engineering
4 us all

2023-2024

e4usa Credit and Placement Prospectus

Learn about college course credit and placement opportunities you can receive with Engineering for US All!

Table of Contents

About e4usa

Engineering for US All (e4usa) is an NSF-funded high school engineering program that opens engineering to a new generation of students and educators. Core to the e4usa mission is the nationwide expansion of student and teacher access to engineering, with intentional efforts to reach populations traditionally underrepresented in the field.

To date, e4usa involves **91** high school partners, **42** university partners, and more than **5,000** students.

e4usa students explore engineering in society, develop professional skills, and engage in community-focused engineering design experiences, all aimed at helping them see themselves as engineers.

e4usa provides a standardized educational curriculum for pre-college students to learn and demonstrate engineering principles, skills, and practices. The curriculum incorporates an authentic, design-based experience and affords students the opportunity to earn college credit at participating colleges and universities.
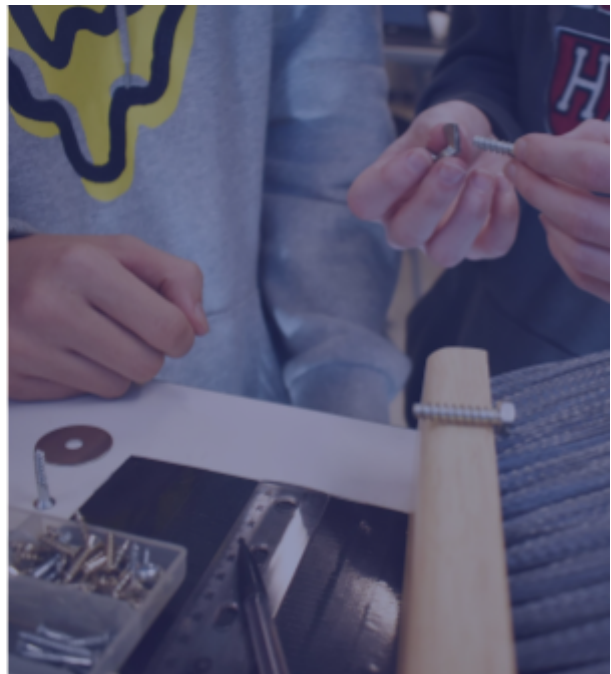
e4usa Curriculum

Engineering is all around us! e4usa **empowers**, **engages**, and **excites** students to use what they know and find what they are passionate about to take control and boldly influence the world.

The e4usa curriculum consists of 8 units. Each unit covers our four signature course threads to help students achieve the following course learning outcomes:

Connect with Engineering

CE.A	Iterate and evolve the definition of what it means to engineer and be an engineer.	
CE.B	Recognize the value of engineering for all regardless of one's potential career.	
CE.C	Explain and apply ethical considerations when exploring an engineering problem.	

Engineering in Society

ES.A	Explore the impacts of past engineering successes and failures on society as a whole.	
ES.B	Recognize and investigate the world's greatest challenges and the role that engineering plays in solving these challenges (e.g., Engineering Grand Challenges, UN sustainability goals, etc.).	
ES.C	Integrate diverse disciplinary thinking and expertise to inform design solutions that add value to society.	
ES.D	Identify and analyze issues when bringing a solution to scale.	

Engineering Professional Skills

| PS.A	Use various engineering communication methods.	
PS.B	Collaborate effectively in a team.	
PS.C	Develop, implement, and adapt a project management plan.	

Engineering Design

ED.A	Identify and describe a problem that can be solved with a potentially new product or process.	
ED.B	Identify appropriate stakeholders and content experts and evaluate their input.	
ED.C	Plan and conduct research by gathering relevant and credible data, facts, and information.	
ED.D	Articulate appropriate STEM practices and principles in the design.	
ED.E	Evaluate solution alternatives and select a final design by considering assumptions, tradeoffs, criteria, and constraints.	
ED.F	Create a prototype.	
ED.G	Create and implement a testing plan to evaluate the performance of design solutions.	
ED.H	Apply iteration to improve engineering designs.	
ED.I	Articulate and reflect on how an engineering design process could be applied to solving a problem.	

Institutions Awarding Credit

At the end of the 2023-24 academic year, 21 institutions in thirteen states have created pathways for students to receive college credit and placement for successfully completing the e4usa high school course.

Additional institutions are exploring ways to offer students credit and placement and we are excited to watch the list of states and institutions awarding credit grow in the near future.

states and territories with institutions awarding e4usa students credit or placement

engineering 4 us all
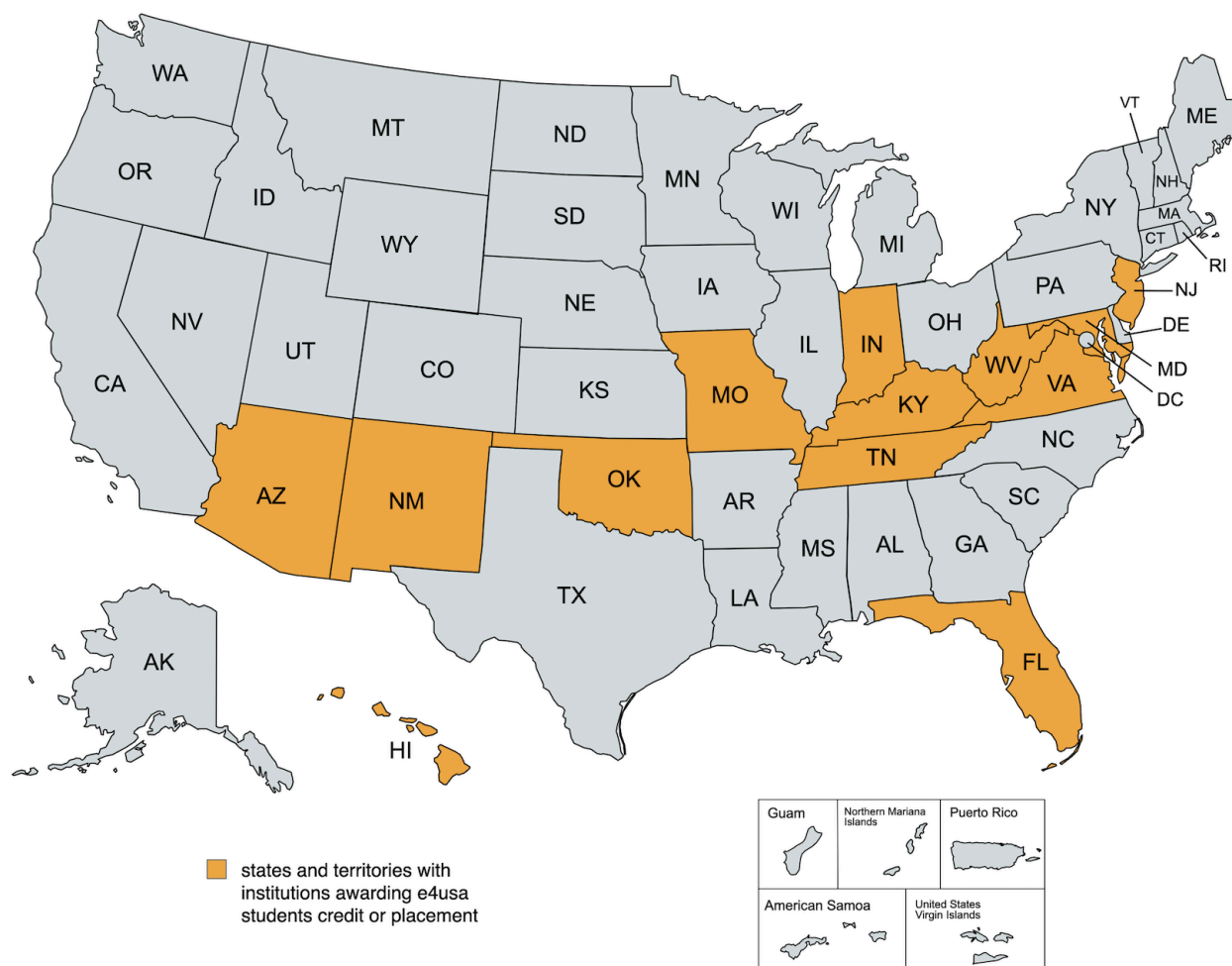
Arizona State University

About Arizona State University

Arizona State University (ASU) is a top ranked research university in the greater Phoenix metropolitan area. The university is a model for the New American University, committed to excellence, access, and impact.

The Ira A. Fulton Schools of Engineering (FSE) is one of the largest and most comprehensive engineering programs in the U.S. FSE offers 25 undergraduate programs and 47 graduate programs housed within 7 schools:
- School of Biological and Health Systems Engineering
- School of Computing and Augmented Intelligence
- School of Electrical, Computer and Energy Engineering
- School for Engineering of Matter, Transport and Energy
- School of Manufacturing Systems and Networks
- School of Sustainable Engineering and the Built Environment
- The Polytechnic School
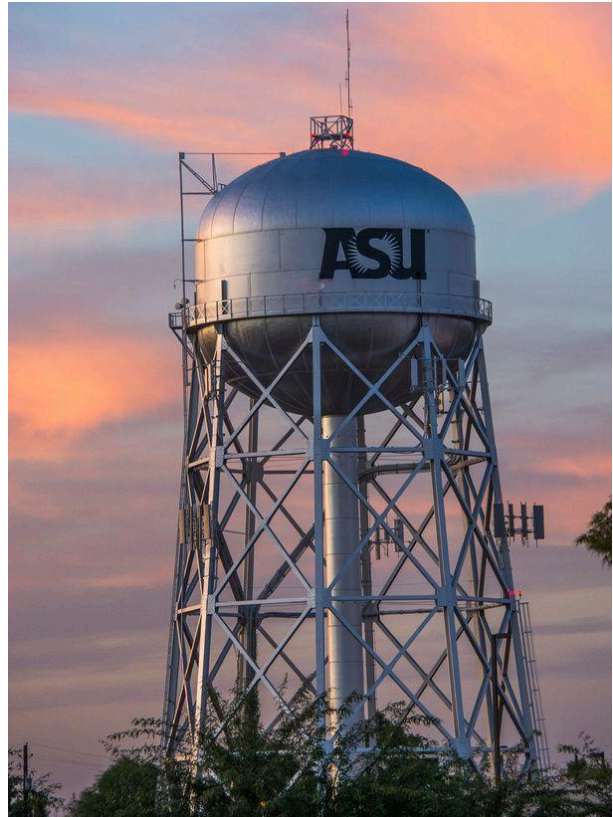
Fast Facts

Course: STS 102/ASU 194 - Engineering for All

Credits: 3 in University General Studies offered through the College of Integrative Sciences and Arts

Credit pathway: Concurrent Enrollment through ASU Prep Digital

   Details: See enrollment instructions
   - Enrollment files should be completed and submitted by school personnel only.
   - Enrollment files must be submitted through our secure upload.
   - ASU Prep Digital will request ASU IDs for the interested students upon receiving enrollment forms.
   - High school instructors submit a grade for the student at the end of the semester to a point of contact.

   Point of Contact: Dr. Medha Dalal (medha.dalal@asu.edu)

Cost: $500

Other: Students do not need to matriculate at ASU to earn credits.

Chandler-Gilbert Community College

About Chandler-Gilbert Community College

One of the ten Maricopa Community Colleges located in Chandler, Arizona, in the East Valley. The mission of CGCC is to empower every student to unlock their full potential for growth and innovation through inclusive learning opportunities and community engagement.

The engineering program at CGCC offers two pathways:
- The AS, Emphasis in Engineering, provides the majority of the first two years of a four-year curriculum for students who wish to transfer to a four-year institution to earn a bachelor's degree in engineering.
- The AAS in Engineering Technology Program prepares students to be engineering technicians.

More than 17 disciplines are offered, such as mechanical, electrical, civil, aerospace, and computer sciences engineering.

Learn more at: www.cgc.edu/engineering

Fast Facts

Course: ECE150 - Exploring Engineering and its Impact on Society

Credits: 3 credits

Placement: Open to all students (engineering and non-engineering), no prerequisites course

Credit pathway: Transfers to university as a Humanities course (HU).

    Details: ECE150 Maricopa course description

    Point of Contact: Fanny Silvestri (fanny.silvestri@cgc.edu)

Cost: 3 credits

Other: Credits applied to the AAS and AS programs as [HU] credits

Florida International University

About Florida International University

FIU is among the top 10 largest universities in the USA. Forbes magazine ranked Miami "America's Cleanest City" based on its air quality, green spaces, drinking water, clean streets and recycling programs. It's a perfect environment for learning, exploring and having some fun along the way. The student population comes from all 50 US states and 142 countries. You'll get to meet a variety of smart, interesting people from all around the world!

FIU's College of Engineering and Computing is South Florida's leading engineering education resource. Our students enjoy the benefits of many small classes, experiential learning opportunities and close interaction with WorldsAhead faculty. Through internship opportunities in the industry and hands-on research activities in our cutting-edge laboratories, our graduates are prepared to hit the ground running in their chosen careers.

Learn more by visiting https://cec.fiu.edu/

Fast Facts

Course: EGS 1006: Introduction to Engineering

Credits: 3

Placement: Engineering Topics

Credit pathway: Pathway Syllabus will be evaluated by faculty in the Department of Mechanical and Materials Engineering on a case-by-case basis

    Details: The Department of Mechanical and Materials Engineering will do a full review of the syllabus.

    Point of Contact: Dr. Bruk T. Berhane (bberhane@fiu.edu)

Cost: $0

Other: For instructions on how to initiate the process visit: Academic Advising - FIU College of Engineering and Computing

George Mason University

About George Mason

George Mason University is the largest and most diverse public research university in Virginia, with an enrollment of over 39,000 students studying in over 200 degree programs. Mason is an innovative, entrepreneurial institution with national distinction in a range of academic fields.

Its proximity to Washington, D.C. provides unmatched geographical access to a number of federal agencies and national laboratories.

The College of Engineering and Computing (CEC) at George Mason University is comprised of the Volgenau School of Engineering and a new School of Computing. Ranked nationally in the top 100 in both undergraduate and graduate education, the College boasts more than 10,000 students in 37 undergraduate, master's, and doctoral degree programs, including several first-in-the-nation offerings.

Fast Facts

Course: ENGR 110 - Engineering & Social Justice

Credits: 3 credits

Credit pathway: Early Identification Program Enrollment

> **Details:** To become an EIP Prep Student, a candidate must first be recommended by their school counselor and/or a teacher. Once nominated, students and their parents are invited to attend an information session where the benefits of the program are outlined and families are given instruction on how to access the online EIP Prep Application link. For your reference, the EIP Prep nomination period is during the spring semester; please view the timeline reference link below.

> **Point of Contact:** The Office of Diversity, Outreach, and Inclusive Learning (cecdoil@gmu.edu)

Cost: $150 (Financial Aid Available)

Other: Students must enroll at George Mason University as a high school matriculant. Information around non-degree enrollment can be found here:

https://www.gmu.edu/admissions-aid/apply-now/how-apply/non-degree

Lincoln Memorial University

About Lincoln Memorial University

Lincoln Memorial University was founded in 1897 as a living memorial to Abraham Lincoln. LMU is located in Harrogate, Tennessee, where Tennessee, Kentucky, and Virginia merge at the Cumberland Gap, approximately 55 miles north of Knoxville, Tennessee. We are proud of our beautiful, historic, 1,000-acre wooded campus with 43 academic, administrative, and residential buildings.

The Lincoln Memorial University School of Engineering offers:

- Personalized academic advising
- Small class sizes
- Intern and co-op opportunities
- Relationship building with industry personnel

For more information on what the engineering program has to offer visit:
https://www.lmunet.edu/school-of-engineering/index

Fast Facts

Course: ENGR 100 Engineering Portal

Credits: 1

Credit pathway: Dual Enrollment

>   *Details:* Enrollment in an e4usa-affiliated high school course.

>   *Point of Contact:* Dr. Ryan Overton (ryan.overton@lmunet.edu)

Cost: Standard tuition and fee rates offset by state/school district support.

Other: Learn more by visiting https://www.lmunet.edu/school-of-engineering/index

Morgan State University

Fast Facts

Course: ENGR 110: Engineering For US All

Credits: 3 in the General Education Program

Credit pathway: Concurrent Enrollment

> **Details:** Evaluation consists of 1) e4usa high school engineering design portfolio review and 2) 980 SAT score (Critical Reading and Mathematics) or 19 ACT composite

> **Point of Contact:** Carl White (carl.white@morgan.edu)

Cost: Standard tuition and fee rates offset by state/school district support.

Other: For instructions on how to initiate the process visit:
https://www.morgan.edu/office-of-undergraduate-admission-and-recruitment/how-to-apply/dual-enrollment

About Morgan State University

Morgan State University, founded in 1867, is a Carnegie-classified, doctoral, high-research institution providing instruction to a multiethnic, multiracial, multinational student body and offering more than 125 academic programs.

As Maryland's Preeminent Public Urban Research University, Morgan fulfills its mission to address the needs and challenges of the modern urban environment. Located in a charming residential area of northeast Baltimore, Morgan's impressive, 152-acre campus features state-of-the-art facilities geared toward innovative teaching and learning in the 21st century. Designated as a National Treasure by the National Trust for Historic Preservation, this National Treasure offers a safe and inviting learning environment with easy access to the best the city has to offer.

The Clarence M. Mitchell Jr. School of Engineering has four accredited undergraduate engineering programs in the areas of Civil Engineering, Electrical and Computer Engineering, Industrial and Systems Engineering, and Transportation Systems Engineering.

Purdue University, College of Engineering

About The College of Engineering at Purdue University

The Purdue College of Engineering consistently ranks in the top 10 of engineering schools by US News & World Report. With almost 500 faculty and over 11,000 undergraduate students from across the globe, Purdue Engineering offers a broad range of experiential learning programs to fit a diverse set of student interests.

Purdue students choose from 17 engineering majors, and all engineering students are admitted to the First-Year Engineering Program. There are over 30 buildings on campus wholly or partially dedicated to engineering, and several makerspaces for student projects. The largest student-run career fair in the nation draws over 400 employers from across the country and contributes to our 97% placement rate within 6 months of graduation.

For more info, visit:
https://www.purdue.edu/futureengineers/

Fast Facts

Course: ENGR 10301: Pre Engineering Experience

Credits: 1 credit, may be used for a prerequisite for ENGR 13000: Transforming Ideas into Innovations

Credit pathway: Credits granted for participation in e4usa upon admission to Purdue First Year Engineering

      Details: Credit granted for participation in e4use for students with a grade of B or higher

      Point of Contact: Dr. Isabel Jimenez-Useche, ijimenez@purdue.edu

Cost: $0

Other: Students must matriculate to Purdue University in the First Year Engineering major to earn credits.

Purdue University

About the Purdue Polytechnic Institute @ Purdue University

The Purdue Polytechnic Institute (PPI) is one of the 10 academic colleges of Purdue University in West Lafayette, Indiana. The college embraces the connection of people of diverse backgrounds, experiences and thoughts, and leverages innovative learning methods, real-world experiences and industry partnerships to produce graduates uniquely qualified for technology-driven careers.

There are more than 30 undergraduate degrees offered through the PPI, so students can choose an area of study that matches their hobbies and interests. These degrees cover areas such as:
- Engineering Technology Education
- Aviation
- Engineering Technologies
- Construction Management
- Technology Management
- Computing & Graphics

Fast Facts

Course: TECH 12000: Design Thinking in Technology

Credits: 3 credits in the university's core *Science Technology & Society* curriculum component. Also, the course is the first-year design course for most majors within the Purdue Polytechnic Institute.

Credit pathway: Departmental Proficiency Exam

> **Details:** A Proficiency Exam may be available for students who have earned a grade of B or better in their e4usa course. Qualifying students will then submit their e4usa high school engineering design portfolio for review to ensure there is evidence that the course learning objectives were met. An additional student interview may be requested for further clarification related to their achievement of the course learning objectives.
>
> **Point of Contact:** Dr. Greg Strimel (gstrimel@purdue.edu)

Cost: $30

Other: Students must matriculate to Purdue University to earn credits.

Regent University

About Regent University

Regent's Engineering & Computer Science Department, with its highly marketable, innovative curriculum, equips students with the knowledge and skills employers seek. Named a National Center of Academic Excellence in Cyber Defense for the B.S. in Cybersecurity by the National Security Agency and the Department of Homeland Security, Regent's award-winning degree programs integrate leading-edge instruction with the exploration of ethical, spiritual and social responsibility.

Founded in 1978, Regent enrolls more than 13,000 students annually on its 70-acre campus in Virginia Beach, Virginia, and online around the world. Ranked among top national universities (U.S. News & World Report, 2022), degree programs are presented from a Christian worldview and help you develop credentials and character that set you apart and build your career.

Learn more at www.regent.edu/learnmore

Fast Facts

Course: ENGR 201 Engineering Foundations 1

Credits: 3 Credit Hours

Credit pathway: Departmental Proficiency Exam consisting of:
1. An e4usa high school engineering design portfolio review.
2. A 30-minute written examination.

   Point of Contact: Dr. Cheryl Beauchamp | cherbea@regent.edu

Cost: $75

Other: Students must matriculate at Regent University to earn credits. To initiate the process, visit regent.edu/learnmore.

Saint Louis University

About Saint Louis University

Founded in 1818, Saint Louis University is one of the nation's oldest and most prestigious Catholic institutions. Rooted in Jesuit values and its pioneering history as the first university west of the Mississippi River, SLU offers nearly 13,000 students a rigorous, transformative education of the whole person. At the core of the University's diverse community of scholars is SLU's service-focused mission, which challenges and prepares students to make the world a better, more just place.

Saint Louis University formed the School of Science and Engineering in 2022, merging the existing engineering and aviation programs housed in Parks College with select natural and applied science departments to better meet the future needs of its students and faculty. The college emphasizes authentic, hands-on experiential learning and boasts programs in an array of engineering and science disciplines:

- **Engineering:**
  - Aerospace, Biomedical, Civil, Computer, Electrical, and Mechanical
- **Sciences:**
  - Aviation Science, Chemistry, Computer Science, Earth & Atmospheric Sciences, Physics

Fast Facts

Course: SE 1709 - Introduction to Engineering

Credits: 2 credits

Credit pathway: Credits granted for participation in e4usa upon admission

   Details: Credit granted for participation in e4usa for students with a grade of C or better

   Point of Contact: Dr. Scott Sell, Associate Dean for Undergraduate Education (scott.sell@slu.edu)

Cost: No additional cost for credit in SE 1709

Other: Students must matriculate at Saint Louis University to earn credits. To initiate the process visit: https://www.slu.edu/admission/index.php

South Mountain Community College

About South Mountain Community College

One of the ten schools in the Maricopa County Community College District, South Mountain Community College is located in Phoenix, Arizona. The Engineering program offers two pathways for Engineering students (AS for university transfer, and AAS for job placement for technicians who may decide to transfer to a university after working in industry), as well as Dual Enrollment opportunities with local high schools.

The Engineering AS transfer program focuses on Civil Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, and Engineering Technology. The AAS program focuses on Engineering Technology.

Learn more at:
https://www.southmountaincc.edu/degrees-certificates/engineering

Fast Facts

Course: ECE 150 - Exploring Engineering and its Impact on Society

Credits: 3

Credit pathway: Transfers to university as a Humanities course (HU). Dual Enrollment transfers for college credit.

    Details: Open for Engineering and non-Engineering students.

    Point of Contact: Dr. Carl Whitesel (cwhitesel@southmountaincc.edu)

Cost: 3 credits tuition + low course consumables fee

Other: Students must matriculate to Arizona State University to earn transfer credits. Credits apply as HU credits for the SMCC programs.

Tennessee State University

Fast Facts

Course: e4usa students receive credit for ENGR 1020 Freshmen Engineering Seminar with a successful completion of the course. Students may also submit a portfolio of their CAD work for consideration of credit for ENGR 1151 Computer Engineering Graphics and Analysis

Credits: ENGR 1020: 1 hr. and ENGR 1151: 1 hr.

Credit pathway: dual credit

> **Details:** Evaluation consists of 1) e4usa high school engineering design portfolio review and 2) 900 SAT(Verbal and Math Scores Only) and 19 ACT
>
> **Point of Contact:** Dr. Catherine Armwood-Gordon (carmwood@Tnstate.edu)

Cost: $0

Other: Other students may be reviewed/considered by our Continuing & Distance Education Office for possible credit.

About Tennessee State University

Tennessee State University is a world-class university known for academic excellence, incredible students, inspiring faculty, exceptional value and an amazing campus and community. For more than half a century, the College of Engineering at Tennessee State University has provided a quality education in engineering, technology, and computer science with a mission to increase the diversity of tomorrow's technical workforce.

The College of Engineering offers full-time undergraduate programs leading to the Bachelor of Science degree in the fields of:

- Applied & Industrial Technologies
- Architectural Engineering
- Civil Engineering
- Computer Science
- Electrical Engineering
- Mechanical Engineering

Learn more by visiting: https://www.tnstate.edu/engineering/index.aspx

The College of New Jersey

Fast Facts

Course: TST161: Creative Design - Engineering For US All

Credits: 4 credits

Credit pathway: Dual Enrollment

> *Details:* Credit granted for participation in e4USA course for students earning a C or higher, taking the course in 11th grade or later

> *Point of Contact:* Debra Gulick (gulickd@tcnj.edu) or Manuel Figueroa (manuel.figueroa@tcnj.edu)

Cost: $550

Other: To apply for admission to TCNJ, visit: https://admissions.tcnj.edu/apply/

About The College of New Jersey

TCNJ's School of Engineering students are a high-achieving group of diverse, creative thinkers and problem-solvers with the drive, passion, and intellect to revolutionize the world around us. Here, engineering talents and interests are developed in a rigorous curriculum and supported by a faculty of teacher-scholars to launch a new generation of industry breakthroughs, meaningful change, and impactful citizenship.

The School of Engineering offers full-time undergraduate programs that lead to Bachelor of Science degrees in the fields of:

Biomedical Engineering	Engineering Science
Civil Engineering	Integrative STEM Education
Computer Engineering	Mechanical Engineering
Electrical Engineering	Technology & Engineering Education

University of Hawai'i at Mānoa

About University of Hawai'i at Mānoa College of Engineering

Established in 1907, the University of Hawai'i at Mānoa is the largest and oldest of the 10 UH campuses. Mānoa offers hundreds of undergraduate, graduate and professional degrees; a strong, vital research program; and nationally ranked NCAA Division I athletics. UH Mānoa is a R1 research university of international standings.

The College of Engineering at UH Mānoa is "dedicated to world-class education and research. We produce the entrepreneurial and innovative human and intellectual capital required to be competitive in an increasingly technological and global society. Through our graduates and our research, we provide people and discoveries to transform lives and to support vibrant, knowledge-based economies. We are inspired by the principles of sustainability and resilience, flavored by our unique island environment."

- Civil & Environmental Engineering
- Electrical & Computer Engineering
- Mechanical Engineering

Fast Facts

Course: ENGR 196 Freshman Vertically Integrated Project

Credits: Variable, 1-3 credits, based on thoroughness and complexity

Credit pathway: Concurrent enrollment or upon matriculation to College

> **Details:** Students interested in earning credits MUST sign up for this course while taking the e4usa course at their respective high school. Upon payment for the UHM CoE course and submission of a report for the e4usa course to the high school instructor, the grade submitted by the high school instructor will be transmitted to the point of contact in the College for official grade submission.

> **Point of Contact:** Song K Choi, PhD (schoi@hawaii.edu)

Cost: Standard tuition and fees, and possible ways to offset the costs will be explored

Other: State and College scholarships may be available for e4usa programs

The University of Indianapolis

About The University of Indianapolis

We believe the R. B. Annis School of Engineering at UIndy is one of the most innovative engineering programs nationwide. Our faculty members embody an attitude of service to our students and partners. We work with our students in our DesignSpine program to ensure that our students are involved in authentic, industry-driven engineering projects from the beginning of their program.

- Computer Engineering
- Electrical Engineering
- Industrial and Systems Engineering
- Mechanical Engineering
- Software Engineering
- Computer Science
- General Engineering

Learn more at:
https://www.uindy.edu/cas/engineering/

Fast Facts

Course: ENGR 199 - Pre Engineering Experience

Credits: 1 for e4usa, up to 4 if students have other experience

Credit pathway: Credit granted for participation in e4usa upon admission

> **Details:** Credit granted for participation in e4usa for students with a grade of B or better, taking the course in 10th grade or later.

> **Point of Contact:** Dr. Kenneth Reid, Associate Dean of Engineering (reidk@uindy.edu)

Cost: No additional cost for credit in ENGR 199

Other: Scholarships available for e4usa participants: see

> Engineering for US All - University of Indianapolis (uindy.edu) for details

University of Louisville

About the JB Speed School of Engineering

The mission of the J.B. Speed School of Engineering is to serve the University, the Commonwealth of Kentucky, and the engineering profession by providing high-quality educational programs to all students; engaging in research and scholarship that will extend knowledge; and assisting the economic development of the regional, state, and national economies through technology transfer.

Students of engineering should graduate with knowledge of engineering sciences and design, experience working in teams, have strong written and oral communication skills, and be well-versed on the impact of solutions in a global, economic, environmental, and social context. In particular, engineers have a duty to society to understand and abide by their discipline's Codes of Ethics.

Fast Facts

Course: ENGR 165 - General Engineering Credit

Credits: 2 credits

Credit pathway: Departmental Proficiency Evaluation

      Details: Proficiency Evaluation consists of review of e4usa high school engineering design portfolio.

      Point of Contact: Dr. Erin Gerber (e.gerber@louisville.edu)

Cost: $0

Other: Students must matriculate at University of Louisville's JB Speed School of Engineering to earn credits. To initiate the process, discuss with your Academic Advisor or Point of Contact listed above.

University of Maryland, Baltimore County

About UMBC

University of Maryland Baltimore County (UMBC) is a top-ranked university with an inclusive culture that connects innovative teaching and learning, research across disciplines, and civic engagement. Whatever your passion, at UMBC you'll find a program that challenges and excites you and a community that supports you.

The College of Engineering and Information Technology offers full time undergraduate programs in:

- Chemical Engineering
- Computer Engineering
- Mechanical Engineering
- Information Systems
- Computer Science.

All engineering and computer science programs are ABET accredited

Learn more by visiting:
https://coeit.umbc.edu/programs-degrees/

Fast Facts

Course: ECEP 104: Discovering the Engineering World

Credits: 3 General Education Program Credits (TBD)

Credit pathway: Credit granted for participation in e4usa upon admission to the college

> ***Details:***
> - Earn a 2.5 or above in first semester at UMBC
> - Earn a 3.0 or better average for e4usa classes in Pre-College
> - Meet with Dr. Maria Sanchez when you are ready to submit an electronic copy of your e4usa portfolio
>
> ***Point of Contact:*** Dr. Maria Sanchez (msanchez@umbc.edu)

Cost: Please check UMBC up to date tuition rates: https://sbs.umbc.edu/tuition-info/

Other: For more information about UMBC visit: https://umbc.edu/

University of Maryland, College Park

About University of Maryland

Located nine miles from the Nation's Capital, The University of Maryland is the Flagship Institution of the State of Maryland.

The A. James Clark School of Engineering offers full-time undergraduate programs leading to the Bachelor of Science degree in the fields of:

- Aerospace Engineering
- Biocomputational Engineering
- Bioengineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Fire Protection Engineering
- Materials Science and Engineering
- Mechanical Engineering

Learn more by visiting
https://eng.umd.edu/prospective-students

Fast Facts

Course: ENES 192: Engineering For US All

Credits: 3 in General Education Scholarship in Practice (DSSP)

Credit pathway: Departmental Proficiency Exam

> **Details:** Proficiency Exam consists of 1) e4usa high school engineering design portfolio review and 2) a short written examination.

> **Point of Contact:** Kevin Calabro (kcalabro@umd.edu)

Cost: $30

Other: Students must matriculate at University of Maryland to earn credits. To initiate the process download the Credit By Exam form at https://ltsc.umd.edu/forms

University of New Mexico School of Engineering

About Engineering at UNM

Enrollment: 2000 undergraduate, 700 graduate students

One of only 74 engineering programs in the US to receive the ASEE Bronze Award for Diversity

An R1 (high research activity) university and an Hispanic-Serving Institution

Many opportunities for undergraduate research experiences

Over $42M in annual research expenditures

Centers of Excellence include:
- Center for Biomedical Engineering
- Center for Water and the Environment
- Center for Engineered Resilience and Ecological Sustainability
- Center for Advanced Research Computing
- Center for Micro-engineered Materials

Fast Facts

Course: ENGR 195

Credits: 3 semester credit hours of general university credit

Credit pathway: Dual enrollment credit

    Details: Enrollment in an e4usa-affiliated high school course

    Point of Contact: Charles Fleddermann, cbf@unm.edu

Cost: Free to New Mexico students

University of Oklahoma - Norman Campus

About University of Oklahoma

The University of Oklahoma in Norman, OK welcomes students to a campus and community life large enough to be full of opportunity and fun, and small enough to feel at home.

The Gallogly College of Engineering recently launched the Engineering Pathways program focused on nurturing and supporting students as they pursue full-time undergraduate programs in the fields of:
- Engineering:
  - Aerospace, Architectural, Biomedical, Chemical, Civil, Computer, Electrical, Environmental, Industrial & Systems, Mechanical
- Science:
  - Computer, Environmental, and Engineering Physics

The College also offers certificates in Engineering Leadership and Data Science, along with several minors.

Fast Facts

Course: Pathways to Engineering Thinking (ENGR 1411)

Credits: Substitute *Engineering Design in Action* for *Pathways to Engineering Thinking*

Placement: Engineering Design in Action (ENGR 1421)

Credit pathway: By request with submission of e4usa engineering design portfolio

　　Details: 1) High school transcript must show B or better for e4usa; 2) Faculty review of e4usa engineering design portfolio submitted by July 1 prior to entry.

　　Point of Contact: Dr. Susan Walden, Executive Director Engineering Pathways, susan.walden@ou.edu

Cost: Free

Other: Must matriculate to Gallogly College of Engineering at University of Oklahoma - Norman Campus. For more information see: https://www.ou.edu/coe/explore/futurestudents

Virginia Tech

About Virginia Tech

Located in Blacksburg, VA, next to the Jefferson National Forest, Virginia Tech (VT) has been providing degrees in engineering since 1872. VT is one of largest producers of engineering graduates in the nation and has consistently ranks in the top 20 of engineering schools by US News & World Report.

VT students can earn BS degrees in 14 areas of engineering and computer science including: Aerospace Engineering, Biological Systems Engineering, Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Construction Engineering Management, Electrical Engineering, Industrial & Systems Engineering, Materials Science & Engineering, Mechanical Engineering, Mining & Minerals Engineering, and Ocean Engineering.

For more information visit: https://eng.vt.edu/

Fast Facts

Course: ENGR 2464: Engineering Fundamentals for Scientists

Credits: 2 in Interdisciplinary Engineering and Science (IES) Minor for Life Science majors

Credit pathway: Credit by Examination

   Details: Evaluation consists of 1) a review of e4usa portfolio materials and 2) a 1-hour examination (primarily multiple choice with a few short answer questions)

   Point of Contact: College of Engineering Academic Affairs (coeacademicdean@vt.edu)

Cost: Free

Other: Students must be admitted to Virginia Tech to earn credits. To apply for admission to Virginia Tech, visit https://vt.edu/admissions/undergraduate/apply.html.

West Virginia University

Fast Facts

Course: ENGR 101: Engineering Problem Solving I

Credits: 2 credits towards a degree requirement for all Statler College Majors

Credit pathway: Departmental Proficiency Exam

> **Details:** High school transcript must show B or better for e4usa. Qualifying students will then submit their e4usa high school engineering design portfolio for review to ensure course learning objectives were met.
>
> Proficiency Exam consists of 1) e4usa high school engineering design portfolio review and 2) a Microsoft Excel examination
>
> **Point of Contact:** Lizzie Santiago (Lizzie.Santiago@mail.wvu.edu) or Carter Hulcher (chulcher@mail.wvu.edu)

Cost: $0

Other: Students must matriculate at West Virginia University to earn credits. To initiate the process, discuss with your Academic Advisor or a Point of Contact listed above. To apply to WVU, visit https://admissions.wvu.edu/how-to-apply

About West Virginia University

West Virginia University (WVU), founded in 1867, is an R1: Doctoral University providing instruction to a diverse student body from 90 nations, 50 U.S. states, and all 55 West Virginia counties and offering more than 300 academic programs. WVU is dedicated to its mission to leverage talents and resources to create a better future for West Virginia and the world.

The WVU Morgantown campus is in a town named "No. 1 Small City in America" by BizJournals.com for its exceptional quality of life. Morgantown, population 30,855, was also rated the ninth-best college town in America by Business Insider and is within easy traveling distance of Washington, D.C., to the east, Pittsburgh, Pa., to the north, and Cleveland and Columbus, Ohio, to the northwest.

The Benjamin M. Statler College of Engineering and Mineral Resources has sixteen undergraduate programs in the areas of Aerospace Engineering, Biomedical Engineering, Biometric Systems Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Cybersecurity, Electrical Engineering, Engineering Technology, Environmental Engineering, Industrial Engineering, Mechanical Engineering, Mining Engineering, Petroleum and Natural Gas Engineering, and Robotics Engineering.

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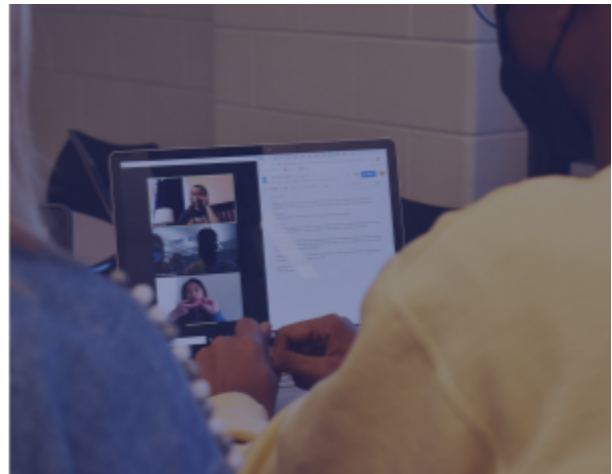Visit our YouTube page to learn more about the e4usa program.

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Acknowledgments