MASTER OF SCIENCE IN MECHANICAL ENGINEERING, PLAN A

The Master of Science in Mechanical Engineering, Plan A is ideal for students who are interested in advancing their career in industry or research. The program combines valuable classroom instruction with research experiences. Students conduct research under the supervision of a faculty advisor, often the Principal Investigator (P.I.), for a government or industry sponsored project. The student's research, in conjunction with thesis credits and coursework, culminates in an article for submission to a peer-reviewed journal and a final thesis.

Students interested in graduate work should refer to the Graduate and Professional Bulletin.

Learning Objectives

1. Bring together faculty members and graduate students in a diverse community of scholars having a common interest in advanced professional study and creative work.
2. Extend the boundaries of the mechanical engineering profession by developing advanced technologies to provide creative solutions to global problems such as energy, environment and human health.
3. Consideration of a challenging problem utilizing analytical, experimental, and/or design techniques 1) to determine and explain the behavior of a simple system or 2) to bring into logical order the techniques of a field which has experienced random growth.
4. Develop new analytical knowledge, experimental knowledge, design knowledge, or a combination thereof.

Requirements Effective Fall 2023

Code	Title	Credits
Select 2 courses from the following:		6-7
CBE 521	Mathematical Modeling for Chemical Engineers	
CIVE 560	Advanced Mechanics of Materials	
ENGR 550/ MATH 550	Numerical Methods in Science and Engineering	
MATH 530	Mathematics for Scientists and Engineers	
MECH 529	Advanced Mechanical Systems	
MECH 532/ BIOM 532	Materials Issues in Mechanical Design	
MECH 538	Mechanical Engineering Thermodynamics	
MECH 539	Advanced Fluid Mechanics	
MECH 544	Advanced Heat Transfer	
MECH 568	Computational Methods for Mechanical Eng.	
Electives [1]		11-18
Select one from the following:		6-12
MECH 699A	Thesis: Bioengineering	
MECH 699B	Thesis: Energy Conversion	
MECH 699C	Thesis: Environmental Engineering	
MECH 699D	Thesis: Heat and Mass Transfer	
MECH 699E	Thesis: Industrial and Systems Engineering	
MECH 699F	Thesis: Mechanics and Design	
MECH 699G	Thesis: Computer-Assisted Engineering	
MECH 699H	Thesis: Robotics	
MECH 699I	Thesis: Solar Engineering	
MECH 699J	Thesis: Computational Fluids	
MECH 699K	Thesis: Materials	
MECH 699L	Thesis: Plasma Engineering	
MECH 699M	Thesis: Motorsport Engineering	
Program Total Credits:		**30**

A minimum of 30 credits are required to complete this program. Of the 30 minimum credits required for this program, at least 24 credits must be at the 500-level or above and earned at CSU.

[1] Select courses with approval of advisor and graduate committee.

Requirements for All Graduate Degrees

For more information, please visit Requirements for All Graduate Degrees (https://catalog.colostate.edu/general-catalog/graduate-bulletin/graduate-study/procedures-requirements-all-degrees/) in the Graduate and Professional Bulletin (https://catalog.colostate.edu/general-catalog/graduate-bulletin/).

Summary of Procedures for the Master's and Doctoral Degrees

NOTE: Each semester the Graduate School publishes a schedule of deadlines. Deadlines are available on the Graduate School website (https://graduateschool.colostate.edu/deadline-dates/). Students should consult this schedule whenever they approach important steps in their careers.

Forms (https://graduateschool.colostate.edu/forms/) are available online.

Step	Due Date
1. Application for admission (online)	Six months before first registration
2. Diagnostic examination when required	Before first registration
3. Appointment of advisor	Before first registration
4. Selection of graduate committee	Before the time of fourth regular semester registration
5. Filing of program of study (GS Form 6)	Before the time of fourth regular semester registration
6. Preliminary examination (Ph.D. and PD)	Two terms prior to final examination
7. Report of preliminary examination (GS Form 16) - (Ph.D. and PD)	Within two working days after results are known
8. Changes in committee (GS Form 9A)	When change is made
9. Application for Graduation (GS Form 25)	Refer to published deadlines from the Graduate School Website

9a. Reapplication for Graduation (online)	Failure to graduate requires Reapplication for Graduation (online) for the next time term for which you are applying
10. Submit thesis or dissertation to committee	At least two weeks prior to the examination or at the discretion of the graduate committee
11. Final examination	Refer to published deadlines from the Graduate School Website
12. Report of final examination (GS Form 24)	Within two working days after results are known; refer to published deadlines from the Graduate School website
13. Submit a signed Thesis/ Dissertation Submission Form (GS Form 30) to the Graduate School and Submit the Survey of Earned Doctorates (Ph.D. only) prior to submitting the electronic thesis/ dissertation	Refer to published deadlines from the Graduate School website.
14. Submit the thesis/dissertation electronically	Refer to published deadlines from the Graduate School website
15. Graduation	Ceremony information is available from the Graduate School website