

Program:	Mechanical Engineering
Degree:	BS
Department:	Mechanical Engineering
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<b>Outcome</b>	<b>Master the depth of knowledge required for a degree</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• (a) an ability to apply knowledge of mathematics, science, and engineering</li> <li>• (b) an ability to design and conduct experiments, as well as to analyze and interpret data</li> <li>• (j) a knowledge of contemporary issues</li> <li>• *Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.</li> </ul>

<b>Outcome</b>	<b>Demonstrate critical thinking</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• (e) an ability to identify, formulate, and solve engineering problems</li> <li>• *Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.</li> <li>• *Analyzing information and evaluating results to choose the best solution and solve problems.</li> <li>• *Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.</li> <li>• *Considering the relative costs and benefits of potential actions to choose the most appropriate one.</li> </ul>

<b>Outcome</b>	<b>Communicate effectively</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• (g) an ability to communicate effectively</li> <li>• *Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.</li> <li>• *Communicating effectively in writing as appropriate for the needs of the audience.</li> <li>• *The ability to communicate information and ideas in speaking so others will understand.</li> </ul>

<b>Outcome</b>	<b>Practice personal and social responsibility</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• (f) an understanding of professional and ethical responsibility</li> <li>• (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context</li> </ul>

<b>Outcome</b>	<b>Demonstrate social, cultural, and global competence</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability</li> </ul>

<b>Outcome</b>	<b>Prepare to engage in lifelong learning</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• (i) a recognition of the need for, and an ability to engage in life-long learning</li> </ul>

<b>Outcome</b>	<b>Work collaboratively</b>
Marketable Skills	<ul style="list-style-type: none"> <li>• d) an ability to function on multidisciplinary teams</li> <li>• (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.</li> <li>• *Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.</li> </ul>

Notes:

- Marketable skills listed with an asterisk (\*) for this example program were drawn from the Knowledge, Skills, and Abilities identified by the US Department of Labor and Statistics for “mechanical engineers” as published on O\*Net Online (onetonline.org or <https://www.onetonline.org/link/summary/17-2141.00> )
- Marketable skills listed with a letters (a)-(k) for this example program were drawn from ABET Criterion 3.
- Alternate sources for degree-specific marketable skills include learning outcomes and associated metrics used for programmatic assessment
- Learning outcomes or skills required for programmatic accreditation