

**Texas A&M University**

**Marketable Skills**

Program:	Construction Science
Degree:	B.S. – Construction Science
Department:	Construction Science
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<b>Outcome</b>	<p><b>Master the depth of knowledge required for a degree</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Articulate disciplinary and interdisciplinary theories, concepts, principles, skills, and practices;</i></li> <li>• <i>Synthesize knowledge across courses and other experiences; and</i></li> <li>• <i>Apply knowledge from core curriculum courses, discipline-based courses, and other experiences in a range of contexts to solve problems and make decisions.</i></li> </ul>
<b>Marketable Skills</b>	<ul style="list-style-type: none"> <li>• Knowledge of construction materials and methods and their applications and behaviors in various environments.</li> <li>• Knowledge of project management, project planning / scheduling and estimating.</li> <li>• Knowledge of construction contract administration.</li> <li>• Knowledge of project controls and the skills needed to complete construction projects on time and within budgets.</li> <li>• Knowledge of computer applications and information modeling for the construction industry</li> <li>• Knowledge of late lay-out with horizontal and vertical controls.</li> <li>• Knowledge of and specifically the installations of lighting, electrical and mechanical systems in building.</li> <li>• Knowledge of construction safety practices.</li> </ul>

<b>Outcome</b>	<p><b>Demonstrate critical thinking</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Evaluate, analyze, and integrate information from a variety of sources;</i></li> <li>• <i>Use appropriate strategies and tools to represent, analyze, and integrate information; and</i></li> <li>• <i>Develop critical, reasoned positions.</i></li> </ul>
<b>Marketable Skills</b>	<ul style="list-style-type: none"> <li>• Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.</li> <li>• Considering the relative costs and benefits of potential construction solutions to choose the most effective solution.</li> <li>• Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.</li> <li>• Breaking down complex construction projects into activities and then</li> </ul>

	sequencing those activities to develop the best order to execute the project most effectively.
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<b>Outcome</b>	<p><b>Communicate effectively</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Demonstrate effective oral communication skills (which could include the use of languages such as American Sign language for those who do not communicate orally);</i></li> <li>• <i>Demonstrate effective writing skills;</i></li> <li>• <i>Demonstrate effective nonverbal communication skills (which could include appropriate use of performance, design, or representations such as maps, tables, and graphs);</i></li> <li>• <i>Listen actively and critically;</i></li> <li>• <i>Present work effectively to a range of audiences; and</i></li> <li>• <i>Effectively communicate original and creative ideas.</i></li> </ul>
Marketable Skills	<ul style="list-style-type: none"> <li>• The ability to communicate information and ideas in speaking and writing so others will understand.</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> <li>• The ability to communicate graphically through construction documents.</li> <li>• The ability to effectively document the actual construction process for historical and documentation purposes.</li> </ul>

<b>Outcome</b>	<p><b>Practice personal and social responsibility</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Practice ethical leadership;</i></li> <li>• <i>Recognize an ethical dilemma and apply rational decision-making in order to address it;</i></li> <li>• <i>Choose ethical courses of action in research and practice;</i></li> <li>• <i>Acknowledge and address the consequences of one's own actions; and</i></li> <li>• <i>Engage in local and global civic activities.</i></li> </ul>
Marketable Skills	<ul style="list-style-type: none"> <li>• Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.</li> <li>• Managing one's own time and the time of others.</li> <li>• Knowledge of maintain a construction jobsite that minimally impacts the surrounding environment through effective storm water control.</li> <li>• Understand the legal implications of contract, common and regulatory law to manage a construction project</li> <li>• Analyze professional decisions based on ethical principles</li> </ul>

<b>Outcome</b>	<p><b>Demonstrate social, cultural, and global competence</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Live and work effectively in a diverse and global society;</i></li> <li>• <i>Articulate the value of a diverse and global perspective; and</i></li> <li>• <i>Recognize diverse economic, political, cultural, and religious opinions and practices.</i></li> </ul>
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Marketable Skills	<ul style="list-style-type: none"> <li>• Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.</li> <li>• Being aware of others' reactions and understanding why they react as they do.</li> <li>• Being aware of the diverse nature of the construction workforce and developing inclusivity and effective communications.</li> </ul>
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Outcome	<p><b>Prepare to engage in lifelong learning</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Exhibit the skills necessary to acquire, organize, reorganize, and interpret new knowledge;</i></li> <li>• <i>Show proficiency in current technologies and the ability to adapt to emerging technologies;</i></li> <li>• <i>Recognize and participate in activities that enhance wellness of body, mind, and spirit;</i></li> <li>• <i>Formulate a plan of personal goals for continued professional growth; and</i></li> <li>• <i>Demonstrate intellectual curiosity.</i></li> </ul>
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Marketable Skills	<ul style="list-style-type: none"> <li>• Understanding the implications of new information for both current and future problem-solving and decision-making.</li> <li>• Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new technology and methods.</li> <li>•</li> </ul>
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Outcome	<p><b>Work collaboratively</b>, including the ability to:</p> <ul style="list-style-type: none"> <li>• <i>Participate effectively in teams;</i></li> <li>• <i>Consider different points of view; and</i></li> <li>• <i>Work with others to support a shared purpose or goal.</i></li> </ul>
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Marketable Skills	<ul style="list-style-type: none"> <li>• Motivating, developing, and directing people as they work, identifying the best people for the job.</li> <li>• Bringing others together and trying to reconcile differences.</li> <li>• Bringing together the diverse professions in building project to work cohesively as a team to attain the common objective of effective project completion</li> <li>•</li> </ul>
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