

Indiana Commission for Higher Education
Indiana Board for Proprietary Education

Out-of-State Institutions and
In-State Proprietary Institutions Offering Instruction in Indiana
with a Physical Presence in the State

DEGREE APPLICATION
(New or Renewal program)

Use the <tab> key to advance to the next field, or select a field by clicking the cursor.

Name of Institution Embry-Riddle Aeronautical University

Program name and
Suggested CIP Code: Associate of Science in Engineering Fundamentals, 14.0201

Level of Degree (AAS, AS, AA, BAS, BA, BS, MBA, MAS, MA, MS, Ph.D.) AS

Name of Person Preparing this Form Rachel Durrance

Telephone Number 386-226-7129 **Application Type**

Date the Form was Prepared 3/28/2016 Initial or Renewal
(Revise date after any revision)

I. PROGRAM OBJECTIVES: Describe what the program is designed to achieve and explain how it is structured in order to accomplish the objectives.

The Associate of Science in Engineering Fundamentals program is Embry-Riddle Aeronautical University's latest offering for aspiring engineering students who want world-class educational opportunities that meet their needs in new and innovative ways.

Through this program, you have the opportunity to complete your associate degree online. Earning your A.S. degree can help open the door to continued engineering studies at Worldwide or an Embry-Riddle residential campus in Florida or Arizona. Or you can take your associate degree to another institution if heading to Daytona Beach or Prescott isn't in your plans.

Embry-Riddle professors and program development experts carefully researched every aspect of this offering, creating a curriculum that features short nine-week terms which ultimately result in the 65 credit hours necessary to obtain your degree. Earning your A.S. degree can help open the door to continued engineering studies at an Embry-Riddle residential campus location in Florida or Arizona.

II. PROGRAM STRUCTURE: List all courses in the program. Indicate course name, course number, and number of credit hours or clock hours for each course.

Name of Program: Associate of Science in Engineering Fundamentals

Total Course Hours: 65 Check one: Quarter Hours
 Semester Hours X
 Clock Hours

Tuition : \$21,300.00 Length of Program: 2 years

SPECIALTY COURSES:

<u>Course Number</u>	<u>Course Title</u>	<u>Course Hours</u>
ENGR 101	Introduction to Engineering	3
ENGR 115	Introduction to Computing for Engineers	3
ENGR 120	Graphical Communications	3
ECON 225	Engineering Economics	3
ESCI 201	Statics	3
ESCI 202	Solid Mechanics	3
ESCI 204	Dynamics	3
ESCI 206	Fluid Mechanics	3
MATH 241	Calculus and Analytic Geometry I	4
MATH 242	Calculus and Analytic Geometry II	4
MATH 243	Calculus and Analytic Geometry III	4
MATH 345	Differential Equations and Matrix Methods	4
PHYS 150	Physics I for Engineers	3
PHYS 160	Physics II for Engineers	3
PHYS 250	Physics III for Engineers	3
PHYS 253	Physics Laboratory for Engineers	1

GENERAL EDUCATION / LIBERAL ARTS COURSES:

<u>Course Number</u>	<u>Course Title</u>	<u>Course Hours</u>
ENGL 123	English Composition	3
SPCH 219	Speech	3
ENGL 221	Technical Report Writing	3
	Humanities elective (HUMN 140 Series)	3
	Humanities/Social Science elective (lower level)	3

GENERAL EDUCATION / LIBERAL ARTS COURSES:

<u>Course Number</u>	<u>Course Title</u>	<u>Course Hours</u>
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Number of Credit/Clock Hrs. in Specialty Courses: _____ / 50 Percentage: 77%

Number of Credit/Clock Hrs. in General Courses: _____ / 15 Percentage: 23%

If applicable:
Number of Credit/Clock Hrs. in Liberal Arts: _____ / _____ Percentage: _____

III. LIBRARY: Please provide information pertaining to the library located in your institution.

1. Location of library; Hours of student access; Part-time, full-time librarian/staff:

Due to the nature of our University with 137 campuses globally, we strive to provide library resources through digital platforms. For further information please see the attached Appendix 1 Library resources document.

2. Number of volumes of professional material:

See attached Appendix 1 Library Resources Document

3. Number of professional periodicals subscribed to:

See attached Appendix 1 Library Resources Document

4. Other library facilities in close geographical proximity for student access:

See attached Appendix 1 Library Resources Document

**Supplementary Information on
Licensure, Certification, and Accreditation**

Institution: Embry-Riddle Aeronautical University
Degree Program: Associate of Science in Engineering Fundamentals
Locations: 5726 Professional Circle, Suite 120, Indianapolis, IN 46241

State Licensure

Does a graduate of this program need to be licensed by the State to practice their profession in Indiana and if so, will this program prepare them for licensure?

If so, please identify
The specific license(s) needed:
The State agency issuing the license(s):

Please see attached Appendix 2 document

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Professional Certification

What are the professional certifications that exist for graduates of similar program(s)?

Will a graduate of this program be prepared to obtain national professional certification(s) in order to find employment, or to have substantially better prospects for employment, in a related job in Indiana?

If so, please identify
Each specific professional certification:
The national organization issuing each certification:

Please explain the rationale for choosing each professional certification:

Please identify the single course or a sequence of courses that lead to each professional certification?

Please see attached Appendix 2 document

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Professional Industry Standards/Best Practices

Does the program curriculum incorporate professional industry standard(s) and/or best practice(s)?

If so, please identify
The specific professional industry standard(s) and/or best practice(s):
The organization or agency, from which the professional industry standard(s) and/or best practice(s) emanate:

Please see attached Appendix 2 document

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Program Accreditation

Does this program need specialized accreditation in order for a graduate to become licensed by the State or to earn a national professional certification, so graduates of this program can work in their profession or have substantially better prospects for employment?

If so, please identify the specialized accrediting agency:

Please see attached Appendix 2 document

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Transferability of Associate of Science Degrees

Since CHE/BPE policy reserves the Associate of Science designation for associate degrees whose credits apply toward meeting the requirements of a related baccalaureate degree, please answer the following questions:

Does a graduate of this A.S. degree program have the option to apply all or almost all of the credits to a related baccalaureate degree at your institution?

If so, please list the baccalaureate degree(s):

Please see attached Appendix 2 document

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Job Titles

List specific job titles and broad job categories that would be appropriate for a graduate of this program:

Please see attached Appendix 2 document

Appendix 1. Library Resources

Books, Library and Supplies

Hunt Library: Bringing the Library to You

<http://huntlibrary.erau.edu/>

The Hunt Library, located on the Daytona Beach Campus, is the Library for all Worldwide students, faculty and staff, regardless of location. The Hunt Library slogan, "Bringing the Library to You," defines our commitment that the Worldwide community has access to all library resources and services.

The mission of the Hunt Library is to provide materials, services, and facilities to students, faculty, and staff in support of the University's commitment to excellence in teaching, learning, and research for both the Daytona Beach and Worldwide campuses.

Hunt Library users will find resources in a variety of formats: books, government documents, periodicals, microforms, conference proceedings, videos, DVDs, and electronic resources.

The Hunt Library's web pages are located at library.erau.edu; choose the Hunt Library link.

The electronic library includes round-the-clock access to EAGLEsearch (<http://library.erau.edu/find/eaglesearch.html>), which allows researchers to search much of Hunt Library's collection simultaneously, as well as the Library's online catalog, Voyager (<http://voyager.db.erau.edu:7008/vwebv/searchAdvanced>), and over 100 online databases (<http://guides.erau.edu/databases>) (which include many full-text resources).

Textbook Purchase

Please consult the Campus Director at your Worldwide location or your Student Affairs Office advisor for information on ordering textbooks. Students may search for textbook information by term on the Worldwide Master Textbook & Materials List site. Online, EagleVision Home, and certain classroom books may be purchased through the Worldwide bookstore website (<http://store.nexternal.com/erau/storefront.aspx>).

Identification Cards

Applying for a student identification card, known as the EAGLEcard, is done through your ERNIE (<http://ernie.erau.edu>) login under Student Services (<https://ernie.erau.edu/portal/page/portal/students/services/worldwide>). These identification cards may be required to use the library facilities of other universities and might be used for student discounts wherever a student identification card is honored.

Help

The Hunt Library is the researcher's primary resource provider. Regardless of their location, members of Embry-Riddle's Worldwide community have circulation (check-out) privileges, online quick-help opportunities, and access to a web-based document delivery system.

Research Librarians are also available via telephone at (800) 678-9428 or (386) 226-7656, by chat (<http://library.erau.edu/help/ask-a-librarian>) or by emailing us at library@erau.edu (library@erau.edu). Research Librarians will provide detailed advice on research strategies, referrals to relevant reference sources, assistance with literature searches, and help navigating the library's website.

An overview of the Hunt Library's help features is available from <http://library.erau.edu/help/>

How to Contact the Hunt Library

Phone: (800) 678-9428 or (386) 226-7656 (8 a.m.-5 p.m. Eastern)

E-mail: library@erau.edu

Internet: library.erau.edu/home.html

Hunt Library Strategic Plan

Vision Statement

The Embry-Riddle Aeronautical University Hunt Library will be a leading resource for the access and discovery of information and research in aviation and aerospace studies.

Mission Statement

The Hunt Library supports the Daytona Beach and Worldwide Campuses. It provides access to materials, information resources, services and facilities to students, faculty and staff in support of the University's commitment to excellence in teaching, learning, and research. As an academic support unit, the Library maintains flexibility and is proactive in meeting the changing information needs of its clientele.

Strategic Directions for 2013-2016

To fulfill the Library's vision, the staff will focus on the following strategic directions.

Strategic Direction 1: Provide easy access to Library collections, excellent customer service, and student study space through the transitions to temporary and new permanent locations.

Strategic Direction 2: Facilitate open access to the research and creative works of faculty, students and staff.

Strategic Direction 3: Enhance virtual collections, instruction and research assistance.

Strategic Direction 4: Preserve the University's collections of rare and unique information resources.

Strategic Direction 5: Develop new research and service partnerships

Appendix 2. Associate of Science in Engineering Fundamentals

State Licensure

Does a graduate of this program need to be licensed by the State to practice their profession in Indiana and if so, will this program prepare them for licensure?

No, a graduate of this program does not need to be licensed by the State.

Is so, please identify

The specific license(s) needed:

The State agency issuing the license(s):

Professional Certification

What are the professional certifications that exist for graduates of similar program(s)?

Will a graduate of this program be prepared to obtain national professional certification(s) in order to find employment, or to have substantially better prospects for employment, in a related job in Indiana?

If so, please identify

Each specific professional certification:

- *National Institute for Certification in Engineering Technologies*
- *Associate Engineering Manager*
- *Systems Engineering Professional*
- *Associate Systems Engineering Professional*

The national organization issuing each certification:

- *National Society for Professional Engineers*
- *American Society for Engineering Management*
- *International Council on Systems Engineering*

Please explain the rationale for choosing each professional certification:

These professional certifications will help graduates of this program further themselves in the field of engineering and will help the graduate keep current with new information and technology.

Please identify the single course or a sequence of courses that lead to each professional certification?

To attain each of these certifications the graduate will need to submit either documentation to show that they are in the field of engineering or sit for an exam that will test their knowledge of the field of engineering. Some of these certifications required both evidence and a test, while others require one or the other.

Professional Industry Standards/Best Practices

Does the program curriculum incorporate professional industry standard(s) and/or best practice(s)?

This Program does not incorporate professional industry standards and/or best practices because it is only an Associates level degree program.

If so, please identify

The specific professional industry standard(s) and/or best practice(s):

The organization or agency from which the professional industry standard(s) and/or best practice(s) emanate:

Program Accreditation

Does this program need specialized accreditation in order for a graduate to become licensed by the State or to earn a national professional certification, so graduates of this program can work in their profession or have substantially better prospects for employment?

Since this is only an Associates level degree program there is no specialized accreditation in order for the graduate to become licensed in the state or earn a national professional certification.

If so, please explain the specialized accrediting agency:

Transferability of Associate of Science Degrees

Since CHE/BPE policy reserves the Associate of Science designation for associate degrees whose credits apply toward meeting the requirements of a related baccalaureate degree, please answer the following questions:

Does a graduate of this A.S. degree program have the option to apply all or almost all of the credits to a related baccalaureate degree at your institution?

Yes.

If so, please list the baccalaureate degree(s):

Bachelor of Science in Engineering Technology

Job Titles

List specific job titles and broad job categories that would be appropriate for a graduate of this program:

- *Electrical Engineer*
- *Systems Architect – Systems Engineer*
- *Geotechnical Engineer*
- *Systems Engineer – Data Solutions*
- *Structural Engineer*