ENGINEERING DESIGN WITH DIGITAL TOOLS, CERTIFICATE

Requirements for an undergraduate certificate may be completed at any campus location offering the specified courses for the certificate.

Program Description

The Engineering Design with Digital Tools (EDDiT) certificate is a 13-credit certificate that enables students to specialize in digital design tools. This provides students with the opportunity to more fully develop their CAD and design skills, which are highly sought after by industry. Students are required to take at least one section of Engineering Design and Analysis with CAD (EDSGN 468), with each course section offering a different software package, such as SolidWorks, AutoCAD, or Catia. The certificate culminates in the preparation of a portfolio, through which students document and display their design work in a professional manner. Students must earn a C grade or better in each prescribed and additional course or independent study or pursue a replacement option.

What is Engineering Design?

Engineering Design is based on the concept of integrating ideas, disciplines, people, and resources within engineering and beyond that are necessary to achieve optimal design solutions for products, systems, processes, and services.

You Might Like This Program If...

- You are interested in learning about new design methods.
- You would like to learn more about interdisciplinary applications of design such as sustainability, innovative design, design for human variability, global design, and affective design.
- You are interested in interdisciplinary integrated design involving two or more distinct fields of knowledge.
- You would like to develop a portfolio of your design projects.

Program Requirements

To earn an undergraduate certificate in Engineering Design with Digital Tools, a minimum of 13 credits is required.

Code	Title	Credits
Required Courses		
EDSGN 100	Cornerstone Engineering Design	3
EDSGN 468	Engineering Design and Analysis with CAD	3
EDSGN 485	Engineering Design Portfolio	1
Select 6 credits from the following or from an approved list maintained by the program:		6
EDSGN 110	Spatial Analysis in Engineering Design	
EDSGN 210	Tolerancing and Spatial Models	
EDSGN 462	Introduction to Design for Additive Manufacturing	
EDSGN 468	Engineering Design and Analysis with CAD	
EMCH 461	Finite Elements in Engineering	

Non-Course Requirements:

- Students must take one but no more than two courses designated EDSGN 468. If taking two courses designated EDSGN 468, each must cover a different software package.
- No fewer than 7 credits must be completed at the 400-level or above. A list of approved courses will be maintained by the certificate director.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/32-00-advising-policy/)

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