



MANUFACTURING

Students interested in the transformation of raw materials into commercially successful products might consider the ISE Manufacturing Engineering track. The curriculum in Manufacturing Engineering exercises students' background in chemistry, physics, and mathematics toward the understanding and improvement of manufacturing materials, processes, and systems. Courses focus on process engineering, design for manufacturability, design of work-holding/dies/molds, numerical (computer) simulation, and automation/robotics – as applied to machining processes, sheet forming operations, metal casting, and polymer processing.

This track requires students to complete a minimum of 15 credit hours.

REQUIRED ELECTIVE (3 hours)

ISE 3500	3	Process Engineering for Machining Operations
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MINIMUM SIX HOURS FROM THE FOLLOWING ELECTIVES (6 hours)

ISE 5463	3	Manufacturing of Energy Systems
ISE 5530	3	Fundamentals of Tool Engineering
ISE 5501	3	Fundamentals of Solid State Processing
ISE 5502/MATSCEN 5451	3	Molten Metal Processing
ISE 5520	1.5	Industrial Automation I
ISE 5194	1.5	Industrial Automation II
ISE 5521	1.5	Advanced Sheet Forming Laboratory
ISE 5540	3	Polymer Processing Fundamentals
ISE 5550	3	Principles of Precision Engineering
ISE 5555	3	Manufacturing Processes and Machine Tools
ISE 5682.01	3	Fundamentals of Product Design Engineering
ISE 5683	1	Fundamentals of Product Design Engineering Lab

MINIMUM SIX HOURS FROM THE FOLLOWING ELECTIVES (6 hours)

Any ISE technical elective from this track (*listed above*)

Any ISE technical elective from another track

Any outside approved elective (*listed on final page*)

Students who were admitted to OSU prior to Autumn 2015 should contact their Academic Advisor for information about their course requirements in this track.