

## Bachelor of Science in Systems Engineering<sup>†</sup>

### Department of Systems and Industrial Engineering

#### Program Outcomes

##### All graduates shall:

- have the ability to formulate a problem in technical terms including the relevant aspects from the mathematical, business, natural, social, and SIE engineering sciences.
- have the ability to determine and implement the appropriate modeling approach for problem solution.
- have the ability to apply feedback to improve system performance and perform sensitivity analyses.
- understand all components in the design of large, complex systems from eliciting customer requirements through retirement, replacement and disposal.
- have the ability to model and analyze systems having conflicting criteria and interacting decision variables.
- understand the impact of the solution on society and the environment.
- understand roles, advantages, disadvantages and dynamics of teams and have successful experience on team projects.
- be able to communicate effectively with team members and clients through both oral and written means.
- be able to develop customized solution software.
- know how to use high-level modeling and computation tools such as spreadsheet programs, equation solvers, UML and simulation software to analyze engineering problems.
- be able to deal with clients (including instructors) in a professional manner covering demeanor, presentation style and work ethic.
- be able to understand different career options within the profession and preparation for lifelong learning.
- be able to differentiate between ethical and unethical behavior.

[www.engineering.arizona.edu](http://www.engineering.arizona.edu)

<sup>†</sup>Accredited by the Engineering Accreditation Commission of ABET,  
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