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.

ERAU University Mission Statement

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

Our technologically enriched, student-centered environment[3] emphasizes learning through collaboration and teamwork,[4] concern for ethical and responsible behavior,[5] cultivation of analytical[6] 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 achievement[9] 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 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

Program Alignment to University Mission

Select all that apply.

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

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	**Embry-Riddle General Education Competency Set:** Scientific Literacy (DB, PC, WW)

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.	**Embry-Riddle General Education Competency Set:** Cultural Literacy (DB, PC, WW)

PC_Gen_Ed Program Outcomes

Outcome

Outcome	Mapping
PC_GENED_PO_01 Math Apply knowledge of college-level mathematics for defining and solving problems.	No Mapping
PC_GENED_PO_02 Writing Construct effective written documents for technical and non-technical audiences.	No Mapping
PC_GENED_PO_03 Speech Communicate ideas in non-written form, such as through oral presentations and visual media.	No Mapping
PC_GENED_PO_04 Research Conduct and report research accurately and in accordance with professional standards.	No Mapping
PC_GENED_PO_05 Ethics	No Mapping

Recognize the importance of ethical responsibility both professionally and socially.	
PC_GENED_PO_06 Science Identify some of the important results of scientific inquiry in the physical and natural sciences, and use scientific information in critical thinking and decision-making.	No Mapping
PC_GENED_PO_07 Tech Use technology to organize and manipulate information to communicate ideas and concepts.	No Mapping
PC_GENED_PO_08 Economics Apply economic principles to identify, formulate, and solve problems.	No Mapping
PC_GENED_PO_09 Humanities Demonstrate an awareness and understanding of the values communicated through the Humanities.	No Mapping
PC_GENED_PO_10 Social Describe some of the historical and contemporary issues that affect societies.	No Mapping
PC_GENED_PO_11 Complexity Recognize the complexity of human experience from a variety of perspectives, for example, cultural, aesthetic, social, technological, scientific, psychological, philosophical, and historical.	No Mapping

Curriculum Map

Mapping Matrixs

Gen Ed Curriculum Map

[Print View] [PDF]

Alignment Set: PC_Gen_Ed Program Outcomes
Created: 05/06/2014 5:21:05 pm EDT
Last Modified: 05/06/2015 2:08:59 pm EDT

Gen Ed Curriculum Map

Courses and Activities Mapped to PC_Gen_Ed Program Outcomes

Show Outcome Description(s) | Show Course/Activity Detail

Courses and Learning Activities	Outcome										
	PC_GENED_PO_01 Math	PC_GENED_PO_02 Writing	PC_GENED_PO_03 Speech	PC_GENED_PO_04 Research	PC_GENED_PO_05 Ethics	PC_GENED_PO_06 Science	PC_GENED_PO_07 Tech	PC_GENED_PO_08 Economics	PC_GENED_PO_09 Humanities	PC_GENED_PO_10 Social	PC_GENED_PO_11 Complexity
COM 221 Tech Writing		P	I	P	I	I				I	
COM 219 Speech		I	P	P	I				I	P	
MA 241 Calculus (1st year)	P					I					
Library Library				I			I				
ECON 210/211 Economics	P	P						P		P	
PS 150/160 Physics (1st year)	P					P	I				
BIO 104 Biology				I		I					I
HU 330 Ethics		P	P	P	P				M	P	P
AE 425/427 Engineering Capstone	M	M	M	P	I	M	M	I		I	I

Legend: I Introduced P Practiced M Mastered

Last Modified: 05/06/2015 02:08:59 PM

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Assessment Schedule

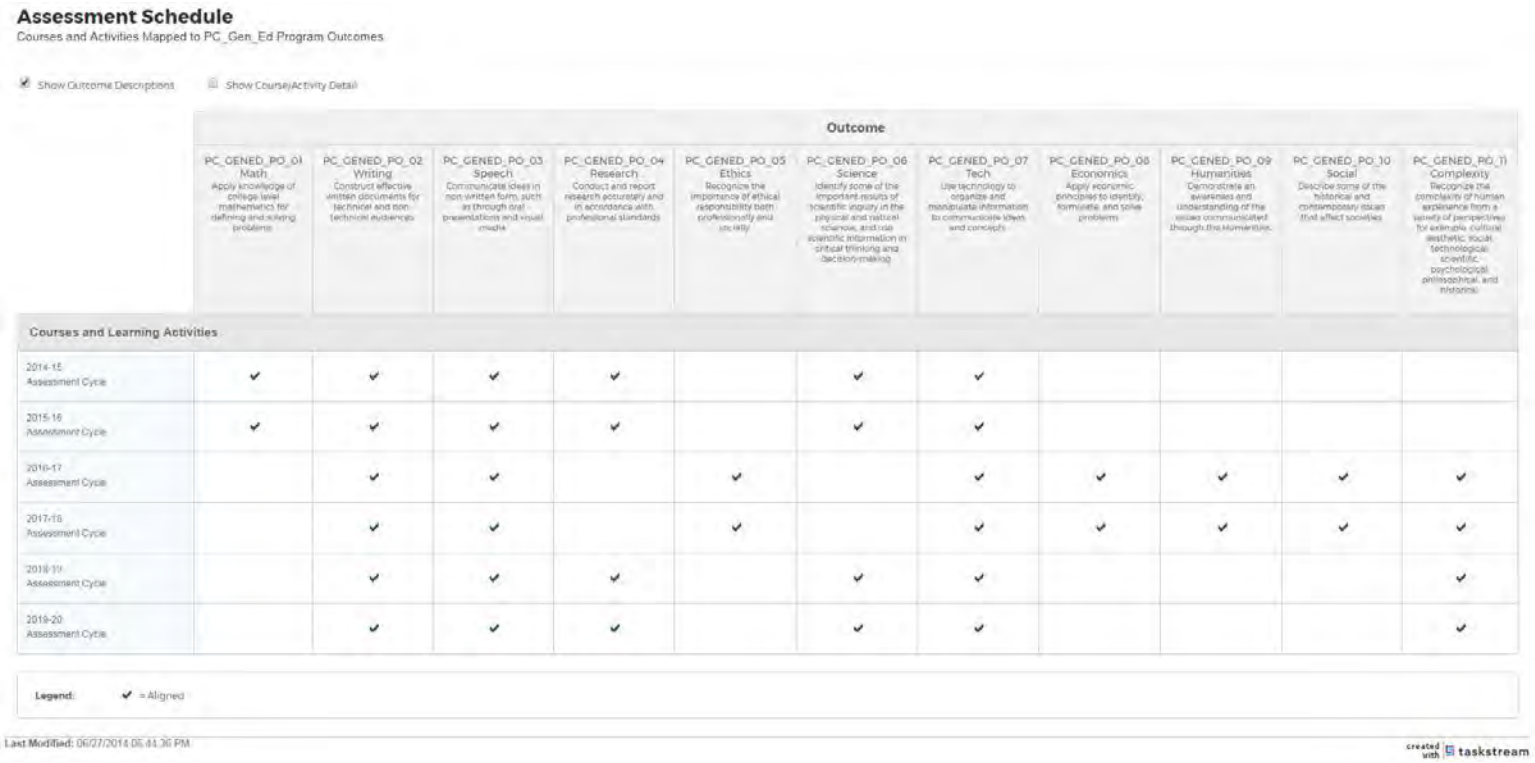
Mapping Matrixs

Assessment Schedule

[Print View] [PDF]

Alignment Set: PC_Gen_Ed Program Outcomes
Created: 05/06/2014 5:37:25 pm EDT
Last Modified: 06/27/2014 5:44:36 pm EDT

Years vs Program Outcomes



Assessment Schedule
Courses and Activities Mapped to PC_Gen_Ed Program Outcomes

Show Outcome Descriptions Show Course/Activity Detail

Courses and Learning Activities	Outcome										
	PC_GENED_PO_01 Math	PC_GENED_PO_02 Writing	PC_GENED_PO_03 Speech	PC_GENED_PO_04 Research	PC_GENED_PO_05 Ethics	PC_GENED_PO_06 Science	PC_GENED_PO_07 Tech	PC_GENED_PO_08 Economics	PC_GENED_PO_09 Humanities	PC_GENED_PO_10 Social	PC_GENED_PO_11 Complexity
2014-15 Assessment Cycle	✔	✔	✔	✔		✔	✔				
2015-16 Assessment Cycle	✔	✔	✔	✔		✔	✔				
2016-17 Assessment Cycle		✔	✔		✔		✔	✔	✔	✔	✔
2017-18 Assessment Cycle		✔	✔		✔		✔	✔	✔	✔	✔
2018-19 Assessment Cycle		✔	✔	✔		✔	✔				✔
2019-20 Assessment Cycle		✔	✔	✔		✔	✔				✔

Legend: ✔ = Aligned

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Additional Information (Optional)

- Gen Ed program outcomes were developed with input from the University Gen Ed Committee, and are similar across all three campuses.
- We assess courses two years in a row, so that we can immediately track the results of changes implemented based upon data/results from the first year.
- Due to unexpected staffing changes, assessment plans are sometimes (often?) developed in the late summer/early fall. It also makes sense to develop assessment plans at the same time one is preparing to teach a course.
- The Prescott Gen Ed committee coordinates and provides guidance for Gen Ed assessment, but leaves the actual details of assessment to individual faculty.

2016-2017 Assessment Cycle

Contact Information

Form: Contact Information

Please fill out the form with the information of the person responsible for the assessment plan.

Contact Name

First	Last
Edward	Poon

Email

poon3de@erau.edu

Phone Number

(928) 777-3752

Assessment Plan

Measures

PC_Gen_Ed Program Outcomes

Outcome

Outcome: PC_GENED_PO_02 Writing

Construct effective written documents for technical and non-technical audiences.

Measure: Comparison of writing samples

Course level; Direct - Student Artifact

Details/Description:	Pre- and post-course writing samples from selected sections of COM 221 and the engineering design capstone courses will be compared.
Criterion for Success:	On the post-test students will score an aggregate mean of 70%, furthermore students will show a significant improvement from pre- to post-measures of at least 10% of the mean aggregate score.
Timeframe of Data Collection:	Fall 2016 and Spring 2017
Key/Responsible Personnel:	To be determined.

Measure: Student evaluations

Course level; Indirect - Survey

Details/Description:	Student evaluations of COM 221 will be used as an indirect assessment of students' perception of their ability to communicate effectively. This performance indicator will be assessed by the question: “My experiences in this course have improved my ability to communicate effectively.”
Criterion for Success:	At least 70% of students will respond Agree or Strongly Agree, and no more than 10% of students will respond Disagree or Disagree Strongly.
Timeframe of Data Collection:	Fall 2016 and possibly Spring 2017
Key/Responsible Personnel:	Dr. Angela Beck, HU/COM

Outcome: PC_GENED_PO_03 Speech

Communicate ideas in non-written form, such as through oral presentations and visual media.

Measure: Capstone course/senior design project

Course level; Direct - Student Artifact

Details/Description:	Students enrolled in all AE/ME Engineering Capstone courses will be assessed on their final capstone presentations. These Engineering Capstone briefing assessments will use as instrument developed by teams of HU/COM and AE faculty over the past 9 years. This instrument provides a discreet item analysis of critical oral presentation elements (e.g., pacing, volume, eye contact, engagement, fillers, appropriate register, appropriate vocabulary, good teamwork, question-and-answer skills). Student scores are used for general education assessment, ABET assessment, and a portion of each student's final course grade.
Criterion for Success:	All students in all sections of AE/ME capstone in each semester will have their final briefing scores aggregated; students will score an aggregate mean of 75% in Fall 2014 and 75% in Spring 2015.
Timeframe of Data Collection:	Fall 2016 and Spring 2017
Key/Responsible Personnel:	HU/COM and AE/ME faculty teaching Engineering Capstone courses in Fall 2016 and Spring 2017 will assess all students in all sections of AE/ME capstone.

Measure: Self-evaluation of speaking skills

Course level; Direct - Other

Details/Description:	Students enrolled in COM 219 will demonstrate effective evaluation of their own speaking skills as exhibited through self-evaluations of speeches, online quizzes, and course evaluations.
Criterion for Success:	Students enrolled in COM 219: Speech will demonstrate effective evaluation of their own speaking skills as exhibited through self-evaluations of speeches, online quizzes, and course evaluations. Specifically, the mean difference between student self-reports and instructor evaluations will be no more than 10%.
Timeframe of Data Collection:	Fall 2016 and Spring 2017
Key/Responsible Personnel:	To be determined.

Measure: Student evaluations

Course level; Indirect - Survey

Details/Description:	On the end-of-course evaluations for COM 219 students will be asked if they agree or disagree with the following statement: "This course has improved my ability to communicate."
Criterion for Success:	At least 70% of the students will agree or strongly agree with the statement: "This course has improved my ability to communicate."
Timeframe of Data Collection:	Fall 2016 and Spring 2017
Key/Responsible Personnel:	To be determined

Outcome: PC_GENED_PO_05 Ethics

Recognize the importance of ethical responsibility both professionally and socially.

Measure: Ethical argument for a professional dilemma

Course level; Direct - Exam

Details/Description:	Selected questions from the HU 330: Values and Ethics final exam will be graded to assess students' ability to articulate an ethical argument in response to a professional dilemma using recognized ethical systems. All students enrolled in Fall 2016 in either HU 330.01 or HU 330.02 will participate (approx. 60 students).
Criterion for Success:	At least 70% of the students will score above 70% on the selected question, AND no more than 10% of the students will score below 50% on the selected question.
Timeframe of Data Collection:	Fall 2016
Key/Responsible Personnel:	Dr. Kelly Lambert

Measure: Ethical argument for lifelong learning

Course level; Direct - Exam

Details/Description:	Selected questions from the HU 330: Values and Ethics final exam will be graded to assess students' ability to articulate an ethical argument justifying the need to engage in lifelong learning. All students enrolled in Fall 2016 in either HU 330.01 or HU 330.02 will participate (approx. 60 students).
Criterion for Success:	At least 70% of the students will score above 70% on the selected question, AND no more than 10% of the students will score below 50% on the selected question.
Timeframe of Data Collection:	Fall 2016
Key/Responsible Personnel:	Dr. Kelly Lambert

Measure: Student Evaluations

Course level; Indirect - Survey

Details/Description:	Student evaluations of HU 330 will be used as an indirect assessment of students' perception of their understanding of professional and ethical responsibilities. This performance indicator will be assessed by the question: “My experiences in this course have improved my understanding of professional and ethical responsibility.”
Criterion for Success:	At least 70% of students will respond Agree or Strongly Agree, and no more than 10% of students will respond Disagree or Disagree Strongly.
Timeframe of Data Collection:	Fall 2016
Key/Responsible Personnel:	Dr. Kelly Lambert HU/COM

Outcome: PC_GENED_PO_08 Economics

Apply economic principles to identify, formulate, and solve problems.

Measure: Selected test questions

Course level; Direct - Exam

Details/Description:	Selected questions from the EC 210 final exam will be graded to assess student understanding and application of basic principles in economics. All students in selected sections of EC 210 will participate.
Criterion for Success:	The mean score on these questions will be at least 70%.
Timeframe of Data Collection:	Fall 2016
Key/Responsible Personnel:	Dr Ricardo A Carreras

Additional/Ad-hoc Program Improvements (Optional)

Attachments