

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

Product Development Technology Technical Electives

Recommended Electives:

AME 408 <i>Computer-Aided Design of Mechanical Systems (F)</i>	AME 410 <i>Engineering Design Theory and Methodology (F)</i>	AME 505 <i>Engineering Information Modeling (Sp)</i>
AME 527 <i>Elements of Vehicle and Energy Systems Design (Sp)</i>	AME 544 <i>Computer Control of Mechanical Systems (Sp)</i>	AME 546 <i>Computer Control of Mechanical Systems (F)</i>
ASTE 520 <i>Spacecraft System Design (F)</i>	ASTE 523 <i>Design of Low Cost Space Missions (Sp)</i>	CE 550 <i>Computer-Aided Engineering +</i>
CE 551 <i>Computer-Aided Engineering Projects +</i>	ISE 567 <i>Collaborative Engineering Principles and Practice +</i>	ISE 576 <i>Industrial Ecology: Technology-Environment Interaction (Sp) +</i>
SAE 549 <i>Systems Architecting (F)(Sp)(Su)</i>		

Other Recommended ISE & SAE Electives from Systems Track

ISE 460 <i>Engineering Economy (F)(Sp)(Su)</i>	ISE 470 <i>Human/Computer Interface Design (Sp)</i>	ISE 511L <i>Mechatronics Systems Engineering + (Sp)</i>
ISE 517 <i>Modern Enterprise Systems (F)(Sp)</i>	ISE 525 <i>Design of Experiments (F)(Sp)</i>	ISE 527 <i>Quality Management for Engineers (F)(Sp)</i>
ISE 528 <i>Advanced Statistical Aspects of Engineering Reliability +</i>	ISE 555 <i>Invention and Technology Development (Sp)</i>	ISE 561 <i>Economic Analysis of Engineering Projects (F)(Sp)</i>
ISE 567 <i>Collaborative Engineering Principles and Practice +</i>	ISE 576 <i>Industrial Ecology: Technology-Environment Interaction (Sp)</i>	ISE 580 <i>Performance Modeling and Simulation (F)(Sp)</i>
ISE 585 <i>Strategic Management of Technology (Sp)</i>	SAE 541 <i>Systems Engineering Theory and Practice (Sp)(Su)</i>	

Program of Study Worksheet

Course	Semester	Notes
AME 503		
AME 525		
ISE 501		
ISE 545		

*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.