

**PROPOSED SEMESTER PROGRAM OF GRADUATE STUDY**

**Master of Science: Mechanical Engineering**

Plan A: Thesis, minimum 30 cr. \_\_\_\_\_

Plan B: Non-thesis, minimum 32 cr. \_\_\_\_\_

**I. Core Requirements, 15 credits**

Number	Course	Instructor	Sem. /Yr.	Credits	Grade
MATH 610	Advanced Engineering Mathematics	_____	_____	3	_____
MME 601	Thermal Sciences in Materials Processing	_____	_____	3	_____
MME 630	Advanced Manufacturing Processes	_____	_____	3	_____
MME 640	Elastic and Plastic Behavior of Materials	_____	_____	3	_____
MME 650	Advanced Control of Mechanical Systems	_____	_____	3	_____

**II. Elective Courses (at, least 15 credits, no more than 6 in any one area)**

*Automation, Controls, and Robotics*

MME 550	Industrial Robots	_____	_____	3	_____
MME 554	Manufacturing Automation Systems	_____	_____	3	_____
MME 556	Manufacturing Automation Equipment	_____	_____	3	_____
EE 551	Control Systems	_____	_____	3	_____

*Design*

MME 520	Finite Element Method	_____	_____	3	_____
MME 542	Mechanical Vibrations	_____	_____	3	_____
MME 620	Advanced Finite Element Method	_____	_____	3	_____

*Manufacturing*

MME 522	Computer-Aided Manufacturing	_____	_____	3	_____
MME 535	Processing of Metals	_____	_____	3	_____
MME 536	Processing of Polymers	_____	_____	3	_____

*Materials*

MME 511	Mechanical Behavior of Materials	_____	_____	3	_____
MME 512	Theory of Polymers	_____	_____	3	_____
MME 513	Composite Materials	_____	_____	3	_____

*Thermal Sciences*

MME 500	Heat Transfer	_____	_____	3	_____
MME 502	Thermal Science in Product and Process Design	_____	_____	3	_____
MME 503	Design of Thermal Systems	_____	_____	3	_____

*Management*

MME 562	Production Control	_____	_____	3	_____
MME 572	Manufacturing Systems	_____	_____	3	_____
MME 664	Production and Operations Management	_____	_____	3	_____
MBA 6__	Elective	_____	_____	_____	_____
MKTG 5__	Elective	_____	_____	_____	_____
MGMT 5__	Elective	_____	_____	_____	_____

*Additional Courses*

MME 680	Special Topics	_____	_____	_____	_____
MME 681	Seminar	_____	_____	_____	_____
MME 696	Research	_____	_____	_____	_____
MME 697	Independent Study	_____	_____	_____	_____
MME 699	MS Thesis	_____	_____	_____	_____

*Other Electives*

ECE 571	Digital Signal Processing	_____	_____	3	_____
ECE 574	Image Processing	_____	_____	3	_____
PHYS 535	Laser Optics	_____	_____	3	_____
PHYS 536	Advanced and Fourier Optics	_____	_____	3	_____
PESS 548	Biomechanics	_____	_____	3	_____

Thesis option requires up to 6 credits of MME 699 and thesis defense.

Total Core Credits \_\_\_\_\_ Total Elective Credits \_\_\_\_\_ Total Credits \_\_\_\_\_

Non-thesis option requires at least 2 credits of MME 696 and public research presentation.

**Credit limitation on transfer and extension credits (combined)—10 cr.  
Required: At least one-half of the minimum requirements of the program must be earned in 600-level course work.**

\_\_\_\_\_  
Applicant Signature

\_\_\_\_\_  
Date

# ST. CLOUD STATE UNIVERSITY

## Application for Program Approval: **Master of Science, Mechanical Engineering**

Social Security Number \_\_\_\_\_ Date \_\_\_\_\_  
Name in Full \_\_\_\_\_ Address \_\_\_\_\_  
Home Phone \_\_\_\_\_ Business Phone \_\_\_\_\_ Present Position \_\_\_\_\_  
Address \_\_\_\_\_

I request transfer of the following courses: (Official transcripts of all transfer credits which have been completed must be received in the Graduate Office before program can be approved.)

Dept. and Course No.	Name of College or University	Sem./Qtr. Hours	Grade	Date Taken
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

(The area below this broken line should not be filled in by the applicant.)

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I certify that this student is eligible for program approval and that I approve the program outlined in this application.

Major Adviser \_\_\_\_\_

The program outlined in this application complies with the minimum course requirements set by this University for the Master's degree.

Graduate Dean \_\_\_\_\_

Student notified: \_\_\_\_\_