

TDR 171 - Introduction to SolidWorks - TDR171

Proposal Type: New Course
Requester(s): Stephen H Simmons
College: North
Status: Curriculum Committee Review

BASIC INFORMATION

Requester(s): Stephen H Simmons
College: North Seattle College
Division/Dept: Business, Engineering & IT
Dean: Laura H Hopkins
Peer Reviewer(s):

COURSE INFORMATION

Proposed Course Number:

Prefix: **TDR** Number: **171**

- Request a new Prefix
 This will be a common course

Full Title: TDR 171 - Introduction to SolidWorks

Abbreviated Title: Intro to Solid Works

Catalog Course Description:

Intro to basic parametric solid modeling practices using SolidWorks or comparable programs to industry standards. Learn engineering graphics in the 3D environment including drawing commands, efficiencies of PSM vs. the 2D environment. CAD or 3D experience recommended.

Course Length: 11 Weeks Request an Exception

Topical Outline:

- I. Introduction to Equipment
- II. Introduction to Software
 - A. Parametric Solid Modeling (PSM programs)
 - B. The PSM program – an overview
- III. Introduction to PSM Basics
 - A. Understanding PSM
 - B. Familiarization with the SolidWorks or CATIA interface
 - C. Element modifications
 - D. Modeling
 - E. Introducing other applications
 - F. Annotations
 - G. Details
 - H. Plotting
- IV. Introduction to Modeling Projects

COURSE CODING

Funding Source: 1.....State

Institutional Intent: 21.....Vocational Preparatory

This Course is a requirement for the following program(s):
(No Programs Selected)

My Course Proposal is a requirement for a program not on this list

Will this course transfer to a 4-year university? **No**

Is this course designed for Limited English Proficiency? **No**

Is this course designed for Academic Disadvantaged? **No**

Does this course have a Workplace Training component? **No**

CIP Code: 15.1304 Request Specific CIP Code

EPC Code: 798 Request Specific EPC Code

Credits:

Will this course be offered as Variable Credit? **No**

List Course Contact Hours

Lecture (11 Contact Hours : 1 Credit)	55
Lab (22 Contact Hours : 1 Credit)	0
Clinical Work (33 Contact Hours : 1 Credit)	0
Other (55 Contact Hours : 1 Credit)	0
 Total Contact Hours	 55
Total Credits	5

COLLEGE SUPPLEMENTAL

Proposed Quarter of Implementation: NA Request Provisional Exception
Winter of 2017

Class Capacity: 28

Note: *The following questions are being asked in order to fulfill [Seattle Colleges District VI and AFT Seattle, Local 1789 Agreement language](#):*

Have you discussed the class cap for the course with your unit administrator and with other unit faculty that will be teaching the course?

Yes, discussion has been held.

Is the class cap number that you have indicated mutually agreed upon by unit faculty and unit administrators?

Yes, agreement has been reached.

Modes of Delivery: (Check all that apply)

Note: *For a course to be designated as **Fully Online** or **Hybrid**, please make sure that you have consulted with the NSC eLearning Office: 206.934.3738 or north.elearning@seattlecolleges.edu. Materials in addition to the Master Course Outline are required by the eLearning subcommittee of CAS before final approval.*

- Fully On Campus
 Fully Online
 Hybrid
 Correspondence
 Credit by Exam
 Seminar
 Visual Media
 Other
 Explanation:

Class Schedule Description:

Intro to Basic Parametric Solid Modeling practices using SolidWorks or comparable programs to industry standards. Familiarization with engineering graphics in the 3D environment to include drawing commands, efficiencies of PSM vs. the 2D environment. CAD or 3D experience recommended.

Course Prerequisite(s):

None

Course Corequisite(s):

None

AA Degree Outcomes: (If Applicable)

Essential Learning Outcomes:

Intellectual & Practical Skills, including

Critical thinking and problem solving

Exhibit the safe and proper selection, use and maintenance of technical equipment used in the 3D printing process, select materials appropriate for the intended use of the 3d models and thinking through the processes taken to produce required projects.

Quantitative reasoning

The student will use Solidworks to produce basic engineering drawings using Imperial and Metric units of Measurement and the conversion of one unit of measurement to the other.

Integrative & Applied Learning

Synthesis and application of knowledge, skills and responsibilities to new settings and problems

Demonstrate an awareness of career opportunities and requirements needed to make informed and meaningful choices in technical occupations.

Discipline/Program Outcomes:

- **Demonstrate the ability to identify, formulate and solve engineering problems**

- **Complete a comprehensive design project using advanced engineering design programs as required by industry standards.**

- **Describe the role and purpose of codes and standards as they pertain to the life, health, and safety of the public.**

- **Perform the necessary steps to transform an idea or need into a completed project.**

- **Perform and support design and estimating functions, including costs, labor requirements, equipment and scheduling functions.**

Course Outcomes:

Course Outcome	Topical Outline	Program Outcome	ELO
Utilize Parametric Solid Modeling to create printed 3D objects that are used in everyday life.	III, D: Modeling; IV, Introduction to Modeling Projects	1	Integrative & Applied Learning

Demonstrate through projects and assignments the skills necessary to use PSM software.	I, Introduction to Equipment; II, A-B, Introduction to Software; III, A-H: Introduction to PSM Basics	4	Critical Thinking & Problem Solving
Demonstrate how to produce drawings that meet accepted conventions and standards.	III, F - H: Annotations, Details and Plotting	2	Quantitative Reasoning

Assessment:

Evaluation may include but is not limited to:

- 1. In-Class Quizzes and Exams**
- 2. Class Assignments**
- 3. Help Desk Posts**
- 4. Final Project**

Final grades are assigned according to published grading standards for course.

Explain why this course is being created:

We are only changing class ID's so that they reflect 100 level courses.

Sample Syllabus *(Optional)*:

Notations: List any additional course fees or any additional notes (e.g. Permission required)