

ENGINEERING

<p>DET 1010/DET 1160 – CE PLTW Introduction to Engineering Design (IED) 8637/Year Engineering Credit 6 WSU credits (10th, 11th, 12th) CAMPUS: Davis & North CE Fees: WSU \$5 per credit Lab and Materials Fee: \$20</p>	<p><u>Course Description:</u> This class is required for all 10th graders and new incoming 11th graders. IED is an introductory course which develops student problem solving skills, with emphasis placed on the development of 3-D solid models. Students will work from sketching simple geometric shapes to applying a solid-modeling computer software package. They will learn a problem-solving design process and how it is used in industry to manufacture a product. Students will be exposed to the techniques learned and equipment used by engineers throughout the United States. WSU Credit - DET 1010 1st Semester, DET 1160 2nd Semester.</p>
<p>ENGR 1000 – CE PLTW Principles of Engineering (POE) 8638/Year Engineering Credit 2 WSU credits (10th, 11th, 12th) CAMPUS: Davis & North CE Fees: WSU \$5 per credit Lab and Materials Fee: \$20</p>	<p><u>Prerequisite:</u> Intro to Engineering Design (IED) <u>Course Description:</u> This course provides an overview of engineering and engineering technology. Students develop problem-solving skills by tackling real-world engineering problems. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem-solving process to benefit people. Through theory and practical hands-on experiences, students address the emerging social and political consequences of technological change.</p>
<p>MEET 1130 – CE PLTW Digital Electronics Technology (DE) 8639/Year Engineering Credit 6 WSU credits (11th, 12th) CAMPUS: Davis & North CE Fees: WSU \$5 per credit Lab and Materials Fee: \$20</p>	<p><u>Prerequisite:</u> Intro to Engineering Design or Principles of Engineering <u>Course Description:</u> Digital Electronics is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to test digital circuitry prior to the actual construction of circuits and devices. Course includes sections on circuit design, microprocessor controls and design, and sequential logic programming.</p>
<p>PLTW Aerospace Engine 8642/Year Engineering Credit (11th, 12th)</p>	<p><u>Prerequisite:</u> Intro to Engineering Design or Principles of Engineering <u>Course Description:</u> The major focus is to acquaint the students with the world of flight and space travel. The course covers the following: the history of flight; aerodynamics and aerodynamics testing; flight systems; astronautics;</p>

<p>CAMPUS: Davis</p> <p>Lab and Materials Fee: \$20</p>	<p>space life sciences; aerospace materials; systems engineering. Aerospace Engineering is intended to serve as a specialization course within the engineering sequence.</p>
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<p>CS 1030 – CE Foundations of Computer 8676/Semester Engineering Credit (11th, 12th) WSU 4 credit hours CAMPUS: Davis and North</p> <p>Lab and Materials Fee: \$20</p>	<p><u>Course Description:</u> This course follows the core body of knowledge specified by the ACM which provides students with a broad overview of topics they might encounter within the Computer science curriculum. The course is taught at an introductory level and includes topics such as: history of computers, computer architecture, operating systems, world-wide web and HTML, programming with Java, database, software engineering, networking, and more.</p>
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<p>CS 1400 – CE Comp. Programming II 8688/Semester Engineering Credit (11th, 12th) WSU 4 credits CAMPUS: Davis and North</p> <p>Lab and Materials Fee: \$20</p>	<p><u>Prerequisite:</u> CS 1030 CE Foundations of Computer Science <u>Course Description:</u> This course covers basic operating system navigation and components of the program development process. The majority of the course covers basic problem solving and program design of a software application using a selected language. Topics presented and discussed depending on selected language include: thinking logically to solve problems, working with input/output devices, compilation and library use, structured programming and modularity concepts, conditional and iterative structures including recursion, object oriented design, data types and structures, and pointers,</p>
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<p>CS 1410 – CE Computer Programming III 8685/Semester Engineering Credit (11th, 12th) WSU 4 credits CAMPUS: Davis and IVC CE Fees: WSU \$5 per credit</p>	<p><u>Prerequisite:</u> CS 1400 CE Computer Programming II <u>Course Description:</u> This advanced course is object oriented computer programming. It is intended to serve both as an introductory course for computer science majors and as a substantial service course for people who will major in other disciplines that require significant involvement with computing such as engineering. A primary objective is to teach students how to write logically structured, well-documented computer programs. The language for this course is C++.</p>
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