

Inventor Level 1

MECH 211 – 5 Credits – February 2012



Class Description:

This class is a practical hands-on experience. Students will work through a basic mechanical design project using Autodesk Inventor, showing many different methods of using Autodesk Inventor to accomplish certain tasks and solve problems along the way. The class covers the basics of the software interface, sketching solid models, adding sketch constraints, adding sketch dimensions, editing sketches, extruding, revolving sketches, modeling options, modeling tools, editing features, and automatic dimensioning

Location:

**WEI Headquarters:
Haskell Business Center
1301 Fraser Street, Suite A3
Bellingham, WA 98229**



Dates and Times:

The class is scheduled to run on **Tuesday and Thursday evenings at 6:00-9:00 PM from January 31st to February 23rd**. This provides (8) classes to cover the course material. Please see the class calendar on the third page for course material details.

Tuition and Registration:

Tuition must be paid before the class begins. Program enrolled students have seniority for this class and should register online three-weeks before the class begins. Continuing education students may begin registering online two-weeks before the class begins. Students may also send class registrations by mail to the following address:

**Washington Engineering Institute
1301 Fraser Street, Suite A3
Bellingham, WA 98229**

Washington Engineering Institute, 1301 Fraser Street Suite A3, Bellingham WA 98229
website: www.weiedu.org email: admin@weiedu.org phone: (360) 739-1428

School Provided Materials:

- **Lecture Notes:** The school provides lecture handouts as needed.
- **School Laptop - Continuing Education Students:** Enrolled students have their own laptop. However, Continuing education students may use a school laptop during lecture times, but you will not have it to study at home. Therefore, you are encouraged to download and license the educational version of Inventor 2011/2012 as soon as possible. Please contact dbren@weiedu.org if you need to use a school laptop during lectures.

Student Provided Materials:

- **Personal Laptop – Program Enrolled Students:** Program enrolled students are required to have a laptop in order to conduct their program. Enrolled students should install the educational version of Inventor 2011/2012 as soon as possible on their laptop.
- **Inventor 2011/2012 Student Download:** Students should download and license Inventor 2011/2012 to their laptop as part of the coursework for the class, through the Autodesk Education Community. Your instructor will provide a special school link for you to download and license Inventor on the first night of class.

Instructors

Juan Plata

Mechanical Engineering Technology Instructor

Experience: 15 years of experience in the private structural concrete industry. Detail drafter for Whitewater Engineering designing Hydro dams, Power house, and pipe layout civil work data collection. Recently 10 years with Granite Precast as drafting dept manager. Responsible for design and fabrication drawings using Inventor.

Format:

Class Structure: The class will typically run in one-hour blocks as follows:

6:00 PM – Class setup and first hour
6:50 PM – Break
7:00 PM – Class
7:50 PM – Break
8:00 PM – Class last hour

Final Exam and Grades:

Continuing education students will receive an **AU** audit grade. Full career program enrolled students will be graded by attendance (50%) and a final project (50%). The Instructor holds the sole authority to issue grades and shall issue grades based on a 4.0 schedule as follows.

Grading legend

4.0	A+
3.7	A
3.5	A-
3.3	B+
3.0	B
2.7	B-

2.4	C+
2.0	C
1.7	C-
1.4	D+
1.0	D
0.7	D-

AU	Class audited with no grade earned
EXP	Experiential credit granted per policy
EDU	Prior education credit granted per policy
I	Incomplete – Instructor Allows Extra Time to Complete
W	Withdrawn from class

February 2012 – Inventor Level 1 – MECH 211

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
30	31 Interface 6:00-9:00 PM <u>Chapter 1</u> - Intro to Inventor - Creating a Part in Sketch Mode - Sketch Constraints - Saving an Ipt file	1	2 Sketch Mode 6:00-9:00 PM <u>Chapter 2</u> - Modeling tools Extrude, - Start Vault Top slab demo Project. - Students to Model Vault Top Slab. - Model Section and Base	3	4	5
6	7 Sketching 6:00-9:00 PM <u>Chapter 3</u> - Continue with Vault model - Demo Detail, Section, and 3D views - Demo Baffle Wall using Plane to sketch - Show Cross section and save idw file	8	9 Sketched Features 6:00-9:00 PM <u>Chapter 4</u> - Demo 3 piece Man Hole - Demo MH Top Slab - Demo MH Section Riser - Demo MH Base Slab - Students to Draw in Class save to idw.	10	11	12
13	14 Assemblies 6:00-9:00 PM <u>Chapter 5</u> - Add finished MH Parts to IAM file - Review views, section, and details - Go over Shading & Rendering - Students to save IAM file - Insert IAM into IDW file for final Dimensioning	15	16 Drawing 6:00-9:00 PM <u>Chapter 6</u> Go over Feature commands - Revolve - Extrude along a path - Sweep - Loft Command	17	18	19
20	21 Title Blocks 6:00-9:00 PM <u>Chapter 7</u> - Review models and finish detailing - Dimensioning tools IDW - Insert Borders or Printing	22	23 6:00-9:00 PM <u>Chapter 8</u> - Questions and Answers - Review for Exam	24	25 Exam 9:00-12:00 AM <u>Full Career Program Enrolled Students Only</u>	26



PO Box 483
 Custer WA 98240
admin@weiedu.org
 (360) 739-1428

Class Registration Form 2010 v2.0

Returning students with a Student ID do not need to fill out the gray portions of this form.

Name	
Address	
Phone	
Email	

Class Requested	MECH 211 – Inventor Level 1
Class Month / Date	February 2012

WAC 490-105-160 – State Licensed School Reporting Requirements:

Student ID #		
SSN #		
Date of Birth		
Gender		
Disability	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Race	<input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black/African American <input type="checkbox"/> Hawaiian Native or Pacific Islander <input type="checkbox"/> Hispanic <input type="checkbox"/> White/Caucasian <input type="checkbox"/> Multi-racial <input type="checkbox"/> Other	
Prior Education	<input type="checkbox"/> Less than high school graduation <input type="checkbox"/> GED <input type="checkbox"/> High School Graduate <input type="checkbox"/> Post H.S., no degree or certificate <input type="checkbox"/> Associate Degree <input type="checkbox"/> Bachelor Degree <input type="checkbox"/> Master or Doctorate Degree	GED Year _____ Graduation Year _____ Graduation Year _____ Graduation Year _____ Graduation Year _____
Name of Last School Attended		

Student Signature

Date