Bachelor of Science in Manufacturing and Design Engineering
Effective Fall 2013

Mathematics (4 courses)
Math 220, 224, 230, 234

Manufacturing and Design Core (10 courses)
IEMS 201 Introduction to Statistics
or IEMS 303 Statistics I
IEMS 310 Operations Research
IEMS 305 Statistical Methods for Quality Improvement
or IEMS 307 Quality Improvement by Experimental Design

Eng Analysis and Computer Proficiency (4 courses)
Gen Eng 205-1,2,3,4 Engineering Analysis

Basic Sciences (4 courses)
Physics 135-2 and 135-3

Eng Analysis and Computer Proficiency (4 courses)
IEMS 307 Quality Improvement by Experimental Design
DSGN 386 Manufacturing Engineering Design
IEMS 382 Production Planning and Scheduling
Mat Sci 318 Materials Selection
Mech Eng 240 Intro. to Mechanical Design and Manufacturing
Mech Eng 340-1 Computer-Integrated Manufacturing
Mech Eng 340-2 or -3 Computer-Integrated Manufacturing
DSGN 308 Human Centered Product Design
or Mech Eng 315 Theory of Machines - Design of Elements

Plus 2 Chemistry courses

Design and Communications (3 Courses)
DSGN 106-1,2 (.5 each) plus English 106-1,2 (.5 each)
Gen Cmn 102 or 103

Design Project (2 courses)
DSGN 384-1 Interdisciplinary Design Project I
DSGN 384-2 Interdisciplinary Design Project II

Basic Engineering (5 courses)
Systems engineering and analysis: IEMS 326
Materials science: Mat Sci 201
Fluids and solids: Civ Env 216
Electrical Science: ME 233
One additional course from the current approved list of Basic Engineering courses (see catalog)

Technical Electives (4 courses)
At least two courses must be from the list of approved MaDE technical electives
The remaining two courses may be any 300-level or higher engineering courses.

Social Sciences-Humanities (7 courses)

Unrestricted Electives (5 courses)

All students must have 18 engineering credits (see http://abet.mccormick.northwestern.edu/course_partitioning.php)

Technical Electives
For a current list of approved technical electives, contact Debbie Labedz at 847-467-1604 or www.segal.northwestern.edu/made. A maximum of two technical electives may be taken P/N.

Dual Degree Programs
To receive two engineering degrees, students must have a total of 54 credits instead of 48.

Reviewed and revised June 21, 2013