

Standing Requirements

## **Program Mission Statement**

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To graduate engineers with the knowledge and skills necessary to assume leading roles in developing safety- and mission-critical software-intensive systems.

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# ERAU University Mission Statement

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Our mission is to teach the science, practice and business of aviation and aerospace, preparing students for productive careers<sup>1</sup> and leadership roles in service around the world.<sup>2</sup>

Our technologically enriched, student-centered environment<sup>3</sup> emphasizes learning through collaboration and teamwork,<sup>4</sup> concern for ethical and responsible behavior,<sup>5</sup> cultivation of analytical<sup>6</sup> and management abilities,<sup>7</sup> and a focus on the development of the professional skills needed for participation in a global community.<sup>8</sup> We believe a vibrant future for aviation and aerospace rests in the success of our students. Toward this end, Embry-Riddle is committed to providing a climate that facilitates the highest standards of academic achievement<sup>9</sup> and knowledge discovery,<sup>10</sup> in an interpersonal environment that supports the unique needs of each individual.<sup>11</sup> Embry-Riddle Aeronautical University is the world's leader in aviation and aerospace education. The University is an independent, non-profit, culturally diverse institution providing quality education and research in aviation, aerospace, engineering and related fields leading to associate's, baccalaureate's, master's and doctoral degrees.

## Program Alignment to University Mission

Select all that apply.

- <sup>1</sup>Preparing students for productive careers
- <sup>2</sup>Preparing students for leadership roles in service around the world
- <sup>3</sup>Technologically enriched environment
- <sup>4</sup>Emphasize learning through collaboration and teamwork
- <sup>5</sup>Concern for ethical and responsible behavior
- <sup>6</sup>Cultivate analytical abilities
- <sup>7</sup>Cultivate management abilities
- <sup>8</sup>Develop the professional skills needed for participation in a global community
- <sup>9</sup>Facilitating the highest standards of academic achievement
- <sup>10</sup>Facilitating knowledge discovery
- <sup>11</sup>Providing an interpersonal environment that supports the unique needs of each individual

Standing Requirements

## Program Outcomes

### MS Software Engineering Outcome Set

#### Outcome

Outcome	Mapping
DB_MSE_SO_A (Process) Ability to apply software engineering processes (e.g., SCRUM, PSP, TSP and CMM) to the development of highly reliable software-intensive systems.	No Mapping
DB_MSE_SO_B (Technology) Ability to use software engineering methods, techniques, and tools as they relate to the following areas of highly reliable software systems: analysis and specification of software requirements, software architecture and design, software construction, and verification and validation.	No Mapping
DB_MSE_SO_C (Communications) Ability to communicate effectively as an individual and to perform successfully as part of a team.	No Mapping
DB_MSE_SO_D (Management) Ability to use software engineering methods, techniques, and tools as they relate to the management of software-intensive systems development	No Mapping

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**DB\_MSE Indicator Course to Student Outcomes Map**

Courses and Activities Mapped to MS Software Engineering Outcome Set

	Outcome			
	DB_MSE_SO_A (Process) Ability to apply software engineering processes (e.g., PSP, TSP and CMM) to the development of highly reliable software-intensive systems.	DB_MSE_SO_B (Technology) Ability to use software engineering methods, techniques, and tools as they relate to the following areas of highly reliable software systems: analysis and specification of software requirements, software architecture and design, software construction, and verification and validation.	DB_MSE_SO_C (Communications) Ability to communicate effectively as an individual and to perform successfully as part of a team.	DB_MSE_SO_D (Management) Ability to use software engineering methods, techniques, and tools as they relate to the management of software-intensive systems development
<b>Courses and Learning Activities</b>				
SE 690,607,700 Graduate Research Project or Software Engineering Practicum or MS Thesis	M	M	M	M
SE 610 Software Systems Architecture and Design		M	P	
SE 530 Software Requirements Engineering		I	P	
SE 510 Software Project Management	P		I	P
SE 500 Software Engineering Discipline	P			I
SE 690 Graduate Research Project	M	M	M	M
SE 697 Software Engineering Practicum	P	P	P	P
SE 700 Graduate Thesis	M	M	M	M
<b>Legend :</b> I    Introduced      P    Practiced      M    Mastered      X    Aligned				

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**DB\_MSE Assessment Schedule**

Courses and Activities Mapped to MS Software Engineering Outcome Set

	<b>Outcome</b>			
	<b>DB_MSE_SO_A (Process)</b> Ability to apply software engineering processes (e.g., PSP, TSP and CMM) to the development of highly reliable software-intensive systems.	<b>DB_MSE_SO_B (Technology)</b> Ability to use software engineering methods, techniques, and tools as they relate to the following areas of highly reliable software systems: analysis and specification of software requirements, software architecture and design, software construction, and verification and validation.	<b>DB_MSE_SO_C (Communications)</b> Ability to communicate effectively as an individual and to perform successfully as part of a team.	<b>DB_MSE_SO_D (Management)</b> Ability to use software engineering methods, techniques, and tools as they relate to the management of software-intensive systems development
<b>Courses and Learning Activities</b>				
2014-15 Assessment Cycle	✓	✓	✓	✓
2015-16 Assessment Cycle	✓	✓	✓	✓
2016-17 Assessment Cycle	✓	✓	✓	✓
2017-18 Assessment Cycle	✓	✓	✓	✓
2018-19 Assessment Cycle	✓	✓	✓	✓
2019-2020 Assessment Cycle	✓	✓	✓	✓

**Legend :**    ✓ = Aligned

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