Standing Requirements

Program Mission Statement

Recognizing its general and special missions in education, Embry-Riddle Aeronautical University embraces a general education program. This course of study ensures that students possess the attributes expected of all university graduates. 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. These include the arts and humanities, the social sciences, economics, 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.

Embry-Riddle Aeronautical University's general education program encourages effective learning and provides a coherent base for students to pursue their academic specializations. In specific support of the goals of general education,

candidates for bachelor degrees must complete course work or demonstrate competency in the following areas: English, Mathematics, Physical Sciences, and Social Sciences and Economics.

Program Alignment to University Mission
Form: Alignment to University Mission

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

[3]Technologically enriched environment

[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 2)

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)	**Embry-Riddle General Education Competency Set:** 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.	**Embry-Riddle General Education Competency Set:** Cultural Literacy (DB, PC, WW)
Lifelong Personal Growth (WW Only) The student will be able to demonstrate the skills needed to enrich the quality of life through activities which enhance and promote lifetime learning.	**Embry-Riddle General Education Competency Set:** Lifelong Personal Growth (WW Only)

General Education Outcome Set

Outcome

Outcome	Mapping
WW_BSGE_PO_01 Mathematical Reasoning: Apply knowledge of college level mathematics to defining and solving problems.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Quantitative Reasoning (DB, PC, WW)
WW_BSGE_PO_02 Quantitative Analysis: Apply statistical methods in the analysis and interpretation of data for the purpose of	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Information Literacy (DB, PC, WW), Quantitative Reasoning (DB, PC, WW)

drawing valid conclusions relating to the solutions of problems.	
WW_BSGE_PO_03 Written Communication: Communicate ideas in written form in both technical and non-technical areas.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Information Literacy (DB, PC, WW)
WW_BSGE_PO_04 Oral and Visual Communication: Communicate ideas in non-written form, such as through oral presentations or visual media.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Information Literacy (DB, PC, WW)
WW_BSGE_PO_05 Ethical and Social Responsibility: Recognize the importance of professional, ethical and social responsibility.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Cultural Literacy (DB, PC, WW), Scientific Literacy (DB, PC, WW)
WW_BSGE_PO_06 Environmental Awareness: Understand the natural world, to include the impact of the environment on aerospace operations and aerospace operations on the environment, as well as everyday life and professional experiences.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Cultural Literacy (DB, PC, WW), Scientific Literacy (DB, PC, WW)
WW_BSGE_PO_07 Technological Literacy: Use digitally-enabled	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Critical Thinking (DB, PC, WW), Information Literacy (DB,

technology to organize and manipulate data, perform calculations, aid in solving problems, and communicate solutions, ideas, and concepts.	PC, WW), Quantitative Reasoning (DB, PC, WW), Scientific Literacy (DB, PC, WW)
WW_BSGE_PO_08 Scientific Reasoning: Use scientific information in critical thinking and decision-making processes.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Quantitative Reasoning (DB, PC, WW), Scientific Literacy (DB, PC, WW)
WW_BSGE_PO_09 Teamwork: Function on multi-cultural and/or multi-disciplinary teams.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Cultural Literacy (DB, PC, WW), Lifelong Personal Growth (WW Only)
WW_BSGE_PO_10 Economic Reasoning: Apply economic principles to identify, formulate, and solve problems within professional and personal environments.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Information Literacy (DB, PC, WW), Quantitative Reasoning (DB, PC, WW)
WW_BSGE_PO_11 Professional Engagement: Identify and participate in professional and personal development activities through organizations and self-directed learning.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Cultural Literacy (DB, PC, WW), Lifelong Personal Growth (WW Only)
WW_BSGE_PO_12 Social Awareness: Understand contemporary issues in society.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Cultural Literacy (DB, PC, WW), Information Literacy (DB, PC, WW), Lifelong Personal Growth (WW Only)

WW_BSGE_PO_13
Multicultural Competence:

Recognize the complexity and diversity of the human experience, including cultural, aesthetic, psychological, philosophical, and spiritual dimensions.

Embry-Riddle General Education Competency Set: Cultural Literacy (DB, PC, WW), Lifelong Personal Growth (WW Only)

WW_BSGE_PO_14
Information Literacy:

Conduct and report research in accordance with professional standards.

Embry-Riddle General Education Competency Set: Communication (DB, PC, WW), Critical Thinking (DB, PC, WW), Information Literacy (DB, PC, WW), Quantitative Reasoning (DB, PC, WW)

Curriculum Map

Mapping Matrixs ⊘

○ **College of Arts & Sciences Curriculum Map**🔍

Alignment Set: General Education Outcome Set
Created: 09/30/2013 10:00:17 am EDT
Last Modified: 10/29/2013 5:04:22 pm EDT

College of Arts & Sciences Curriculum Map
Courses and Activities Mapped to General Education Outcome Set

☑ Show Outcome Descriptions   ☐ Show Course/Activity Detail

Outcome

	WW_BSCE_PO_01 Mathematical Reasoning	WW_BSCE_PO_02 Quantitative Analysis	WW_BSCE_PO_03 Written Communication	WW_BSCE_PO_04 Oral and Visual Communication	WW_BSCE_PO_05 Ethical and Social Responsibility	WW_BSCE_PO_06 Environmental Awareness	WW_BSCE_PO_07 Technological Literacy	WW_BSCE_PO_08 Scientific Reasoning	WW_BSCE_PO_09 Teamwork	WW_BSCE_PO_09 Economic Reasoning	WW_BSCE_PO_11 Professional Programme	WW_BSCE_PO_10 Social Awareness	WW_BSCE_PO_13 Multicultural Competence	WW_BSCE_PO_14 Information Literacy

Courses and Learning Activities

Course	01	02	03	04	05	06	07	08	09	09b	11	10	13	14
ECON 101 Microeconomics	I		I							I		I		
ECON 201 Macroeconomics	I		I				I			I		I		
ECON 315 Managerial Economics	I	I	I				I			I		I		
ECON 400 Economics of Air Transportation	I		I				I			I		I		
GOVT 320 American National Government		I	I	I	I		I	I			I	I	I	I
GOVT 325 International Studies								I				I	I	I
GOVT 305 Current Issues in America			I	I								I	I	I
GOVT 345 U.S. Foreign Policy			I	I									I	I
GOVT 357 Inter-American Relation			I	I									I	I
GOVT 401 American Constitutional Law			I									I		I
GOVT 402 Globalization and World Politics			I	I							I	I	I	I
HIST 110 World History		I	I	I	I			I				I	I	I
HIST 101 History of American America														
HIST 202 Evolution of Scientific Thought	I		I	I	I	I	I	I				I		I
HIST 205 American Military History			I	I									I	I
PSYC 320 Introduction to Psychology	I	I	I	I	I	I				I	I	I	I	
PSYC 322 Aviation Psychology		I	I	I	I		I	I			I	I	I	I
PSYC 360 Social Psychology	I	I	I	I	I	I				I	I	I	I	
PSYC 400 Introduction to Cognitive Science			I	I	I		I	I	I		I	I	I	I
SOCI 210 Introduction to Sociology	I	I	I		I	I		I	I			I	I	I
SOCI 209 Marriage & Family			I		I	I		I			I	I	I	I
SOCI 310 Personality Development														I
ENGL 123 English Composition			I	I	I							I		I
ENGL 342 Studies in Rhetorical Theory			I		I							I		I
ENGL 223 Technical Report Writing			I	I	I		I		I			I		I
ENGL 237 Business Communication			I	I			I		I			I		I
ENGL 251 Creative Writing			I	I	I							I		I
HUMN 140 Western Humanities I: Antiquity to the Middle Ages			I	I	I							I	I	I
HUMN 141 Western Humanities II: Renaissance to Postmodern			I	I	I							I	I	I
HUMN 142 Studies in Literature			I	I									I	I
HUMN 200 World Literature			I	I								I	I	I
HUMN 250 American Literature			I	I								I	I	I
HUMN 325 Exploring Film			I	I									I	I
HUMN 330 Values and Ethics			I	I								I	I	I
SPC 1 219 Speech			I	I			I		I					
GNED 101 Fundamentals of College Student Success			I	I			I					I		I
MATH 106 Basic Algebra & Trigonometry							I							
MATH 111 College Mathematics for Aviation I	I						I							
MATH 112 College Mathematics for Aviation II	I						I							
MATH 140 College Algebra	I						I							
MATH 142 Trigonometry	I						I							
MATH 211 Statistics with Aviation Applications	I						I							
MATH 222 Business Statistics	I						I							
MATH 240 Calculus and Analytic Geometry I	I						I							
MATH 241 Calculus and Analytic Geometry II	I						I							
MATH 242 Calculus and Analytic Geometry III	I						I							
MATH 252 Calculus and Analytic Geometry IV	I						I							
MATH 320 Decision Mathematics	I	I					I							
MATH 345 Differential Equations and Matrix Methods	I						I							
BIOL 101 Elemental Biological Science		I	I								I			
PHYS 101 Exploration in Physics	I		I			I	I						I	
PHYS 150 Physics I for Engineers	I		I											
PHYS 160 Physics II for Engineers	I		I			I	I	I						
PHYS 250 Physics III for Engineers	I		I			I	I							
PHYS 142 Introduction to Environmental Science	I		I								I			
PHYS 101 Astronomy			I					I						
PHYS 201 Exploration in Scientific Thought														
PHYS 204 Environmental Science			I	I	I	I		I			I			I
WEAX 201 Meteorology I	I		I			I	I	I	I					
WEAX 202 Meteorology II			I			I		I						

Legend: I Introduced   P Practiced   M Mastered

Assessment Schedule

Mapping Matrixs ⓘ

⊙ **Gen Ed Assessment Schedule** 🔍   [Print View] [PDF]
Alignment Set: General Education Outcome Set
Created: 09/30/2013 10:53:43 am EDT
Last Modified: 10/11/2016 3:57:38 pm EDT

Additional Information (Optional)

Contact Information

Form: Contact Information

❋**Contact Name**

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Assessment Plan

> **Measures**

General Education Outcome Set

Outcome

> **Outcome: WW_BSGE_PO_05**
> Ethical and Social Responsibility:
>
> Recognize the importance of professional, ethical and social responsibility.

> **Measure:** Overall Student Performance Goal
> ▾*Course level; Direct - Exam*

Details/Description:	HUMN 330 – Values and Ethics
	This course focuses on the process of practical ethics as a way of resolving moral conflict and of understanding professional responsibility in a multiculturally diverse society without devaluing specific viewpoints of ethical or metaphysical theory, ideology, or religion. With basic moral logic, students will examine issues in terms of rights, responsibilities, and the community of rational beings; in terms of consequences and contingencies; and in terms of habituated virtues and character.

This course is designed to help students: 1) Understand the basic vocabulary and fundamental theories of ethics; 2) Discover life's values and determine which values are the most worthwhile; 3) Relate the textbook theories to actual life situations; 4) Find greater personal peace by choosing more constructive values; 5) Apply understanding of ethics to personal lives; 6) Understand the relationship between attitudes, values and moral conduct.

The primary rationale at the foundation of the course design is workplace relevance. All topics, activities, and assignments have been selected because of their applicability to a professional environment.

The Final Exam is a two-part test - 5 essay questions for each part. The Final is comprehensive (Modules 1-4 and 5-9, Chapters 1-13) and is t taken during Week 9.

Criterion for Success:	Set an overall goal of 80% of the students achieving an overall grade of 75% or higher on the 10 question set.
Timeframe of Data Collection:	October – December 2013
Key/Responsible Personnel:	Donna Roberts, Discipline Chair, Psychology & Sociology

Measure: Student Performance Content Goal
▾*Course level; Direct - Exam*

Details/Description:	HUMN 330 – Values and Ethics This course focuses on the process of practical ethics as a way of resolving moral conflict and of understanding professional responsibility in a multiculturally diverse society without devaluing specific viewpoints of ethical or metaphysical theory, ideology, or religion. With basic moral logic, students will examine issues in terms of rights, responsibilities, and the community of rational beings; in terms of consequences and contingencies; and in terms of habituated virtues and character. This course is designed to help students: 1) Understand

the basic vocabulary and fundamental theories of ethics; 2) Discover life's values and determine which values are the most worthwhile; 3) Relate the textbook theories to actual life situations; 4) Find greater personal peace by choosing more constructive values; 5) Apply understanding of ethics to personal lives; 6) Understand the relationship between attitudes, values and moral conduct.

The primary rationale at the foundation of the course design is workplace relevance. All topics, activities, and assignments have been selected because of their applicability to a professional environment.

The Final Exam is a two-part test - 5 essay questions for each part. The Final is comprehensive (Modules 1-4 and 5-9, Chapters 1-13) and is t taken during Week 9.

Criterion for Success:	Set a content goal that no question on the 10 question exam will have a score of less than 70% of the points available for the question.
Timeframe of Data Collection:	October – December 2013
Key/Responsible Personnel:	Donna Roberts, Discipline Chair, Psychology & Sociology

Outcome: WW_BSGE_PO_08
Scientific Reasoning:

Use scientific information in critical thinking and decision-making processes.

Measure: Measurement Title: Student Performance Content Goal
▼*Course level; Direct - Exam*

Details/Description:	There are 13 chapter quizzes in WEAX 201, Meteorology I, and in each quiz there are at least 3 questions that require students to use scientific reasoning and critical thinking to answer the questions, for a total of 39 possible questions to choose from. I selected 20 of the best questions to use in this

assessment of scientific reasoning and critical thinking. There are 13 chapter quizzes in WEAX 201, Meteorology I, and in each quiz there are at least 3 questions that require students to use scientific reasoning and critical thinking to answer the questions, for a total of 39 possible questions to choose from. I selected 20 of the best questions to use in this assessment of scientific reasoning and critical thinking.

Criterion for Success:	Set a content goal that no question on the 20 question exam will have a score of less than 70% of the points available for the question.
Timeframe of Data Collection:	October – December 2013
Key/Responsible Personnel:	Tom Sieland, Course Monitor and Developer

Measure: Overall Student Performance Goal
▼*Course level; Direct - Exam*

Details/Description:	There are 13 chapter quizzes in WEAX 201, Meteorology I, and in each quiz there are at least 3 questions that require students to use scientific reasoning and critical thinking to answer the questions, for a total of 39 possible questions to choose from. I selected 20 of the best questions to use in this assessment of scientific reasoning and critical thinking. There are 13 chapter quizzes in WEAX 201, Meteorology I, and in each quiz there are at least 3 questions that require students to use scientific reasoning and critical thinking to answer the questions, for a total of 39 possible questions to choose from. I selected 20 of the best questions to use in this assessment of scientific reasoning and critical thinking.
Criterion for Success:	Set an overall goal of 80% of the students achieving an overall grade of 75% or higher on the 20 question set.
Timeframe of Data Collection:	October – December 2013

Key/Responsible Personnel:	Tom Sieland, Course Monitor and Developer

Outcome: WW_BSGE_PO_13

Multicultural Competence:

Recognize the complexity and diversity of the human experience, including cultural, aesthetic, psychological, philosophical, and spiritual dimensions.

Measure: HUMN 210 World Culture

▾*Course level; Direct - Student Artifact*

Details/Description:	HUMN 210 focuses on the cultural development of world societies including but not limited to religious, social, political, and philosophical arenas as all apply to contemporary circumstances.
	The major goals of the course: students will have an overview of world cultures from early modern history to the present, emphasizing the contributions of all world cultures to the advancement of a global civilization; will be familiar with important events and themes of various world cultures and; will be able to research analyze, discuss and appreciate literary, philosophical, artistic and historical documents.
	One of the major learning outcomes for the course is that students will research (in writing), through examination and analysis of primary and secondary sources, a country or specific society and its customs and practices while highlighting overall cultural contributions to a global world society (Activity 8.5).
Criterion for Success:	Set an overall goal of 80% of the students achieving an overall grade of 75% or higher on the research paper.
Timeframe of Data Collection:	December 2013 - March 2014
Key/Responsible Personnel:	Ann Marie Ade, Discilpine Chair English & Speech

Outcome: WW_BSGE_PO_14

Information Literacy:

Conduct and report research in accordance with professional standards.

Measure: ENGL 221 Technical Report Writing

▼*Course level; Direct - Student Artifact*

Details/Description:	ENGL 221 introduces students to the preparation of formal and informal technical reports, abstracts, proposals, instructions, professional correspondence and other forms of technical communication. Major emphasis is placed on the long technical report and the acquisition of advanced writing skills. Part of this course involves student writing a formal, researched and documented report with aesthetically pleasing title page, a letter of transmittal, tables of content and of tables and figures, an informative abstract, and clearly identified sections with headings throughout the report (Activity 9.1).
Criterion for Success:	Set an overall goal of 80% of the students achieving an overall grade of 75% or higher on the final report.
Timeframe of Data Collection:	December 2013 - March 2014
Key/Responsible Personnel:	Ann Marie Ade, Discipline Chair English and Speech

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Measure: Student's Ability to Collect Information through appropriate channels

▼*Course level; Direct - Student Artifact*

Details/Description:	RSCH 202 will be assessed for Information Literacy. In order to assess this learning outcome, two activities of RSCH 202 will be utilized: Activity 3.5 (Case Studies): In Activity 3.5, there are two case studies, one on interviewing from Chapter 7

and the other on Observation from Chapter 8. Students will read through the two case studies, select one of the two, and answer the questions at the end of the case study they choose. Students will write their answers in complete sentences using a Word Document.

This assignment demonstrates students' ability to collect meaningful information, in addition to how to collect that information. Furthermore, this assignment focuses on collecting data through surveys, and thus why the next assessment item will also be used.

Activity 5.6 (Final Literature Review): The core of the Activity is a Literature Review. The assignment states: The primary purpose of this assignment is to help you understand that the literature review is an integral part of any research project and how it lays the groundwork for the investigation you will do.

Thus Activity 5.6 contrasts Activity 3.5 and thus together they form a cohesive assessment of Information Literacy.

See attached files for both the activities above, and the grading rubric.

Criterion for Success:	Assessment Criteria for Success: 70% of the students should earn a 75% or above.
Timeframe of Data Collection:	RSCH 202 will be assessed in the March 2014 semester. All RSCH 202 course instructors will provide students' scores on Activity 5.6. to Dr. Heather Garten, who will do a statistical analysis to determine if the Assessment Criteria for Success was met. If the Criteria for Success were not met, the course activity will be reexamined. First, Dr. Garten will compare and contrast students' responses: Those who did master versus those who did not master the skill. Where there is evidence of weakness and/or a common mistake, course remediation will be implemented immediately and the assessment will take place again in the following semester.
Key/Responsible Personnel:	Dr. Heather L Garten
Supporting Attachments:	

⊕ **RSCH 202 Activity 3_5 Solutions.pdf** (Adobe Acrobat Document)

⊕ **RSCH 202 Literature_Review_Assignment.pdf** (Adobe Acrobat Document)

⊕ **RSCH 202 M5_Rubric_Literature_Review.pdf** (Adobe Acrobat Document)

Additional/Ad-hoc Program Improvements (Optional)

Attachments