

# Manufacturing Operations Management

## Certificate Planning Chart

### Undergraduate - 16 semester credits

Name: \_\_\_\_\_ U of MN ID#: \_\_\_\_\_ Date: \_\_\_\_\_

This planning guide can help you prepare your course of study. See course descriptions and schedules at <http://onestop.umn.edu>. Call 612-624-4000 with your questions.

Required Courses (6 credits)	Required Prerequisite(s)	Credits	Grade	Term
MM 3001 Manufacturing in a Global Economy (3 cr)	none			
MM 4102 Manufacturing Operations (3 cr)	MM 3001; 45 semester credits			
<b>Technical Electives (Choose 10 credits minimum)</b>				
MM 3205 Engineering for Manufacturing Operations (3 cr)	30 semester credits			
MM 4011 Design of Manufacturing Systems and Simulations (3 cr)	MM 3001 or manufacturing experience			
MM 4012 Manufacturing Processes and Technology (3 cr)	MM 3001 or manufacturing experience			
MM 4035 Global Supply Chain Management (3 cr)	MM 4102 or ABus 4102 or professional experience			
MM 4039 Manufacturing Outsourcing Decisions (2 cr)	[MM 3001 or professional experience], MM 4035; Acct 2050			
MM 4045 Regulated Industry Compliance (3 cr)	MM 3001 or manufacturing experience			
MM 4201 Quality Engineering and Process Improvement (3 cr)	Statistics; 45 semester credits			
MM 4311 Sustainable Lean Manufacturing (2 cr)	MM 3001; 45 semester credits			
MM 4501 Capstone (3 cr)	MM major or minor or certificate student or #			
MM 4596 Internship (1-4 cr)	MM major or minor or certificate student or #			
<b>TOTAL CREDITS</b>				

### Certificate Requirements:

- ✓ You may enroll in courses before being admitted to the certificate. For admission details, see <https://ccaps.umn.edu/manufacturing-operations-management-credit-certificate#admission>.
- ✓ 45 credits required for admission to the certificate
- ✓ All courses in the certificate must be completed with a grade of C- or better. Courses must be taken for a letter grade (A-F grading basis). The cumulative GPA for all certificate courses must be 2.00 or higher.
- ✓ You can apply up to 40% of transferable, department-approved coursework from other educational institutions toward the certificate.
- ✓ Certificate coursework must be completed within four years of admission to the certificate.
- ✓ To be awarded a certificate, you must submit the Application for Degree, which can be found online at [onestop.umn.edu/onestop/graduating.html](http://onestop.umn.edu/onestop/graduating.html).

Evaluated by: \_\_\_\_\_ Date: \_\_\_\_\_

Updates to Planning Chart (name and date): \_\_\_\_\_