

**Department of Mechanical and Manufacturing Engineering**

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**School of Graduate Studies**

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**Office of Scholarships and Financial Aid**

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**Graduate Record Examination (GRE) and TOEFL**

Educational Testing Service  
Available on the SCSU campus  
Call: 320.308.5456

**Visit:**

www.gre.org  
www.toefl.org

**ST. CLOUD STATE UNIVERSITY**

*A tradition of excellence and opportunity*

SCHOOL OF GRADUATE STUDIES

*Master of*  
**ENGINEERING  
MANAGEMENT  
(MEM)**

**St. Cloud State University could be a great academic match for you!**

We are a state-sponsored comprehensive university, which means a quality education with affordable tuition. We offer almost 50 graduate programs. Our medium-sized campus allows you to experience dedicated faculty, a mentoring relationship with your advisor and state-of-the-art facilities to support your academic pursuits. Our mission is to prepare graduates with the professional skills needed for Minnesota, the U.S. and the global marketplace. This means SCSU's graduate programs meet your personal needs along with your professional goals.

**The Campus**

St. Cloud State University was established in 1869 and is the largest university in the Minnesota State University & College System. SCSU has a student body of 16,000 full- and part-time students, 700 faculty members, and more than 80,000 alumni. St. Cloud State University serves a large regional area along with a diverse international population.

**The Community**

The city of St. Cloud is nestled along the Mississippi River 60 miles northwest of the Minneapolis-St. Paul metro area. St. Cloud is home to 90,000 people and serves as a commercial hub for over 250,000 people. Residents of St. Cloud enjoy access to ample shopping, recreational areas, the arts, dining and affordable living.



**Master's degrees lead to professional growth.**

Current employment trends indicate that a master's degree gives graduates a decided edge in their careers. Often, a master's degree is the difference between having a *job* and having a *career*.

**Consider the following:**

- The average salary of those with a master's degree is 32 percent higher than the average salary of those with an undergraduate degree.\*
- Employment opportunities for persons with master's degrees continue to grow with our evolving job market.
- Graduate students are recognized as those who understand the need to keep pace with changing workplace demands.
- Graduate school provides an excellent opportunity for networking.
- Master's programs provide a stepping stone to doctoral programs.

**Program Overview**

The Mechanical and Manufacturing Engineering (MME) department, Electrical and Computer Engineering (ECE) department and the G. R. Herberger College of Business at St. Cloud State University are committed to providing a state-of-the-art program that provides a Master of Engineering Management (MEM) degree. The program meets the educational needs of both full-time and part-time students via flexible and varied delivery, responsive curriculum, a professionally qualified staff, an industry advisory council and appropriate research and support activities. This program has been specifically developed to meet the needs of engineers working in Central Minnesota and surrounding areas. This program caters to two key groups. The first group is technical people currently employed in enterprises in the central MN region. The other group of students is engineers who have graduated recently and would like to gain knowledge, skills, and qualifications

\*Source: U.S. Bureau of the Census, Current Population Reports, series P70-51.

in engineering management so that they are able to excel at management level positions both in the U.S. and overseas.

The Master of Engineering Management is a professional degree that prepares engineers for taking on managerial roles. The course content is suitable for engineers from a wide spectrum of disciplines including but not limited to mechanical, manufacturing, industrial, electrical, computer and software engineering as well as chemistry, mathematics, physics, and related fields. The course draws on faculty expertise in the areas of quality, project, and production management as well as economics and administration. The program offers delivery options, which can include evening courses, interactive television (ITV), internet streaming, delayed video, or remote site locations.

#### **Program Requirements**

The requirements for admission to the Master of Engineering Management program include an undergraduate engineering degree from an accredited institution. Applicants with undergraduate degrees in the areas of mathematics, physics, chemistry, or related fields may also be admitted. A grade point average (GPA) of at least 3.0 or higher on a 4.0 scale is required. All applicants must take the Graduate Record Examination (GRE) and a minimum score of 1000 (verbal and quantitative) is required. International students need a TOEFL score of 550 on the paper-based test or a 213 on the computer-based test.

#### **Facilities**

The Department of Mechanical and Manufacturing Engineering offers modern classrooms and laboratories. Several specialized labs and software used in the curriculum include:

- Plant layout
- Systems simulation software
- Ergonomic design
- SPC, DOE and quality engineering
- Robotics and automation lab

Students benefit from faculty-assigned projects which are carried out in local industry. These projects are commonly group projects and apply the theory learned in the lecture.

#### **Internship/Practicum**

None required.

#### **Career Opportunities**

Graduates of this program will be able to develop high performance teams in technology-based companies; provide motivation and leadership to engineers and technical personnel; take leadership roles in project management and implementation of quality engineering and lean manufacturing; and successfully manage large, technically complex projects.

#### **Program Length**

A minimum of 30 credits is required to complete the M.E.M in engineering management. A full-time student can complete the program in three semesters, taking 12 credits per semester. A part-time student can complete the program in seven semesters, taking six credits per semester. All credits (including transfer credits) used in meeting the requirements of a graduate program must be completed within seven years prior to the awarding of the degree.

#### **Transfer Credits**

A maximum of ten semester credits of graduate work completed at other accredited colleges and universities, or extension credit earned from this university, may be considered for application with approval of the School of Graduate Studies and major advisor. See the transfer policy section of the Graduate Bulletin for more information.

#### **Application Process**

When applying for a graduate program, the School of Graduate Studies serves as a liaison between the applicant and the graduate program. Application materials can be obtained from the School of Graduate Studies website: [www.stcloudstate.edu/~grads](http://www.stcloudstate.edu/~grads). Completed application materials should be returned to the School of Graduate Studies. Once all application materials are received, the application materials will be forwarded to the master's program for an admission recommendation.

#### **Application Requirements**

In order to consider an applicant for admission, the School of Graduate Studies will need:

##### **U.S. students**

- Completed admission application
- Application fee of \$35.00
- Official transcripts from previous universities
- Official GRE scores
- Three recommendation forms

##### **International students**

- Completed international admission application
- Application fee of \$35.00 U.S. dollars
- Official transcripts from previous universities
- Official GRE scores
- Official TOEFL or IELTS or MELAB scores
- Three recommendation forms
- Financial form and documentation

#### **Graduate Assistantships**

##### **What are they?**

Graduate assistantships (GA) are academically related employment appointments reserved for students who hold a bachelor's degree and who have been formally admitted to a graduate program. SCSU offers three basic types of assistantships:

- Program assistants – duties are limited to an individual academic program.
- Research assistants – duties include engaging in research activities connected to a department or professor.
- Teaching assistants – duties include the instruction of students under the general supervision of a professor.

Graduate assistantships are available during the regular academic year with a limited number available during the summer term.

##### **Who is eligible?**

International students and U.S. citizens are eligible to apply. A student must be:

- Fully admitted to the School of Graduate Studies
- Registered as a full-time student each term of the appointment

#### **Benefits**

Graduate assistantship stipends (salary) for the 2004-2005 academic year is \$8,200 for 20 hours/week.

In addition to the stipend, both full- and part-time graduate assistants are eligible for tuition assistance. Tuition assistance waives approximately one-half of the student's graduate tuition cost per semester. Tuition for a maximum of six graduate credits may be waived in a semester.

#### **Resident rate privilege**

All graduate assistants, both international and U.S. citizens and residents, qualify for in-state tuition rates.

#### **International students**

Upon receipt of a departmental letter of GA appointment, an international student can list the stipend as income on their financial certification forms.

#### **Graduate Faculty and Research Interests**

**Dr. Bantwal Baliga**, Ph.D. 1999, Swinburne, Australia; manufacturing systems, quality engineering

**Dr. Andrew Bakkala**, Ph.D. 1990, PE, Michigan Technological University; controls and robotics, machine design

**Dr. Jeongmin Byan**, Ph.D. 2003, Purdue University; manufacturing processes, CAD/CAM/CAPP, metrology

**Dr. Steven Covey**, Ph.D. 1993, PE, University of Cincinnati; materials and processes, finite element analysis

**Dr. Kenneth Miller**, Ph.D. 2000, PE, University of South Carolina at Columbia; thermal science, heat transfer, solid mechanics

**Dr. Warren Yu**, Ph.D. 1988, Washington State University; machine design, CAD, CAM