Manufacturing Career Ladder

BACHELORS DEGREE Courses

To complete the requirements of the BMM degree, students in this program must complete the A.S. degree in Manufacturing Technology; 20 additional manufacturing core credits from the 4 certificate programs defined in the brochure; plus 40 credits of upper division (3000 & 4000) credits with at least 30 from the University of Minnesota.

Associate of Science Degree in Manufacturing Technology - 60 credits

University of Minnesota Crookston
At least 30 from the University of Minnesota
Total= 120 Credits for BMM Degree

This program is offered in partnership with University of Minnesota- Crookston.

Last updated November 3, 2014

Center for Outreach & Innovation

Customized Training Division

Developing your employees at your location through educational investments that accomplish your business goals.
Manufacturing Career Ladder

**CERTIFICATE PROGRAMS Courses**

**Lean Manufacturing/Continuous Improvement 17 Credit Certificate**
- Introduction to Cellular Manufacturing - MANF 2311 3 credits
- Principles of Lean Manufacturing - MANF 2522 2 credits
- Total Quality Systems and SPC in a Mfg Environment - MANF 2505 3 credits
- Value Stream Mapping - MANF 2530 2 credits
- Production and Operations Management - MANF 2510 2 credits
- Facilitating Teams in a Manuf. Environ. - MANF - 2540 2 credits
- Elective Courses (choose one of the following)
  - Principles of Supervision in a Manufacturing Environment - MANF 2550 2 credits
  - Introduction to Computer Technology - CPTR 1104 3 credits

**Production and Inventory Management 17 Credit Certificate**
- Basic Supply Chain Management - PRIM 2500 2 credits
- Master Planning of Resource - PRIM 2510 2 credits
- Detailed Scheduling and Planning - PRIM 2520 2 credits
- Execution and Control of Operations - PRIM 2530 2 credits
- Strategic Management of Resources - PRIM 2540 2 credits
- Technical Writing - ENGL 2207 3 credits
- Value Stream Mapping - MANF 2530 2 credits
- Principles of Lean Manufacturing - MANF 2520 2 credits

**Manufacturing Principles 12 Credit Certificate**
- SS System - MANF 1500 1 credit
- Measuring Tools - MANF 1510 2 credits
- Print Reading - MANF 1520 2 credits
- Organizational Communications - MANF 1540 2 credits
- Machine Operations - MANF 1530 1 credit
- Tools of Quality - MANF 2500 2 credits
- Production & Operations Management - MANF 2510 2 credits

**Supervisory Leadership 18 Credit Certificate**
- Business Communications - ADM 1111 3 credits
- Principles of Management - BUSN 2210 3 credits
- Supervisory Leadership - MKTG 2120 3 credits
- Interpersonal Communications - SSCI 1103 3 credits
- Elective Courses (choose two of the following)
  - Intro to Business - BUSN 1110 3 credits
  - Legal Environment Busn- BUSN 2218 3 credits
  - Principle of Marketing - MKTG 2200 3 credits
  - Human Relations - SSCI 1101 3 credits

**ASSOCIATE OF SCIENCE DEGREE**

**Manufacturing Emphasis**
- 30 credits from the four certificate programs, and 30 credits of general education credits distributed between the six areas of the Minnesota Transfer Curriculum will qualify students to earn an Associate of Science in Manufacturing Technology.
- The graduate of the AS Manufacturing Technology program must complete the requirements of at least two certificate programs and 30 credits of general education to continue in the Bachelors in Manufacturing at University of Minnesota Crookston.

**WHAT'S REQUIRED OF ME:**
- Complete all courses in the program
- Participate in and complete all classwork
- Earn a grade of “C” or better for Polaris to sponsor tuition reimbursement.

**WHAT'S ELIGIBLE:**
- All Full-time Polaris employees can enroll in this credit-based certificate and degree program.

**BACHELORS DEGREE**

**Associate of Science Degree in Manufacturing Technology**
- 60 Credits
- Take additional credits from Manufacturing Certificate programs

**General Education**
- 20 Additional Credits
- 40 credits of upper division (300 or 400 level) courses of which 30 need to be from the U of M

**WHAT IS REQUIRED OF ME:**
- Complete all courses in the program
- Participate in and complete all classwork
- Earn a grade of “C” or better for Polaris to sponsor tuition reimbursement.

**WHAT IS ELIGIBLE:**
- All Full-time Polaris employees can enroll in this credit-based certificate and degree program.