

**CLASS OF 2004 EMPLOYER FEEDBACK SURVEY**  
Embry-Riddle Aeronautical University

### DIRECTIONS

For each question, completely fill in the oval that matches your response. Use ONLY blue or black ink, or a no. 2 pencil. All responses are confidential and will NOT be shared with your employee.

## YOU AND YOUR COMPANY

1. Approximately how many ERAU graduates do you know professionally?  
☐ 1      ☐ 2-5      ☐ 6-10      ☐ 11-50      ☐ Over 50
2. How many ERAU graduates do you currently supervise?  
☐ 1      ☐ 2-5      ☐ 6-10      ☐ 11-20      ☐ Over 20
3. Did you graduate from or attend ERAU?    ☐ Yes      ☐ No
4. What is your level of involvement in the hiring of new workers at your current company?  
☐ Make final decision  
☐ Provide input  
☐ No involvement (skip to question #8)
5. What is your preference for hiring graduates?  
☐ Strong preference for ERAU graduates  
☐ Some preference for ERAU graduates  
☐ No preference  
☐ Some preference for other graduates  
☐ Strong preference for other graduates

6. From what other institutions does your company hire?

7. What preference do you have for multi-lingual candidates?
- ☐ Strong preference      ☐ Some preference      ☐ No preference
8. How important do you consider global awareness and international experience for new employees?
- ☐ Very important      ☐ Somewhat important      ☐ Not important
9. What changes do you anticipate in your organization's need for aviation and aerospace professionals in the near future?
- ☐ Increased need      ☐ No changes      ☐ Decreased need

## THE ERAU GRADUATE

Consider the ERAU graduate listed on your cover letter when answering the following questions.

10. The education of the graduate meets  
our company's needs.  
11. He/she is a valuable employee.  
12. He/she is a good candidate for promotion.

13. Compared to graduates from other institutions, his/her knowledge and skill level is:

- ☐ Much higher  
☐ Somewhat higher  
☐ Equivalent  
☐ Somewhat lower  
☐ Much lower

14. For each general skill listed below, provide a response for both:

**USEFULNESS:** How useful the skill is in the employee's position

COMPETENCE: The level of competence at the skill shown by this ERAU graduate vs. graduates from other institutions  
(leave COMPETENCE blank if you rate the skill as Not Useful)

## COMPETENCE

## USEFULNESS

	Very Useful	Somewhat Useful	Not Useful
Quantitative/mathematics	3	2	1
Basic PC software (word processing, spreadsheets, etc.)	3	2	1
Writing skills (non-technical)	3	2	1
Technical writing	3	2	1
Speaking before an audience	3	2	1
Listening skills	3	2	1
Applied research (information gathering and analysis)	3	2	1
Critical thinking	3	2	1
Independent work	3	2	1
Planning, scheduling, and carrying out projects	3	2	1
Defining and solving problems	3	2	1
Working in groups/teams	3	2	1
Leading/guiding others	3	2	1
Responsible actions and decision making	3	2	1
Ability to adapt to change	3	2	1
Understanding other people and other points of view	3	2	1
Environmental awareness	3	2	1
Political and economic awareness	3	2	1
Knowledge of political and physical geography	3	2	1

THIS  
ERAU GRADUATE

The chart displays the distribution of responses for five categories: Excellent, Good, Average, Poor, and Very Poor. The data is presented in a horizontal bar format, with each bar corresponding to a category and its frequency. The frequency is measured by the number of responses for each category, ranging from 1 to 5. The 'Excellent' category has the highest frequency, followed by 'Good', 'Average', 'Poor', and 'Very Poor'.

Category	Frequency (1-5)
Excellent	5, 4, 3, 2, 1
Good	5, 4, 3, 2, 1
Average	5, 4, 3, 2, 1
Poor	5, 4, 3, 2, 1
Very Poor	5, 4, 3, 2, 1

GRADUATES FROM  
OTHER INSTITUTIONS

The chart displays the distribution of responses for five categories: Excellent, Good, Average, Poor, and Very Poor. The data is presented in a horizontal bar format, with each bar corresponding to a category. The bars are color-coded: Excellent (light blue), Good (light green), Average (light orange), Poor (light red), and Very Poor (light yellow). The chart uses a 5-point Likert scale (1-5) for each category. The 'Excellent' category has the highest frequency, followed by 'Good', 'Average', 'Poor', and 'Very Poor'.

Category	1	2	3	4	5
Excellent	10	10	10	10	10
Good	8	8	8	8	8
Average	6	6	6	6	6
Poor	4	4	4	4	4
Very Poor	2	2	2	2	2



15. Locate the separate blue flyer containing program- specific skills taught in his/her ERAU graduate degree programs. If you do not have a separate blue flyer, please skip to question # 16. For each skill listed, provide a response for USEFULNESS and COMPETENCE as in the previous question. Remember to leave COMPETENCE blank if you rate the skill as Not Useful.

USEFULNESS				COMPETENCE											
				THIS ERAU GRADUATE					GRADUATES FROM OTHER INSTITUTIONS						
				Very Poor Poor Average Good Excellent					Very Poor Poor Average Good Excellent						
				Very Poor Poor Average Good Excellent					Very Poor Poor Average Good Excellent						
A	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
B	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
C	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
D	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
E	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
F	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
G	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
H	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
I	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
J	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
K	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
L	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
M	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
N	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
O	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
P	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
Q	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
R	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1
S	3	2	1	.....	5	4	3	2	1	.....	5	4	3	2	1

16. Considering this ERAU graduate, what strengths do you perceive in his/her degree program?

17. Considering this ERAU graduate, what weaknesses do you perceive in his/her degree program?

18. Additional comments that may assist ERAU in evaluating its degree programs:

**THANK YOU FOR YOUR PARTICIPATION! PLEASE USE THE POSTAGE-PAID ENVELOPE PROVIDED AND RETURN SURVEY BY MARCH 20, 2006 TO:**

Embry-Riddle Aeronautical University  
Office of Institutional Research  
600 S. Clyde Morris Boulevard  
Daytona Beach, FL 32114-3900

## **AS AIRCRAFT MAINTENANCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. General knowledge of maintenance operations and safety
- B. Electrical and electronic systems operations
- C. Skills in metallic and non-metallic structures and repair
- D. Understanding of a/c systems (hydraulics, environmental, etc.)
- E. Knowledge of reciprocating and turbine engines and their respective systems
- F. Knowledge and ability to work with technical publications and manuals
- G. Skills in troubleshooting
- H. Use of precision measuring instruments and basic and special tools
- I. Understanding and knowledge of FAA regulations

## **BS AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Understanding aerodynamic performance of aircraft powered by reciprocating and turbine engines
- B. Use of electronic navigation and flight control systems
- C. Crew coordination (cockpit resource management)
- D. Knowledge of flight physiology, awareness of flight psychology (human factors)
- E. Understanding of safety issues, employment of accident prevention techniques, safety program practices and management, and mishap investigation
- F. Understanding the concepts and process of meteorology
- G. Instrument flight skill
- H. Multi-engine/high performance aircraft operations
- I. Knowledge of Federal Aviation Regulations
- J. Aeronautical decision making (judgment skills)
- K. Actions, attitudes, and knowledge of security considerations
- L. Dealing with integrity issues
- M. Development of moral character
- N. Assertiveness in a leadership or subordinate role
- O. Ground/Flight training aptitude
- P. Time required in FTD/Simulators to meet qualification standards

## **BS AERONAUTICAL SYSTEMS MAINTENANCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. General technical competence to perform job related tasks
- B. Knowledge and skills to perform systems analysis
- C. Knowledge and ability to work with technical publications and manuals
- D. Skills in troubleshooting
- E. Use of precision measuring instruments and basic and special tools
- F. Understanding and applying management theory/concepts
- G. Applying statistical and/or quantitative techniques to problem solving
- H. General knowledge of maintenance operations and safety

- I. Crew coordination (cockpit resource management)
- J. Awareness of safety and accident prevention
- K. Decision making (judgment skills)
- L. Effective oral and written communication skills
- M. Development of moral character

### **BS AERONAUTICS PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Knowledge and understanding of aviation law and regulations
- B. Understanding and application of management theory/concepts
- C. Knowledge and understanding of economic principles
- D. Use of statistical/quantitative techniques to solve problems
- E. Knowledge and understanding of aviation, technology and operations, concepts, theory and applications
- F. Knowledge and understanding of the many facets of the aviation industry
- G. Dealing with integrity issues
- H. Development of moral character
- I. Assertiveness in a leadership or subordinate role
- J. Knowledge and understanding of basic computer skills such as e-mail, word processing, presentations, and spreadsheet software
- K. Knowledge of scientific principles

### **BS AEROSPACE ENGINEERING PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Apply knowledge of mathematics and science
- B. Design and conduct experiments
- C. Analyze and interpret experimental data
- D. Apply knowledge of aerodynamics
- E. Apply knowledge of aircraft performance
- F. Apply knowledge of stability and control
- G. Apply knowledge of aerospace materials
- H. Apply knowledge of aircraft and spacecraft structures
- I. Apply knowledge of propulsion
- J. Apply knowledge of orbital mechanics
- K. Apply knowledge of spacecraft dynamics
- L. Apply knowledge of control systems
- M. Apply knowledge of circuits, electronics, and instrumentation
- N. Identify, formulate, and solve engineering problems
- O. Use the techniques, skills, and modern engineering tools necessary for engineering practice
- P. Design an aircraft or spacecraft system, component, or mission to meet desired needs
- Q. Understand the impact of engineering decisions on society and the environment
- R. Understand professional and ethical responsibility
- S. Recognize the need to continue professional development throughout one's career

## **BS AEROSPACE STUDIES PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Effective communication skills
- B. Interpretation of written material
- C. Analytical thinking
- D. International perspectives
- E. Understanding of basic statistics
- F. Cultural awareness
- G. Interdisciplinary knowledge and skills

## **BS AIRCRAFT ENGINEERING TECHNOLOGY PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Aerodynamics/performance
- B. Structures
- C. Propulsion
- D. Dynamic systems and control
- E. Material science
- F. Manufacturing processes
- G. Non-destructive testing
- H. Measurement and testing
- I. Reliability/maintainability

## **BS AIR TRAFFIC MANAGEMENT PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Understanding the history, mission, purpose and duty priority of air traffic control
- B. Knowledge of Instrument Approach Procedure (IAP), Departure Procedure (DP), and Standard Arrival Route (STAR) Charts.
- C. Understanding of Radar separation procedures, airspace to be protected, speed adjustments, vectoring techniques and traffic coordination applicable to terminal Air Traffic Control operations
- D. Knowledge of basic VFR Control Tower operations, including duties and responsibilities associated with the operating positions of local control, ground control, and flight data/clearance delivery
- E. Knowledge of Federal Aviation Regulations as they pertain to Air Traffic Control
- F. Understanding of Air Route Traffic Control Center operations as they pertain to radar separation of aircraft
- G. Understanding of Air Route Traffic Control Center operations as they pertain to non-radar separation of aircraft

## **BS APPLIED METEOROLOGY PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Skills needed to provide weather services to customers.
- B. Understand contemporary issues in atmospheric sciences
- C. Knowledge of techniques, skills, and computer models for weather data gathering, analysis, and product generation.
- D. Ability to translate complex atmospheric features into the practical language of operational decision makers.
- E. Understand the limits of current knowledge and need for continued learning.
- F. Application of mathematical and physical principals of meteorology to society's problems.
- G. Ability to utilize computers effectively in meteorological applications.
- H. Dealing with integrity issues
- I. Development of moral character

## **BS AVIATION BUSINESS ADMINISTRATION PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Applying management theory/concepts into a dynamic organizational environment
- B. Applying accounting and financial information for decision making in a for-profit and not-for-profit entity
- C. Integrate knowledge of macro- and micro-economics into managerial decision making
- D. Applying statistical and/or quantitative techniques to problem solving in organizations
- E. Integrate marketing concepts/practices into executing global market strategies
- F. Formulate business decisions by incorporating ethical standards and principles
- G. Access, analyze, and communicate information using multiple means/media

## **BS AVIATION MAINTENANCE MANAGEMENT PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Understanding and applying management theory/concepts
- B. Understanding and using accounting and financial information
- C. Understanding how the market system works
- D. Awareness of personnel procedures, collective bargaining, and the legal obligations of managements
- E. Applying statistical and/or quantitative techniques to problem solving

## **BS AVIATION TECHNOLOGY (AVIONICS/FLIGHT) PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. General knowledge of maintenance operations and safety
- B. Knowledge of and ability to work with technical publications and manuals
- C. Skills in troubleshooting
- D. Use of precision measuring instruments and basic and special tools
- E. Understanding and knowledge of FAA regulations
- F. Use of electronic navigation and flight control systems
- G. Crew coordination (cockpit resource management)

- H. Knowledge of flight physiology, awareness of flight psychology (human factors)
- I. Awareness of safety and accident prevention
- J. Understanding the concepts and process of meteorology
- K. Instrument flight skill
- L. Multi-engine/high performance aircraft operations
- M. Aeronautical decision making (judgment skills)
- N. Basic and advanced electronics analysis and theory
- O. Avionics equipment and system analysis
- P. Avionics/electronics system test, analysis, and repair

### **BS AVIATION TECHNOLOGY (MAINTENANCE/AVIONICS) PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. General knowledge of maintenance operations and safety
- B. Skills in metallic and non-metallic structures and repair
- C. Understanding of a/c systems (hydraulics, environmentals, etc.)
- D. Knowledge of reciprocating and turbine engines and their respective systems
- E. Knowledge of and ability to work with technical publications and manuals
- F. Skills in troubleshooting
- G. Use of precision measuring instruments and basic and special tools
- H. Understanding and knowledge of FAA regulations
- I. Basic and advanced electronics analysis and theory
- J. Avionics equipment and system analysis
- K. Avionics/electronics system test, analysis, and repair

### **BS AVIATION TECHNOLOGY (MAINTENANCE/FLIGHT) PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. General knowledge of maintenance operations and safety
- B. Skills in metallic and non-metallic structures and repair
- C. Understanding of a/c systems (hydraulics, environmentals, etc.)
- D. Knowledge of reciprocating and turbine engines and their respective systems
- E. Knowledge of and ability to work with technical publications and manuals
- F. Skills in troubleshooting
- G. Use of precision measuring instruments and basic and special tools
- H. Understanding and knowledge of FAA regulations
- I. Electrical and electronic systems operations
- J. Understanding aerodynamic performance of aircraft powered by reciprocating and turbine engines
- K. Use of electronic navigation and flight control systems
- L. Crew coordination (cockpit resource management)
- M. Knowledge of flight physiology, awareness of flight psychology (human factors)
- N. Awareness of safety and accident prevention
- O. Understanding the concepts and process of meteorology
- P. Instrument flight skill
- Q. Multi-engine/high performance aircraft operations
- R. Aeronautical decision making (judgment skills)

## **BS AVIONICS ENGINEERING TECHNOLOGY PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Basic and advanced electronics analysis and theory
- B. Avionics system analysis and design
- C. Avionics/electronics system test
- D. Applied mechanical engineering concepts
- E. Basic design and engineering concepts
- F. Applications software and programming
- G. Reliability/maintainability
- H. Systems integration

## **BS CIVIL ENGINEERING PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Airport planning and design
- B. Transportation engineering
- C. Hydraulics/hydrology
- D. Materials testing
- E. Construction engineering and management
- F. Soil mechanics
- G. Pavement design
- H. Structural analysis and design
- I. Computer skills for civil engineering analysis and design
- J. CAD
- K. Environmental engineering
- L. Understand and adapt to the challenges of contemporary civil engineering
- M. Apply interdisciplinary skills and knowledge to actual problems
- N. Recognize the need to continue professional development throughout one's career

## **BS COMMUNICATION PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Ability to write competent press releases, press kits, white papers, brochures, and various public relations documents
- B. Understand and apply public relations theory and practice in aviation as well as corporate and business contexts
- C. Understand and apply basic journalistic writing genres: news articles, feature writing, news features, interviews, aviation reporting, and general news assignments
- D. Understand fundamental theories of flight, history of aviation, and current trends in the aviation and aerospace industry
- E. Competency in basic graphic design, page layout and typography
- F. Competency in oral presentations and public speaking
- G. Ability to think strategically and creatively in the planning and development of communication documents
- H. Understand the importance of editing copy -- and editing copy according to the Associated Press Style Manual and Libel Manual (AP) -- together with fundamental understanding of libel law



- I. Understand crisis communication theory and have the skill to develop a crisis communication plan for both aviation environment (airport, FBO, etc) or corporate environment
- J. Understand the importance of writing for specific audiences and how to write for professional publication
- K. Appreciate the importance of ethical behavior in the communication profession
- L. Understand and apply core competencies in online and internet writing and design
- M. Understand the increasing globalization of public affairs, public relations, image management, and international communication practice
- N. Understand the increasing role of digital media -- and use "new media" -- in the professional world of communication
- O. Possess the skills to work as part of teams in highly fluid and flexible organizational units
- P. Understand basic management structures in print, public relations and communication organizations
- Q. Understand and apply basic software skills for application in professional communication assignments
- R. Develop a portfolio by end of senior year as a tool for obtaining employment in communication fields (required for graduation)

### **BS COMPUTER ENGINEERING PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Apply knowledge of mathematics, science, and engineering
- B. Design and conduct experiments
- C. Analyze and interpret data
- D. Design a computer system or component to meet desired needs
- E. Implement computer programs and computational processes to meet desired needs
- F. Function on multi-disciplinary teams
- G. Identify, formulate, and solve engineering problems
- H. Understand professional and ethical responsibility
- I. Communicate effectively
- J. Understand the impact of engineering solutions in a global and societal context
- K. Engage in life-long learning
- L. Understand contemporary issues in computer engineering
- M. Use modern engineering tools

### **BS COMPUTER SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Understand and apply object-oriented programming concepts to the development of software modules
- B. Understand and apply algorithm design concepts and techniques to the design of software modules
- C. Understand and apply data structures theory to the design of software modules
- D. Apply theory of modularity, abstraction, and information hiding to the design of software systems
- E. Understand the fundamental concepts of computer organization and architecture
- F. Understand the fundamental concepts of real-time computing
- G. Understand the theory and use of operating systems
- H. Apply software engineering concepts to specify, design, construct, and test a software product
- I. Understand the interrelationship between computer hardware and software fundamentals
- J. Apply scientific, mathematical, and engineering concepts, methods, and tools to the solution of software engineering problems
- K. Use defined life-cycle engineering processes designed to produce software systems that meet functional, quality, economic, and schedule requirements
- L. Understand and appreciate an engineer's professional and ethical responsibilities

- M. Understand and appreciate the importance of life-long learning

### **BS ELECTRICAL ENGINEERING PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Apply knowledge of mathematics, science, and engineering
- B. Design and conduct experiments
- C. Analyze and interpret data
- D. Design a computer system or component to meet desired needs
- E. Implement computer programs and computational processes to meet desired needs
- F. Function on multi-disciplinary teams
- G. Identify, formulate, and solve engineering problems
- H. Understand professional and ethical responsibility
- I. Communicate effectively
- J. Understand the impact of engineering solutions in a global and societal context
- K. Engage in life-long learning
- L. Understand contemporary issues in electrical engineering
- M. Use techniques, skills, and modern engineering tools necessary for engineering practice
- N. Demonstrate depth within specific sub-areas of electrical engineering such as control, communications, systems, circuit design, etc.

### **BS ENGINEERING PHYSICS PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Apply knowledge of mathematics, science, and engineering
- B. Design and conduct experiments
- C. Analyze and interpret data
- D. Design a system, component, or process to meet desired needs
- E. Function on multi-disciplinary teams
- F. Identify, formulate, and solve engineering problems
- G. Understand professional and ethical responsibility
- H. Communicate effectively
- I. Understand the impact of engineering solutions in a global and societal context
- J. Recognize and engage in life-long learning
- K. Knowledge of contemporary issues
- L. Use the techniques, skills, and modern engineering tools necessary for engineering practice
- M. Knowledge of classical mechanics
- N. Knowledge of engineering electricity and magnetism
- O. Knowledge of space physics
- P. Knowledge of quantum physics
- Q. Knowledge of space systems engineering and design
- R. Knowledge of electro-optical engineering
- S. Knowledge of microcomputers and electronic instrumentation

## **BS HUMAN FACTORS PSYCHOLOGY PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Knowledge of human psychophysiological, cognitive, and perceptual functioning
- B. Knowledge of human factors including analytic methods, models, and human capabilities and limitations
- C. Knowledge of basic statistical procedures, including analysis of variance
- D. Research methods and design skills
- E. Effective oral and written communication skills
- F. Ability to read, comprehend, and analyze results of published empirical studies in the human factors field
- G. Understanding of the application of human factors and psychological knowledge in aviation and other applied domains

## **BS MANAGEMENT OF TECHNICAL OPERATIONS PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Relating management concepts to prior knowledge in a technical operations specialty
- B. Using accounting, financial, and statistical information in the management of technical operations
- C. Applying organizational and human resources theory and concepts in the workplace
- D. Using computer technology to support technical operations
- E. Understanding the social, economic, ethical, political, and legal environment of a technical enterprise
- F. Applying strategic and project planning principles and techniques in a technical operation
- G. Using general managerial skills (leadership, problem solving, and decision-making)
- H. Using managerial skills in computers
- I. Using managerial skills in technical writing
- J. Using managerial skills in quantitative/mathematics

## **BS PROFESSIONAL AERONAUTICS PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Knowledge and understanding of aviation law and regulations
- B. Understanding and application of management theory/concepts
- C. Understanding and use of accounting and financial information
- D. Use of statistical/quantitative techniques to solve problems
- E. Understanding of safety issues, employment of accident prevention techniques, safety program practices and management, and mishap investigation
- F. Knowledge and understanding of advanced management concepts, issues, and practices as applied in a variety of aviation operations and services
- G. Knowledge and understanding of aeronautical science, technology and operations, concepts, theory and applications

## **BS SAFETY SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Knowledge and application of OSHA safety regulations for general industry
- B. Ability to analyze and apply systems safety techniques and reliability concepts
- C. Analysis and application capability in aircraft accident investigation
- D. Analysis and application capability in aircraft crash survival analysis of fixed wing aircraft
- E. Knowledge, analysis and application capability in aircraft power plant accident investigation relative to reciprocating/gas turbine engines and propeller systems
- F. Knowledge, analysis and application capability in safety program management
- G. Ability to work in teams
- H. Ability to write and formulate a technical report
- I. Professional presentation skills
- J. Competency in determining an airport's compliance with federal safety regulations
- K. Ability to develop, test and maintain an airport emergency plan
- L. Basic knowledge in the fundamentals of Aircraft Rescue and Fire Fighting
- M. Ability to identify and explain relevant legal issues that exist in the health and safety industry
- N. Ability to apply failure processes of aircraft components to determine accidents causes
- O. Ability to analyze human factors issues in aviation accidents

## **BS SCIENCE, TECHNOLOGY, AND GLOBALIZATION PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Understand, analyze, and work with international cultures, different types of business enterprises, private and public organizations
- B. Define and find solutions to complex problems that may have multiple, open-ended solutions
- C. Communicate clearly and effectively to different audiences and in different circumstances
- D. Work effectively in diverse teams
- E. Act responsibly and demonstrate ethical behavior
- F. Conduct independent research at the level of a senior thesis or professional-level consulting project

## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **AERONAUTICS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Advances in Aviation/Aerospace aerodynamics
- H. Value of simulation in aviation training programs
- I. Operation of high technology meteorology data computer systems
- J. Evaluation of aircraft and spacecraft guidance, control, communication, and navigation systems
- K. Analysis of spacecraft propulsion systems



## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **AVIATION/AEROSPACE EDUCATION TECHNOLOGY SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Role of education in Aviation/Aerospace industry
- H. Value of simulation in aviation training programs
- I. Similarities and differences between pedagogy and andragogy
- J. Uniqueness and commonalities of the adult learning process

## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **AVIATION/AEROSPACE MANAGEMENT SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Production and procurement management in manufacturing
- H. Supply and distribution functions in the logistic system
- I. Strategic planning and strategic management concepts
- J. Interaction of maintenance with operations, logistics, and training functions
- K. Key factors impacting on R and D programs

## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **AVIATION/AEROSPACE OPERATIONS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Past, present, and future airspace and ATC technology
- H. Roles and responsibilities of FAA, NTSB, and military in accident investigation
- I. Crash site investigation
- J. Management and operations related to Air Carriers
- K. Qualifications and training of aircraft dispatchers
- L. Responsibilities associated with Corporate Aviation operations

## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **AVIATION/AEROSPACE SAFETY SYSTEMS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies

## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **HUMAN FACTORS IN AVIATION SYSTEMS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies

## **M AERONAUTICAL SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **SPACE STUDIES SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies

## **MS AERONAUTICS (Formerly M Aeronautical Science) PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

### **AVIATION/AEROSPACE EDUCATION TECHNOLOGY SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Role of education in Aviation/Aerospace industry
- H. Value of simulation in aviation training programs
- I. Similarities and differences between pedagogy and andragogy
- J. Uniqueness and commonalities of the adult learning process

**MS AERONAUTICS**  
**(Formally M Aeronautical Science)**  
**PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

**AVIATION/AEROSPACE MANAGEMENT SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Production and procurement management in manufacturing
- H. Supply and distribution functions in the logistic system
- I. Strategic planning and strategic management concepts
- J. Interaction of maintenance with operations, logistics, and training functions
- K. Key factors impacting on R and D programs

**MS AERONAUTICS**  
**(Formally M Aeronautical Science)**  
**PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

**AVIATION/AEROSPACE OPERATIONS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies
- G. Past, present, and future airspace and ATC technology
- H. Roles and responsibilities of FAA, NTSB, and military in accident investigation
- I. Crash site investigation
- J. Management and operations related to Air Carriers
- K. Qualifications and training of aircraft dispatchers
- L. Responsibilities associated with Corporate Aviation operations

**MS AERONAUTICS**  
**(Formally M Aeronautical Science)**  
**PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

**AVIATION/AEROSPACE SAFETY SYSTEMS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies

**MS AERONAUTICS**  
**(Formerly M Aeronautical Science)**  
**PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

**HUMAN FACTORS IN AVIATION SYSTEMS SPECIALIZATION**

- A. Air transportation as part of the global, multi-modal system
- B. Basic elements of Space Transportation System
- C. State-of-the-art materials and practices used in manufacture and maintenance of A/A vehicles
- D. Human factors problems and analysis
- E. Major steps in developing a research study
- F. Analysis of five major research methodologies

**M AEROSPACE ENGINEERING AND MS AEROSPACE ENGINEERING**  
**PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Ability to work independently on new scientific/engineering projects
- B. Ability to design novel experiments
- C. Knowledge of aerodynamics
- D. Knowledge of aircraft structures
- E. Knowledge of aerospace materials
- F. Knowledge of computational techniques

**M BUSINESS ADMINISTRATION IN AVIATION**  
**M BUSINESS ADMINISTRATION IN AVIATION (online)**  
**PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Apply key organizational concepts of group dynamics, leadership, conflict resolution, ethics, and motivation in implementing organizational goals
- B. Apply the concepts and strategies involved in planning, implementing, and controlling a marketing plan with special emphasis on aviation/aerospace organizations
- C. Analyze financial statements and utilize corporate finance concepts and techniques in decision making within organizations
- D. Access, analyze, and communicate information using multiple means/media
- E. Apply statistical and quantitative analysis to solve business problems
- F. Integrate knowledge of macro- and micro-economic concepts to support aviation/aerospace operations
- G. Formulate and execute strategies and policies required to achieve organizational goals in the competitive environment of airlines, airports, aerospace, manufacturing, and government.



## **MS HUMAN FACTORS AND SYSTEMS PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.  
Use the number in parentheses to fill in the last part of question asking for your degree code.

### **HUMAN FACTORS ENGINEERING TRACK**

- A. Ability to identify human factors problems in operational environments
- B. Knowledge of general systems concepts
- C. Ability to apply the knowledge of human perception, cognition, and memory to operational and design problems
- D. Understanding and ability to apply statistical and quantitative techniques
- E. Understanding and ability to apply the strategies involved in planning, implementing, and controlling a research plan

## **MS HUMAN FACTORS AND SYSTEMS PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.  
Use the number in parentheses to fill in the last part of question asking for your degree code.

### **SYSTEMS ENGINEERING TRACK**

- A. Knowledge of general systems concepts
- B. Ability to apply the knowledge of reliability, maintainability, logistics, safety, and producibility to operational and design problems
- C. Ability to identify human factors problems in operational environments
- D. Ability to balance operational, behavioral, economic, and logistical factors in operations and design
- E. Understanding and ability to apply statistical and quantitative techniques
- F. Understanding and ability to apply the strategies involved in planning, implementing, and controlling a research plan

## **MS SAFETY SCIENCE PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Ability to anticipate and recognize occupational health and safety problems in the industrial and aviation environments
- B. Ability to evaluate occupational health and safety problems in the industrial and aviation environments
- C. Ability to apply knowledge of occupational health and safety (industrial hygiene, ergonomics, occupational safety, and aviation safety), along with data analyses, to the solution of both existing and new design problems in the industrial and aviation environments
- D. Understanding and ability to apply statistical and quantitative techniques
- E. Understanding and ability to apply the strategies involved in planning, implementing, and controlling a research plan
- F. Dealing with integrity issues
- G. Development of moral character
- H. Assertiveness in a leadership or subordinate role

## **MS TECHNICAL MANAGEMENT PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Using computer techniques to solve management problems
- B. Understanding and applying quantitative and statistical skills for decision making
- C. Using computer graphics to enhance verbal presentations
- D. Understanding electronic data systems and relational databases
- E. Using financial accounting and quality control processes
- F. Applying statistical methods to project development and problem solutions
- G. Understanding systems development and operation
- H. Understanding the role of leadership and management in a variety of organizational alternatives
- I. Understanding the role of communication in team building and motivation
- J. Assessing the regulatory, ethical, and legal environments of an organization or industry
- K. Understanding marketing techniques applicable to technical operations
- L. Understanding project management and tactical planning in the technical environment
- M. Using management science principles and software to make better decisions
- N. Understanding the cost and process of improving product quality in an organization

## **M SOFTWARE ENGINEERING PROGRAM-SPECIFIC SKILLS**

**DIRECTIONS:** Use the items listed to answer question #15. Record all ratings on the survey itself, NOT on this flyer.

- A. Ability to apply software engineering processes (e.g. PSP, TSP, and CMMI) to the development of software products
- B. Ability to use software engineering methods and tools for the analysis and specification of software requirements
- C. Ability to use software engineering methods and tools for the analysis and specification of software architecture and design
- D. Ability to use software engineering methods and tools for software construction
- E. Ability to use software engineering methods and tools for the verification and validation of software systems
- F. Ability to communicate effectively and to perform successfully as part of a team
- G. Ability to use software engineering methods, techniques, and tools as they relate to the management of software development