Standing Requirements

Program Mission Statement

General Education Program Mission

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. Over 4500 students are enrolled in the General Education Program at Daytona Beach.

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

Program Outcomes

DB_Gen_Ed Program Outcomes

Outcome

Outcome	Mapping
PO_01	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Quantitative Reasoning (DB, PC, WW)

Apply knowledge of college-level mathematics for defining and solving problems.	
PO_02 Construct effective written documents for technical and non-technical audiences.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Information Literacy (DB, PC, WW)
PO_03 Communicate ideas in non-written form, such as through oral presentations and visual media.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW)
PO_04 Conduct and report research accurately and in accordance with professional standards.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Information Literacy (DB, PC, WW)
PO_05 Recognize the importance of ethical responsibility both professionally and socially.	**Embry-Riddle General Education Competency Set:** Cultural Literacy (DB, PC, WW), Scientific Literacy (DB, PC, WW)
PO_06 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.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Scientific Literacy (DB, PC, WW)
PO_07 Use technology to organize and manipulate information to communicate ideas and concepts.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW), Information Literacy (DB, PC, WW)
PO_08	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Quantitative Reasoning (DB, PC, WW)

Apply economic principles to identify, formulate, and solve problems.	
PO_09 Demonstrate an awareness and understanding of the values communicated through the humanities.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Cultural Literacy (DB, PC, WW)
PO_10 Describe some of the historical and contemporary issues that affect societies.	**Embry-Riddle General Education Competency Set:** Cultural Literacy (DB, PC, WW)
PO_11 Recognize the complexity of human experience from a variety of perspectives, for example, cultural, aesthetic, social, technological, scientific, psychological, philosophical, and historical.	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW), Cultural Literacy (DB, PC, WW)

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)	**Embry-Riddle General Education Competency Set:** 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.	**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)
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)

Curriculum Map

Mapping Matrixs

DB General Education Curriculum Map

[Print View] [PDF]

Alignment Set: DB_Gen_Ed Program Outcomes
Created: 08/07/2014 7:52:47 am EDT
Last Modified: 08/11/2014 2:13:37 pm EDT

DB General Education Curriculum Map
Courses and Activities Mapped to DB_Gen_Ed Program Outcomes

Show Outcome Descriptions Show Course/Activity Detail

	Outcome										
	PO_01	PO_02	PO_03	PO_04	PO_05	PO_06	PO_07	PO_08	PO_09	PO_10	PO_11
Aerospace Electronics											
AEL 210 Linear Systems and Signals Analysis	P										
AEL 310 Elements of Engineering Design and Laboratory Procedures		P	P	P	P	P	P	P			
AEL 321 Advanced Communications Systems Analysis	P						P				
AEL 322 Advanced Communications, Microwave and Control Laboratory Systems Analysis		P	P	P	P	P	P	P			
AEL 323 Applied Control Systems Analysis	P			P	P	P					
AEL 324 Microwave and Radar System Analysis	P										
AEL 411 Communications and Navigation Systems			P	P	P						
AEL 412 Surveillance and Control Systems		P	P		P	P					
AEL 413 Satellite Communications and Navigation Systems		P	P	P	P	P	P				
AEL 414 System Test Evaluation Laboratory		P					P				
AEL 421 Aerospace Electronic System Integration and Design		M	M	M	M	M	M				
AEL 422 Integrated Logistics Support	M	M	M	M	M	M	M	M			
AEL 423 Test System Development Laboratory		M	M	M	M	M	M				
AEL 424 Senior Project		M	M	M	M	M	M	M		M	M
Air Traffic Management											
AT 200 Air Traffic Management I	I										
AT 202 Air Traffic Management II	I				I						
AT 300 Air Traffic Management III	P				P		P				
AT 315 VFR Tower	P				P		P				
AT 401 Air Traffic Management IV	P				P		P				
AT 405 Air Traffic Management V	M				M		M				
AT 409 Non Radar Air Traffic Control	P				P		P				

Business Administration											
BA 120 Introduction to Computer-Based Systems			I		I		P				
BA 201 Principles of Management		I	I		I						
BA 210 Financial Accounting			P		I			P			
BA 215 Transportation Principles			P	P			P			I	
BA 220 Marketing		P	P	P	P						
BA 221 Advanced Computer-Based Systems			P		I		P				
BA 226 Business Law					P						
BA 310 Airport Management		P		P				P		P	
BA 312 Managerial Accounting			P		P		P				
BA 314 Human Resource Management			P		P						
BA 315 Airline Management	P	P					P	P			
BA 317 Organizational Behavior		P	P	P	P					P	P
BA 318 Entrepreneurial Small Business		P	P		P		P				
BA 320 Business Information Systems		P	P		P		M				
BA 321 Aviation/Aerospace Systems Analysis Methods	P		P			P	P	P			
BA 322 Aviation Insurance	P							P			
BA 324 Aviation Labor Relations			P							P	
BA 325 Social Responsibility and Ethics in Management			P		P		P			P	
BA 326 Marketing Management		M	M	M			M				
BA 327 Airline-Airport Operations		P	P	P				P		P	
BA 332 Corporate Finance I					P			P			
BA 334 Investment Analysis	P		P	P	P		P	P			
BA 336 International Business	P		P		P			P			
BA 340 International Accounting			P		P						
BA 408 General Aviation Marketing	P	P						P			
BA 410 Management of Air Cargo	P							P		P	
BA 411 Logistics Management for Aviation/Aerospace	M	P						M			
BA 412 Airport Planning and Design		M	M				P	P		M	
BA 416 Airport Administration and Finance	P			P							P
BA 419 Aviation Maintenance Management		P	P	P							
BA 420 Management of Production and Operations	M			P			P				
BA 422 Life Cycle Analysis for Systems and Programs in Aviation/Aerospace	P	P	M		P	P		P			
BA 424 Project Management in Aviation Operations	P	P	P				P	P			
BA 426 International Aviation Management		P	M					M			
BA 427 Management of the Multicultural Workforce			P	P	P					P	
BA 430 International Trade and Regulations		P	P	P				P			
BA 436 Strategic Management			M	M			M				
BA 450 Airline/Airport Marketing				P				I		P	M

Computer Engineering											
CEC 220 Digital Circuit Design							P				
CEC 222 Digital Circuit Laboratory	P	P									
CEC 300 Computing in Aerospace and Aviation	P	P	P				P			I	
CEC 310 Signals and Systems	P						P				
CEC 320 Microprocessor Systems	P						P				
CEC 322 Microprocessor Systems Laboratory	P	P					P				
CEC 330 Digital Systems Design with Aerospace Applications	P						P				
CEC 410 Digital Signal Processing	P						P				
CEC 411 Digital Signal Processing Laboratory	P						P				
CEC 420 Computer Systems Design	M	M	M	M	P		M	P	P		P
CEC 421 Computer Systems Design II	M	M	M	M	P		M	P	P		P
CEC 440 Autonomous Vehicle Design	P						P				
CEC 450 Real-Time Systems	P	P			I		P				
CEC 460 Telecommunications Systems	P						P				
CEC 470 Computer Architecture	P						P				

Civil Engineering											
CIV 304 Structural Analysis	P	I	I	P			P	P			
CIV 316 Hydraulics	P										
CIV 340 Construction Engineering	P	I	I								
CIV 352 Engineering and Construction Operations in Space	P	I	I			P					
CIV 370 Computational Methods in Civil Engineering	P							P			
CIV 431 Reinforced Concrete Design	M										
CIV 432 Structural Steel Design	M										
CIV 460 Senior Design Project	P			P			P	I			
CIV 490 The Civil Engineering Profession		I	I						P		

Communication											
COM 008 Academic English for Non-Native Speakers of English		I								I	I
COM 010 Advanced Academic English for Non-Native Speakers of English		I								I	I
COM 020 Fundamentals of Communication		I							I		I
COM 122 English Composition and Literature		I		I					I		I
COM 210 Speech			I	P			I				
COM 221 Technical Report Writing		I	P		I		P				
COM 222 Business Communication		I	P		I		P				
COM 228 Science and Technology Communication		P		P	I	P	P		P	P	P
COM 230 Digital Photography			P		I		P				I
COM 260 Introduction to Media		P	P	P	I		P			P	P
COM 265 Introduction to News Writing		P		P	P		P				
COM 268 Sports Writing		P		P	I		I			I	I
COM 320 Mass Communication Law and Ethics		P		P	M					P	P
COM 322 Aviation and Aerospace Communication		P	P	M	P		P			M	M
COM 330 Environmental Communication		P	P	P	P	P	P			P	P
COM 350 Media Relations		P	P	P	P		P			P	P
COM 364 Visual Design		P	P				P		P		P
COM 410 Advanced Professional Writing		M	M	M	M		P				
COM 411 Web Design Workshop		P	P		P		P				
COM 412 Advanced Technical Writing		M		M	M		P				
COM 415 Non-Verbal Communication	P	M	M	M			P		P		M
COM 460 Media Relations II	P	M	P	M	M		P			P	M

Computer Science											
CS 116 Fundamentals of Computer Programming	P						P				
CS 222 Introduction to Discrete Structures	P						P				
CS 225 Computer Science II	P	P					P				
CS 303 Network Security	P						P				
CS 310 Data Structures and Analysis of Algorithms							P				
CS 317 Files and Database Systems	P						P				
CS 332 Organization of Programming Languages	P						P				
CS 335 Introduction to Computer Graphics	P						P				
CS 344 C Programming and Unix	P						P				
CS 350 Computer Modeling and Simulation	P						P				
CS 420 Operating Systems	P						P				
CS 455 Artificial Intelligence	P		P		I	I	P				
CS 495 Computer Science Capstone Design		M			P		M				P

Economics											
EC 200 An Economic Survey	I		P				P			P	
EC 210 Microeconomics					P			P		P	P
EC 211 Macroeconomics	I		P				P			P	I
EC 225 Engineering Economics	P				P			I			
EC 310 Managerial Economics	P							P		P	
EC 420 Economics of Air Transportation					P			P		P	P

Electrical Engineering											
EE 222 Linear Circuits Analysis	I						I				
EE 224 Electrical Engineering Laboratory		I									
EE 300 Linear Circuit Analysis II	P										
EE 301 Electrical Engineering Laboratory II		P									
EE 302 Electronics Devices and Circuits	P						P				
EE 304 Electronic Circuits Laboratory		P									
EE 307 Avionics I	M				M		M				
EE 308 Introduction to Electrical Communications	M										
EE 310 Avionics II	M				M		M				
EE 335 Electrical Engineering I	P						I				
EE 336 Electrical Engineering Laboratory I		P									
EE 345 Electric and Magnetic Fields	P	P		P			P				
EE 401 Control Systems Analysis and Design	M						P				
EE 402 Control Systems Laboratory	M	P		P			P				
EE 417 Digital Communications	M										
EE 420 Avionics Preliminary Design	M	M	M	M	M	M	M	M		P	
EE 421 Avionics Detail Design	M	M	M	M	M	M	M	M		P	
EE 430 Introduction to Radio Frequency Circuits	M	M		M			M	P			
EE 430L Radio Frequency Circuits Laboratory	M	M		M			M				

Engineering											
EGR 101 Introduction to Engineering	I	I	P		P	I	I	I	I	I	I
EGR 115 Introduction to Computing for Engineers	P	P			I	P	P	I			

Electronics											
EL 107 Direct and Alternating Current Fundamentals and Circuit Analysis	P	P			P		P				
EL 108 Direct and Alternating Current Laboratory		P		P	P	P	P	P			
EL 203 Microelectronics Fundamentals and Circuit Analysis											
EL 204 Microelectronics Laboratory		P		P	P		P				
EL 210 Digital Circuit and Systems Analysis		P		P	P			P			
EL 213 Digital Circuit Laboratory		P				P	P	P			
EL 307 Microprocessor Systems		P		P	P		P				
EL 308 Microprocessor Systems Laboratory		P	P	P	P		P	P			

Engineering Physics											
EP 101 Current Topics in Space Sciences	I	P	I	I	P					I	
EP 320 Electro-Optical Engineering		I	P		P		P				
EP 340 Introduction to Space Systems Design		P	I	P	I	P	I	I			
EP 361 Microcomputers and Electronic Instrumentation		P	P	P	P		P				
EP 363 Spaceflight Dynamics		P		P			P				
EP 364 Space Systems Engineering		P		P	P		P				
EP 400 Thermodynamics and Statistical Mechanics		P				P				I	I
EP 410 Space Physics		P	P	P		M	P	I			
EP 420 Planetary Science				P		P	P				
EP 430 Observatory Astronomy		P		P		M	P				
EP 440 Engineering Electricity and Magnetism						P	P				
EP 455 Quantum Physics		P	P	I		M	I				
EP 496 Space Systems Design I		M	M	M			M				
EP 497 Space Systems Design II		M	M	M		P	M				

Engineering Science											
ES 201 Statics	P						I				
ES 202 Solid Mechanics	P	P					P				
ES 204 Dynamics	P						P				
ES 206 Fluid Mechanics	P						P				
ES 305 Thermodynamics	P			I		P	P				
ES 320 Engineering Materials Science	P					P	P				
ES 450 Heat Transfer	M				I	P					

Human Factors											
HF 300 Human Factors I: Principles & Fundamentals											I
HF 302 Human Factors II: Analytic Methods and Techniques											P
HF 305 Human Factors III: Test and Evaluation											P
HF 310 Human-Computer Interaction											P
HF 312 Ergonomics and Bioengineering											P
HF 315 Automation and Systems Issues in Aviation											P
HF 328 Human Factors and System Safety											P
HF 335 Human Factors in Air Traffic Control											P
HF 340 Human Factors and Product Liability											P
HF 400 Human Factors IV: System Design											M
HF 410 Human Factors Engineering: Crew Station Design											P
HF 412 Simulating Humans in Complex Systems											P
HF 415 Human Factors in Simulation Systems											P
HF 490 Practicum in Human Factors Psychology											P

Honors											
HON 150 Honors Seminar I	I	I	I	I	I	I	I		I	I	I
HON 250 Honors Seminar II	P	P	P	P	P	I	P		P	P	P
HON 350 Honors Seminar III	M	M	M	M	P	P	P		P	P	M

Homeland Security											
HS 110 Introduction to Homeland Security					I				I	I	I
HS 210 Fundamentals of Transportation Security		P	P								
HS 215 Introduction to Industrial Security			P	P							
HS 230 Terrorism: Origins, Ideologies, and Goals									I		I
HS 250 Business Skills for the Homeland Security Professional					P						
HS 310 Fundamentals of Emergency Management		P	P	P				P			P
HS 315 Critical Infrastructure and Risk Analysis	P	P	P	P				P			P
HS 320 Homeland Security Law and Policy									I		P
HS 370 Emergency Management Strategy & Policy		P									
HS 380 Asymmetric Terrorism: Cyberspace, Technology, and Innovation		P									
HS 385 Homeland Security Technology and Systems		P				P					
HS 405 Emerging Issues in Homeland Security				P						P	
HS 410 Exercise Design and Evaluation in Homeland Security		P									
HS 425 Counter Terrorism Strategy and Policy		P	P	P							
HS 450 Environmental Security						P			P		
HS 490 Senior Project in Homeland Security		M	M	M	P			M			M

Humanities											
HU 140 Western Humanities I: Antiquity and the Middle Ages		P		P					I	P	I
HU 141 Western Humanities II: Renaissance to Postmodern		P		P					I	P	I
HU 142 Studies in Literature		P		P					I	P	I
HU 143 Introduction to Rhetoric		P		P					I	P	I
HU 144 Studies in Art		P		P					I	P	I
HU 145 Themes in the Humanities		P		P					I	P	I
HU 146 Music Appreciation and Criticism		P		P					I	P	I
HU 300 World Literature		P		P					P	P	P
HU 302 Contemporary Issues in Science		P	P	P	P	P			P	M	M
HU 305 Modern Literature		P		P					P		P
HU 310 American Literature		P		P					P	P	P
HU 315 Studies in Music		P	P	P			P		P	P	P
HU 318 Advanced Speech			M		P		P				
HU 325 Exploring Film		P							P	P	P
HU 330 Values and Ethics		M	P	P	P	P	P		P	P	P
HU 335 Technology and Modern Civilization		P		P	P	P			P	P	P
HU 336 Traversing the Borders: Interdisciplinary Explorations		P	P	P					P	P	P
HU 341 World Philosophy		P	M	M	P	P	M		P	P	P
HU 349 Comparative Religions		P		M	P				P	M	M
HU 355 Creative Writing		P		M			P		P		M
HU 375 The Nature of Language		P	P	P	P				M	M	P
HU 415 Non-Verbal Communication	P	M	M	M			P		P		M
HU 420 Applied Cross-Cultural Communication		M	P	M						P	M
HU 475 Senior Thesis		M	M	M	M						M

Mechanical Engineering											
ME 303 Vehicle Dynamics	M	P				M	M				
ME 304 Introduction to Machine Design	P										
ME 306 Machine Design Laboratory	P										
ME 396 Robotic Mechanisms	P	P				P	P				
ME 400 Vibration & Acoustics	P	P									
ME 401 Advanced Fluid Dynamics	P	P									
ME 402 Robotic Arms	M					M	M				
ME 404 Mechatronics	M	P	P	P		M	M				
ME 405 Vehicle Power Systems	M	P				M	M				
ME 407 Preliminary Design of Robotics Systems with Laboratory	M	M	M	M	P	M	M	P			
ME 409 Vehicle Aerodynamics	M	M	P	P		M	M				
ME 410 Advanced Machine Design	P	P	P	P		P	P				
ME 413 Preliminary Design of High Performance Vehicles with Laboratory	M	M									
ME 423 Senior Design of High Performance Vehicles	M	M	M	M	M	M	M	M			
ME 427 Senior Design of Robotic Systems	M	M	M	M	M	M	M	M			

Physical Science											
PS 101 Basic Chemistry	P					P				P	P
PS 101L Basic Chemistry Laboratory				I		P	I				
PS 103 Technical Physics I	I					I				I	I
PS 103L Technical Physics I Laboratory		P		P		P					
PS 104 Technical Physics II	P					P				P	P
PS 104L Technical Physics II Laboratory		P		P		P					
PS 105 General Chemistry I	P			I		P				P	P
PS 105L General Chemistry I Laboratory				P			P				
PS 107 Elements of Biological Science	P	P	P			P	P			P	P
PS 107L Biological Science Laboratory				P			P				
PS 140 Chemistry for Engineers					P	P	P				
PS 141 Chemistry for Engineers Laboratory						P	P				
PS 142 Introduction to Environmental Science	P	P	P	P		P	P	P	P	P	P
PS 150 Physics for Engineers I					I	I					
PS 160 Physics for Engineers II	P	P			P	P	P	P	P	P	P
PS 208 Physics II	P	P			P	P	P	P	P	P	P
PS 210 Physics II Laboratory											
PS 215 Physics I	P				I	I				P	P
PS 216 Physics I Laboratory		P		P		P					
PS 219 Physics III						P	I		P		
PS 220 Physics III Laboratory		P		P		P					
PS 230 Physics III for Engineers						P	I		P		
PS 252 Physics Laboratory for Engineers		P		P		P					
PS 290 Physics Laboratory Practicum				P		P					
PS 301 Astronomy						P				P	P
PS 302 Evolution of Scientific Thought	P	P				I	M		M	M	M
PS 303 Modern Physics		P		P		P				P	P
PS 305 Modern Physics Laboratory		P		P		P					
PS 320 Classical Mechanics		P		M	P	M	P		P	P	P
PS 400 Senior Physics Laboratory		M	P				P				
PS 401 Astrophysics		P	P	P		M	P				
PS 405 Atomic/Nuclear Physics		P	P			M	I				
PS 406 Astrophysics II		P	P	P		M	P				

Psychology											
PSY 101 Introduction to Psychology											I
PSY 210 Sensation and Perception											P
PSY 252 Research Analysis in Psychology											P
PSY 310 Cognitive Psychology											P
PSY 320 Aviation Psychology											P
PSY 322 Research Design											M
PSY 335 Physiological Psychology											P
PSY 340 Industrial-Organizational Psychology											P
PSY 345 Training and Development											P
PSY 350 Social Psychology											P
PSY 365 Abnormal Psychology											P

Software Engineering											
SE 300 Software Engineering Practices	P	P	P		P		P	P			
SE 310 Analysis and Design of Software Systems		P					P				
SE 320 Software Construction		P					P				
SE 410 Formal Software Modeling	P	P					P				
SE 420 Software Quality Assurance	P	P	P				P				
SE 450 Software Team Project I											
SE 451 Software Team Project II											

Safety Science											
SF 201 Introduction to Health, Occupational, and Transportation Safety				I	I		I	I		I	I
SF 210 Introduction to Aerospace Safety			I	I	I			I		I	I
SF 310 Environmental Compliance and Safety		I	P				P				
SF 316 Workers' Compensation, Insurance, and Risk Management		P									
SF 320 Human Factors in Aviation Safety											P
SF 330 Aircraft Accident Investigation		P	M	I	P	I	P		I	I	I
SF 335 Mechanical and Structural Factors in Aviation Safety		I		I	P	I			I	I	I
SF 340 Safety Program Management		M	M		P	I	P	P	I	I	I
SF 360 Aircraft Crash and Emergency Management		I						I		I	I
SF 368 Industrial Hygiene and Toxicology		P		P		I		P			
SF 370 Propulsion Plant Investigation		P	I				P				P
SF 405 Applications in Industrial Hygiene			M	M		P					M
SF 410 Design of Engineering Hazard Controls		P	P	P	P	I	P				P
SF 420 Analysis of Observational Data			P	P	P		P				P
SF 435 Aircraft Crash Survival Analysis and Design		M	M	I	P	M	P	P	I	I	M
SF 445 Design of Engineering Hazard Controls II		P									P
SF 448 System Safety in Aviation			P	M		M			M		
SF 462 Health, Safety, and Aviation Law		P	P	P	P					P	P
SF 499 Special Topics in Aviation Safety		M		M							

Social Sciences											
BS 110 World History		I								I	I
BS 120 U.S. History		I		I				I		I	I
BS 130 History of Aviation in America		I		I				I	I	I	I
BS 302 Evolution of Scientific Thought		P				P			P	P	P
BS 310 Personality Development		P				P			P	M	P
BS 311 U.S Military History 1775-1900		P		P					P	M	M
BS 320 Government of the U.S.		P		P				P			M
BS 321 U.S. Military History 1900-Present		P		P					P	M	M
BS 325 International Studies		P		P					P	M	M
BS 326 Russian-U.S. Relations		P		P					P	M	M
BS 331 Current Issues in America		P		P				I		M	M
BS 333 U.S.-Asian Relations		P		P					P	M	M
BS 334 Contemporary Africa and the World		P		P						P	P
BS 336 The Modern Middle East in World Affairs		P		P						P	P
BS 337 Globalization and World Politics		P		P						P	P
BS 340 U.S. Foreign Policy		P		P				I	P	M	M
BS 350 Psychology of Relationships					P	P			P		P
BS 353 Early U.S. Diplomacy		P		P				I	P	M	M
BS 363 Irish-American Relations		P		P				I	P	M	M

Systems Engineering											
SYS 301 Introduction to Systems Engineering	I	P	P		I	P	I		I	I	I
SYS 302 System Engineering Design Considerations	P	P	P	I		P	P				P
SYS 303 Optimization in Systems Engineering	I						M				
SYS 304 Systems Engineering in Management, Risk, and Decision Making	I	P		I	I	P	M	P	P	P	I
SYS 403 Systems Engineering Life Cycle Costing		I	I	I			P	P		I	
SYS 405 Aerospace Systems Guidance and Control	I						P				
SYS 410 Space Systems and Mission Analysis	P	P		P			P	P			
SYS 417 Senior Systems Engineering Project	M	M	P	M	P		P	I			
Applied Meteorology											
WX 353 Thermodynamics of the Atmosphere	P										
WX 354 Dynamics of the Atmosphere	P										
WX 427 Forecasting Techniques	M	M	M					I			
WX 456 Advanced Weather Analysis	M	M	M								
WX 460 Environmental Security		M	M							I	
WX 490 Advanced Dynamic Meteorology	M										
WX 491 Advanced Dynamic Meteorology	M										

Legend: I Introduced P Practiced M Mastered

Last Modified: 09/11/2014 02:13:37 PM

created with taskstream

Assessment Schedule

Mapping Matrixs

Assessment Schedule

[Print View] [PDF]

Alignment Set: DB_Gen_Ed Program Outcomes
Created: 08/16/2014 8:15:15 am EDT
Last Modified: 08/21/2014 11:15:56 am EDT

Assessment Schedule
Courses and Activities Mapped to DB_Gen_Ed Program Outcomes

Show Outcome Descriptions Show Course/Activity Detail

	Outcome										
	PO_01 Apply knowledge of college-level mathematics for defining and solving problems.	PO_02 Construct effective written documents for technical and non-technical audiences.	PO_03 Communicate ideas in non-written form, such as through oral presentations and visual media.	PO_04 Conduct and report research accurately and in accordance with professional standards.	PO_05 Recognize the importance of ethical responsibility both professionally and socially.	PO_06 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.	PO_07 Use technology to organize and manipulate information to communicate ideas and concepts.	PO_08 Apply economic principles to identify, formulate, and solve problems.	PO_09 Demonstrate an awareness and understanding of the values communicated through the humanities.	PO_10 Describe some of the historical and contemporary issues that affect societies.	PO_11 Recognize the complexity of human experience from a variety of perspectives, for example, cultural, aesthetic, social, technological, scientific, psychological, philosophical, and historical.
DB General Education Assessment Cycles											
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

Last Modified: 08/21/2014 11:15:56 AM

created with taskstream

Additional Information (Optional)

File Attachments:

1. DB Gen Ed Program Outcomes Curriculum Map.xlsx
2. DB Gen Ed Program Outcomes Map..xls

2015-2016 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
Alan	Pratt

Email

pratta@erau.edu

Phone Number

226-6779

Assessment Plan

Measures

DB_Gen_Ed Program Outcomes

Outcome

Outcome: PO_01

Apply knowledge of college-level mathematics for defining and solving problems.

Measure: BA 332 Corporate Finance I. Students will apply the fundamentals of algebra and elementary probability in the class.

Program level; Direct - Student Artifact

Details/Description:	We propose to administer Pre-and post-tests to the students to assess their academic progress at the beginning and at the end of a course. The results of the pre-test will provide a baseline for the student's current knowledge of the subject. The differences between the

	pre-test and post-test reflects the learning that occurred during the semester and illustrates students' individual knowledge gain.
Criterion for Success:	We propose that the test would be randomly administered to 50% of the students in the class and the students taking the test would achieve a score of 70% or above on the test.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Vedapuri Raghavan, Course Monitor

Supporting Attachments:

BA332_assessment_pLan_gened_outcomes.docx (Word Document (Open XML))

Measure: BA 312 Corporate Finance Survey Short Essay

Indirect - Other

Details/Description:	We propose to use a one minute paper and student surveys to assess this outcome in BA 332: Corporate Finance I.
Criterion for Success:	We will administer the paper and survey to 50% of the students in the class and 80% of the students completing the survey and the one minute paper would state that they have applied college level math and economic principles in the class.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Vedapuri Raghavan, Course Monitor

Measure: BA 420: Management of Production and Operations Pre/Post Test

Program level; Direct - Exam

Details/Description:	The assessment will be conducted in Fall and Spring semesters. The objective of this assessment is to

	evaluate General Education Outcome 1 for BA 420. The aforementioned outcome is concerns with assessing students' ability to apply knowledge of college-level mathematics for defining and solving problems. We propose to assess the outcomes using a direct measure. We propose to administer Pre-and post-tests to the students to assess their academic progress at the beginning and at the end of a course. The results of the pre-test will provide a baseline for the student's current knowledge of the subject. The differences between the pre-test and post-test reflects the learning that occurred during the semester and illustrates students' individual knowledge gain.
Criterion for Success:	We propose that the test would be administered to all of the students in the class and the students taking the test would achieve a score of 70% or above on the test.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Farshid Azadian, Course Monitor

Supporting Attachments:

GenEd Assessment Plan - BA 420.docx (Word Document (Open XML))

Measure: BA 420: Management of Production and Operations, Survey

Program level; Indirect - Survey

Details/Description:	We propose to use a one minute paper and student surveys to assess this outcome in BA 420.
Criterion for Success:	We will administer the paper and survey to 50% of the students in the class and 80% of the students completing the survey and the one minute paper would state that they have applied college level math and economic principles in the class.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Farshid Azadian, Course Monitor

Outcome: PO_03

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

Measure: Capstone courses Survey

Course level; Indirect - Focus Group

Details/Description:	A survey of students in SYS417/418, EE420/421, CEC 420/421, SE 450/451, and CS 490/491 – ECSSE Capstone Design Courses The instructors shall add two statements to the end-of-term course evaluations within EvaluationKit for the fall 2015 and spring 2016 evaluations. 1. This course prepared me to communicate in non-written form such as oral presentations in visual media. 2. This course prepared me to identify important engineering results and apply critical thinking and decision making based upon those results. The students must respond using a Likert scale as 1-Not at all, 2-Very Little, 3-Some, 4-Quite a bit, and 5-Very Much
Criterion for Success:	A mean score of 3 or higher will indicate a successful attainment of this outcome.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Richard S. Stansbury

Supporting Attachments:

Assessment Plan 2015-2016 (Word Document (Open XML))

Measure: Capstone Design Presentations - Evaluation

Course level; Direct - Other

Details/Description:	Capstone Presentations in SYS417/418, EE420/421, CEC 420/421, SE 450/451, and CS 490/491 – ECSSE Outcome 3 will be assessed upon the December and April design presentations. Students will be assessed individually and collectively within their team. Details/Description: Rubrics are created for each attribute/deliverable pair (multiple student deliverables assessed for each attribute when possible). The faculties then assess the student work given the rubric and identify if it is Unsatisfactory, Satisfactory, or Excellent. This data is collected on a student-by-student basis in an Excel spreadsheet. The aggregated result indicates the percentage of student work for each attribute and outcome that is unsatisfactory, satisfactory, excellent, and satisfactory or excellent.
Criterion for Success:	The criteria for successful attainment of an outcome at any of the levels (artifact, course, and program outcome) will be if for student performance that 75% or more attain satisfactory or excellent performance.
Timeframe of Data Collection:	Fall 2015 -Spring 2016
Key/Responsible Personnel:	Richard S. Stansbury

Outcome: PO_05

Recognize the importance of ethical responsibility both professionally and socially.

Measure: Capstone Courses: evalutation of student engineering notebooks

Course level; Direct - Student Artifact

Details/Description:	SYS417/418, EE420/421, CEC 420/421, SE 450/451, and CS 490/491 – ECSSE Capstone Design Courses Outcome 5 will be assessed upon the student engineering notebooks at the end of the fall term and again at the end of the spring term. Details/Description: . Rubrics are created for each attribute/deliverable pair (multiple student deliverables

	assessed for each attribute when possible). The faculties then assess the student work given the rubric and identify if it is Unsatisfactory, Satisfactory, or Excellent. This data is collected on a student-by-student basis in an Excel spreadsheet. The aggregated result indicates the percentage of student work for each attribute and outcome that is unsatisfactory, satisfactory, excellent, and satisfactory or excellent.
Criterion for Success:	The criteria for successful attainment of an outcome at any of the levels (artifact, course, and program outcome) will be if for student performance that 75% or more attain satisfactory or excellent performance.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Richard S. Stansbury, Course Monitor

Supporting Attachments:

ecsse-capstone-General Education Assessment Plan.docx (Word Document (Open XML))

Measure: Student Survey, Capstone Courses

Course level; Indirect - Survey

Details/Description:	SYS417/418, EE420/421, CEC 420/421, SE 450/451, and CS 490/491 – ECSSE Capstone Design Courses Details/Description: The instructors shall add two statements to the end-of-term course evaluations within EvaluationKit for the fall 2015 and spring 2016 evaluations. 1. This course prepared me to communicate in non-written form such as oral presentations in visual media. 2. This course prepared me to identify important engineering results and apply critical thinking and decision making based upon those results. The students must respond using a Likert scale as 1-

	Not at all, 2-Very Litte, 3-Some, 4-Quite a bit, and 5-Very Much
Criterion for Success:	A mean score of 3 or higher will indicate a successful attainment of this outcome.
Timeframe of Data Collection:	Fall 2015 - 2016
Key/Responsible Personnel:	Richard S. Stansbury

Supporting Attachments:

ecsse-capstone-General Education Assessment Plan.docx (Word Document (Open XML))

Outcome: PO_08

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

Measure: BA 332: Corporate Finance I Pre/Post test

Program level; Direct - Student Artifact

Details/Description:	We propose to administer Pre-and post-tests to the students to assess their academic progress at the beginning and at the end of a course. The results of the pre-test will provide a baseline for the student's current knowledge of the subject. The differences between the pre-test and post-test reflects the learning that occurred during the semester and illustrates students' individual knowledge gain.
Criterion for Success:	We propose that the test would be randomly administered to 50% of the students in the class and the students taking the test would achieve a score of 70% or above on the test.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Vedapuri Raghavan, Course Monitor

Measure: BA 420: Management of Production and Operations

Program level; Direct - Exam

Details/Description:	We propose to administer Pre-and post-tests to the students to assess their academic progress at the beginning and at the end of a course. The results of the pre-test will provide a baseline for the student's current knowledge of the subject. The differences between the pre-test and post-test reflects the learning that occurred during the semester and illustrates students' individual knowledge gain.
Criterion for Success:	We propose that the test would be administered to all of the students in the class and the students taking the test would achieve a score of 70% or above on the test.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Farshid Azadian, Course Monitor

Supporting Attachments:

GenEd Assessment Plan - BA 420.docx (Word Document (Open XML))

Measure: EC 210 Microeconomics, Survey

Program level; Indirect - Survey

Details/Description:	For the indirect measure of student perceptions a questionnaire with a Likert scale will be used.
Criterion for Success:	The goal will be 80% either strongly agree or agree that they have gained a better understanding of historical and contemporary issues related to economics.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Thomas Tacker, Course Moniter

Measure: EC210 Microeconomics, Pre/Post Test

Program level; Direct - Exam

Details/Description:	Outcome will be assessed through the pre/post test.
Criterion for Success:	The goal is a 75% improvement.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Thomas Tacker, Course Monitor

Supporting Attachments:

EC210Assessment Report Plan (00000003).docx (Word Document (Open XML))

Outcome: PO_10

Describe some of the historical and contemporary issues that affect societies.

Measure: EC 210 Microeconomics, Pre/post Test

Program level; Direct - Exam

Details/Description:	Outcome will be assessed through the pre/post test.
Criterion for Success:	The goal is a 75% improvement.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Thomas Tacker, Course Monitor

Measure: EC 210 Microeconomics, Survey

Program level; Indirect - Survey

Details/Description:	For the indirect measure of student perceptions a questionnaire with a Likert scale will be used.
Criterion for Success:	The goal will be 80% either strongly agree or agree that they have gained a better understanding of

	historical and contemporary issues related to economics.
Timeframe of Data Collection:	Fall 2015 - Spring 2016
Key/Responsible Personnel:	Thomas Tacker, Course Monitor

Additional/Ad-hoc Program Improvements (Optional)

Attachments