Embry-Riddle Aeronautical University » Academic Division » Prescott Campus » PC_College of Arts and Sciences » PC_General Education **PC_General Education program**

Standing Requirements Program Mission Statement

Recognizing its general and special missions in education, Embry-Riddle embraces a general education program. This course of study ensures that students possess the attributes expected of all University graduates. Encouraging intellectual self-reliance and ability, the general education program enables students, regardless of their degree program, to understand the significance of acquiring a broad range of knowledge.

Throughout the general education program, students gain and enhance competence in written and oral communication. They practice reasoning and critical thinking skills and demonstrate computer proficiency. As students engage in this course of study, they familiarize themselves with and investigate ideas and methodologies from several disciplines including the arts and humanities, the social sciences, the natural sciences, and mathematics. The program also helps students recognize interrelationships among the disciplines.

Promoting the appreciation of varied perspectives, the general education program provides intellectual stimulation, ensuring that students are broadly educated. This course of study empowers students to make informed value judgments, to expand their knowledge and understanding of themselves, and to lead meaningful, responsible, and satisfying lives as individuals, professionals, and concerned members of their society and the

world.

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ERAU University Mission Statement

Our mission is to teach the science, practice and business of aviation and aerospace, preparing students for productive careers¹ and leadership roles in service around the world.²

Our technologically enriched, student-centered environment³ emphasizes learning through collaboration and teamwork,⁴ concern for ethical and responsible behavior,⁵ cultivation of analytical⁶ and management abilities,⁷ and a focus on the development of the professional skills needed for participation in a global community.⁸ 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 achievement⁹ and knowledge discovery,¹⁰ in an interpersonal environment that supports the unique needs of each individual.¹¹ Embry-Riddle Aeronautical University is the world's leader in aviation and 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.

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

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Standing Requirements Program Outcomes

FL - Embry-Riddle General Education Competency Set (Copy 1)

General Education Competencies	
Competency	Mapping
Critical Thinking (DB, PC, WW) The student will apply knowledge at the synthesis level to define and solve problems within professional and personal environments.	Embry-Riddle General Education Competency Set: Critical Thinking (DB, PC, WW)
Quantitative Reasoning (DB, PC, WW) The student will demonstrate the use of digitally-enabled technology (including concepts, techniques and tools of computing), mathematics proficiency & analysis techniques to interpret data for the purpose of drawing valid conclusions and solving associated problems.	Embry-Riddle General Education Competency Set: Quantitative Reasoning (DB, PC, WW)
Information Literacy (DB, PC, WW) The student will conduct meaningful research, including gathering information from primary and secondary sources and incorporating and documenting source material in his or her writing.	Embry-Riddle General Education Competency Set: Information Literacy (DB, PC, WW)
Communication (DB, PC, WW) The student will communicate concepts in written, digital and oral forms to present technical and non-technical information.	Embry-Riddle General Education Competency Set: Communication (DB, PC, WW)
Scientific Literacy (DB, PC, WW) The student will be able to analyze scientific evidence as it relates to the physical world and its interrelationship with human values and interests.	Embry-Riddle General Education Competency Set: Scientific Literacy (DB, PC, WW)

Embry-Riddle General Education Competency Set:

The student will be able to analyze historical events, cultural artifacts, and philosophical concepts.	Cultural Literacy (DB, PC, WW)
Collaborative Learning (DB, PC, WW) The student will be able to work effectively with others on diverse teams to produce quality written documents, oral presentations and/or meaningful projects. The student will assist in organizing others to accomplish a shared task, contribute actively to a group, and work to resolve any conflicts that occur.	No Mapping

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Prescott General Education Program Map

Courses and Activities Mapped to FL - Embry-Riddle General Education Competency Set (Copy 1)

Burker warden		General Education Competencies						
Constraint distribution of the second distributic distribution of the second distributic distribution		Critical Thinking (DB, PC, WW) The student will apply knowledge at the synthesis level to define and solve problems within professional and personal environments.	Quantitative Reasoning (DB, PC, WW) The student will demonstrate the use of digitally-enabled technology (including concepts, techniques and tools of computing), mathematics proficiency & analysis techniques to interpret data for the purpose of drawing valid conclusions and solving associated problems.	Information Literacy (DB, PC, WW) The student will conduct meaningful research, including gathering information from primary and secondary sources and incorporating and documenting source material in his or her writing.	Communication (DB, PC, WW) The student will communicate concepts in written, digital and oral forms to present technical and non- technical information.	Scientific Literacy (DB, PC, WW) The student will be able to analyze scientific evidence as it relates to the physical world and its interrelationship with human values and interests.	Cultural Literacy (DB, PC, WW) The student will be able to analyze historical events, cultural artifacts, and philosophical concepts.	Collaborative Learning (DB,PC, WW) The student will be able to work effectively with others on diverse teams to produce quality written documents, oral presentations and/or meaningful projects. The student will assist in organizing others to accomplish a shared task, contribute actively to a group, and work to resolve any conflicts that occur.
Child 	Communication Theory and Skills							
CMA2 CMA2<	COM 122 English Composition	I		I	I	I		
ChildragenymingInitInitPInitInitInitCM222 ContractionPP<	COM 219 Speech	I		I	P		I	I
CDM 222 Definition of the image of th	COM 221 Technical Report Writing	I		I	P		I	I
Charlenge of the sector of t	COM 222 Business Communication	I		I	P		I	I
Human substrate transmission of the second s	COM 223 Intelligence Writing	Р		Р	P		Р	I
HU34 Stdistard Final Statistication Stdistard Stdistard Stdistard Stdistard Stdistard Stdistard Stdistard 	Humanities/Social Sciences							
HU14S 	HU 144 Studies in Art	I		I	I	I	I	I
Hù âg àng như	HU 145 Themes in Humanities	I		I	I	I	I	I
Unit of the second seco	HU 146 Music Appreciation and Criticism	I		I	I	I	I	I
Economism Economismont11111Economismont EconomismontPPIIIIIIEconomismont EconomismontPPIIIIIIIIEconomismont EconomismontPPII	Lower-Level Social Sciences							
EC23 DecompositionPIIIIIEC23 EconomicsPPPPPEC23 EconomicsPP	EC 200 Economic Survey	I	I		I	I	Р	I
EC21 MarceconnicsPIIPIPEC225 Engineng EconnicsPPPPPPPEV101 Enducion DeychologyIIIIIIIIEV225 	EC 210 Microeconomics	Р	I		I	I	I	I
EC25 Engineering conomicsPMPPPPY101 Introduction to PychologyIIIIIPY222 Introduction to PychologyIIIIIPY222 	EC 211 Macroeconomics	Р	I		P	I	Р	Р
PS 101 Introduction to Psychology I I I I PSY 22 Introduction to Industrial Psychology I I I I I PSY 22 	EC 225 Engineering Economics	Р	м		P	P	Р	I
PS 222 Introduction Industrial/Organizational PsychologyIPIPPSychologyIIPIIIPS 226 Statistics for Organizational Analysis & 	PSY 101 Introduction to Psychology	I			I	I	I	I
PS 226 Statistics for Organizational Analysis & ResearchIPPPIIS110 World HistoryIIPIIPS204 	PSY 222 Introduction to Industrial/Organizational Psychology	I	I	I	Р	I	I	
S110 World HistoryIIPIIPS204 Introduction to GeographyIIIIIPIS210 Introduction to SociologyIIIIIIIS210 Introduction to SociologyIIIIIIIS220 Cultural AnthropologyIIIIIIIIS290 History of Modern EuropeIIIIIIIII	PSY 226 Statistics for Organizational Analysis & Research	I	Р	I	Р	Р	I	
S204 Introduction to GeographyIIIIIS204 Introduction to GeographyIIIIIIS210 Introduction to SociologyIIIIIIIS220 Cutural AnthropologyIIIIIIIIS290 History of Modern EuropeIIIIIIII	SS 110 World History	I	I	Р	I	I	Р	
SS 210 Introduction to Sociology I I I I SS 260 Cultural Anthropology I I I I SS 290 History of Modern Europe I I I I	SS 204 Introduction to Geography	I	I	I	I	I	Р	
SS 260 Cultural Anthropology I I I SS 290 History of Modern Europe I I I P	SS 210 Introduction to Sociology	1		1	1	1	1	1
SS 290 History of Modern Europe	SS 260 Cultural Anthropology	1		1	I	1	Р	
	SS 290 History of Modern Europe	I		I	I		Р	5

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Upper-Level Humanities							
HU 325 Exploring Film	Р		Р	Р		Р	
HU 330 Values and Ethics	Р	Р	Р	Р	Р	Р	Р
HU 335 Technology and Modern Civilization	Р		Р	Р	Р	Р	Р
HU 355 Creative Writing	Р			Р		Р	Р
HU 420 Applied Cross-Cultural Communication	Р		Р	Р		Р	Р
RS 306 Studies in Middle Eastern History and Culture	Р		Р	Р	Р	Р	
RS 307 Islam and Arabic Culture	Р	Р	Р	Р		Р	Р
RS 310 Modern Middle East in World Affairs	Р	Р	Р	I		Р	Р
Upper-Level Social Sciences							
EC 315 Managerial Economics	Ρ	Р		Р	Р	I	Р
EC 317 Global Economics, Politics and Culture	Р	I	Ρ	I	Р	м	Р
PSY 306 Deceptions	Р		Ρ	Р	Р	I	I
PSY 350 Social Psychology	Ρ		Ρ	Р	Р	Ρ	Р
SS 311 U.S Military History 1775-1900	I		Ρ	I		Ρ	
SS 321 U.S. Military History 1900-Present	I		Ρ	I		Ρ	
SS 326 Russian-U.S. Relations	Р		Ρ	Р	Р	Ρ	
SS 360 Environmental Law	Р	I	I	I	I	Р	I
SS 410 International human Rights	Р	I	I	Р	I	I	I
Computer Science/Information Technol	ogy						
BA 222 Business Computer Applications	Р	Р	I	I			Р
CS 118 Fundamentals of Computer Programming	I	1		1			
CS 125 Computer Science I	I	1		1			
EGR 115 Introduction to Computing for Engineers	I	I					
IT 109 Introduction to Computers and Applications	I	I	I	I			
Mathematics							
MA 111 College Mathematics for Aviation I	I	I	I	I	I		

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MA 112 College Mathematics for Aviation II	I	I	I	I	I		
MA 120 Quantitative Methods I	I	I					
MA 143 Precalculus Essentials	I	I					
MA 222 Business Statistics	I	I	I		I		
MA 241 Calculus and Analytical Geometry I	I	I		I			
Physical Sciences							
BIO 104 Foundations of Biology I	I	I	I	I	I		I
BIO 313 Riparian Ecology	I		I	I	Р		
CHM 105 General Chemistry	I	I	I	I	I		I
PS 113 Introductory Physics I	I	I	I	I	I		I
PS 114 Introductory Physics II	I	I	I	I	I		
PS 150 Physics for Engineers I	I	I					
PS 160 Physics for Engineers II	I	I	1	I	1		
WX 201 Survey of Meteorology	I	I		I	1		
Legend : I Introdu	uced P Pra	cticed M M	astered				

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PC Gen Ed Program Outcomes 2018 Onward

Courses and Activities Mapped to FL - Embry-Riddle General Education Competency Set (Copy 1)

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Courses and Learning Activities							
2018-2019 Assessment Cycle		~	~	~			
2019-2020 Assessment Cycle	~				~	~	~
2020-2021 Assessment Cycle		>	>	~			
2021-2022 Assessment Cycle	~				~	~	~
2022-2023 Assessment Cycle		~	~	~			
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2018-2019 Assessment Cycle

Assessment Plan with Results and Proposed Improvements

Result per Measure

PC_Gen_Ed Program Outcomes

Outcome

Outcome: Quantitative Reasoning

The student will demonstrate the use of digitally-enabled technology (including concepts, techniques and tools of computing), mathematics proficiency & analysis techniques to interpret data for the purpose of drawing valid conclusions and solving associated problems.

Measure: Math 241 Final Exam Scores
 Program level Direct - Exam

Details/Description:	Outcomes will be assessed by performance on selected final exam questions.
Criterion for Success:	Students will score above 70% on selected questions on the Final Exam.
Timeframe of Data Collection:	End of semester (Fall 2018-Spring 2019)
Key/Responsible Personnel:	Brent Solie

Results for Math 241 Final Exam Scores

Summary of Results:	Scores were sampled from four sections of
	MA 241 in Fall 2018 and Spring 2019. Scores
	on questions concerning limits derivatives
	and integrals were tallied with the following
	results:
	Section 1: 57.2% of students scored above
	70% on the questions.
	Section 2: 69.9% of students scored above
	70% on the questions.
	Section 3: 52.6% of students scored above



	70% on the questions. Section 4: 42.3% of students scored above 70% on the questions.
Results :	Attainment level: Criterion for Success (not met/ met/ exceeded): Not Met
Sample Size/ Number of Students Assessed:	Section 1: 37 students Section 2: 37 students Section 3: 34 students Section 4: 26 students
Proposed Improvements:	Faculty will meet to discuss these results and develop plans for student mastery of basic calculus. A pilot program has already been started for peer instruction in Calc 1. Furthermore, faculty need to refine the criterion for success for Calc 1 learning outcomes.

 Measure: Quantitative Reasoning Graduating Student Survey Program level Indirect - Survey

Details/Description:	We will add this item to the graduating student survey: My coursework enhanced my ability to solve mathematical and economic problems.
Criterion for Success:	Agreement with above statement - 70% or higher.
Timeframe of Data Collection: Key/Responsible Personnel:	Graduation Brent Solie

Results for Quantitative Reasoning Graduating Student Survey

Summary of Results:

94.0% of students indicated that ERAU helped them improve their quantitative reasoning "very much," "quite a bit," or "some."



	73.4% of students indicated that ERAU helped them improve their quantitative reasoning "very much" or "quite a bit."
Results :	Attainment level: Criterion for Success (not met/ met/ exceeded): Met
Sample Size/ Number of Students Assessed:	301 students
Proposed Improvements:	none

Outcome: Information Literacy

The student will conduct meaningful research, including gathering information from primary and secondary sources and incorporating and documenting source material in his or her writing.

•	Measure: Com 122 Pre Post Test on Library Instruction
	Program level Direct - Exam

Details/Description:	Information literacy will be assessed at course outset and again at conclusion using a multiple choice test.
Criterion for Success:	75% of the students will increase knowledge at post-test.
Timeframe of Data Collection:	At course outset and conclusion during Fall semester.
Key/Responsible Personnel:	Suzie Roth

Results for Com 122 Pre Post Test on Library Instruction

Summary of Results:

Due to an error, pre-test and post-test scores were not collected on an individual basis.



The external vendor handling the survey was not instructed to retain individual student data. Instead, only percentages of students answering each question correctly were provided.

Percentages of student responding correctly per question are recorded in the table below:

Overall average scores were 63% on the pretest and 72% on the post-test.

In 16 out of 20 questions, the percentage of students answering correctly either remained the same or increased. In 8 of these 16 was in the double digits. In the 4 questions where the percentage of students answering correctly decreased, only one question showed a double-digit decrease.

While the data provided seems to indicate a positive effect on information literacy, it is



unfortunately not sufficient to conclude that the criterion for success has been met.

Results :

Sample Size/ Number of Students Assessed:

Proposed Improvements:

Attainment level: Criterion for Success (not met/ met/ exceeded): Not Met

Pre-test: 360 Post-test: 306

Additional efforts will be made to clearly communicate assessment criteria to responsible personnel. Plans are already underway to change vendors for information literacy training and improve the data collection process.

 Measure: Information Literacy Graduating Student Survey Program level Indirect - Survey

Details/Description:	We will add this item to the graduating student survey:
	My coursework improved my ability to conduct meaningful research and document source material.
Criterion for Success:	Agreement with above statement - 70% or higher.
Timeframe of Data Collection:	Graduation
Key/Responsible Personnel:	Suzie Roth

Results for Information Literacy Graduating Student Survey

Summary of Results: 93.0% of students indicated that ERAU helped them improve their information literacy "very much," "quite a bit," or "some."

> 68.1% of students indicated that ERAU helped them improve their information literacy "very much" or "quite a bit."

Results :	Attainment level: Criterion for Success (not met/ met/ exceeded): Met
Sample Size/ Number of	301 students

Students Assessed: Proposed Improvements: none

Outcome: Communication

The student will communicate concepts in written, digital and oral forms to present technical and non-technical information.

 Measure: Com 219: Speech Program level Direct - Other 	
Details/Description:	Communication core competency will be assessed via speech performance on assignments.
Criterion for Success:	75% of students will show improved speech assignment scores at course end.
Timeframe of Data Collection: Key/Responsible Personnel:	Spring semester. Lisa Davis
Results for Com 219: Speech	
Summary of Results:	Scores were sampled from early and late oral presentation assignments to assess improvement over time. Three sections were assessed with the following results: Section 1: 50% of students improved between assessments Section 2: 47.4% of students improved between assessments



	Section 3: 70% of students improved between assessments
Results :	Attainment level: Criterion for Success (not met/ met/ exceeded): Not Met
Sample Size/ Number of Students Assessed:	49 students in total: Section 1: 20 students Section 2: 19 students Section 3: 10 students
Proposed Improvements:	Faculty will meet to review assessment plan and criteria and revise curriculum and assessment measures as appropriate.

Measure: Communication Graduating Student Survey
 Program level Indirect - Survey

Details/Description:	We will add this item to the graduating student survey: My coursework enhanced my ability to communicate complex information and concepts for technical and non-technical audiences.
Criterion for Success:	Agreement with above statement - 70% or higher.
Timeframe of Data Collection:	Graduation
Key/Responsible Personnel:	Lisa Davis

Results for Communication Graduating Student Survey

Summary of Results:96.3% of students indicated that ERAU
helped them improve their communication
skills "very much," "quite a bit," or "some."

77.2% of students indicated that ERAU helped them improve their communication skills "very much" or "quite a bit."

	Results :	Attainment level: Criterion for Success (not met/ met/ exceeded): Met		
	Sample Size/ Number of Students Assessed:	302 students		
	Proposed Improvements:	none		
Overall Reflection				
No text	specified			

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