(Sp)
- ISE 561 Economic Analysis of Engineering Projects (F)(Sp)
- ISE 580 Performance Modeling and Simulation (F)(Sp)
Program of Study Worksheet

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<th>Course</th>
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*To be approved to pursue the MSPDE with Thesis, you must first discuss with an AME Academic Advisor during your first semester in program. An AME faculty thesis advisor must be secured by student and special planning of coursework and units must be discussed with AME Academic Advisor.*