

# Civil 3D Level 1

**ENGR 211 – 5 Credits – January 2012**



## **Class Description:**

This class is a practical hands-on experience. Students will work through a basic road design project from beginning to end using Civil 3D, showing many different methods of using Civil 3D to accomplish certain tasks and solve problems along the way. The class covers the basics of basemap preparation, preliminary layout, survey plan, surfaces generation, horizontal alignments, profiles, corridor modeling, and grading.

## **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 afternoons** at **2:00-5:00 PM** from **January 3<sup>rd</sup> to January 26<sup>th</sup>**. 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**

## School Provided Materials:

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- **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 Civil 3D 2011/2012 as soon as possible. Please contact [dbren@weiedu.org](mailto:dbren@weiedu.org) if you need to use a school laptop during lectures.

## Student Provided Materials:

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- **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 Civil 3D 2011/2012 as soon as possible on their laptop.
- **Civil 3D 2011/2012 Student Download:** Students should download and license Civil 3D 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 Civil 3D on the first night of class.

## Instructors

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### Dave C. Bren, PE, MSCE Civil Engineering Technology Instructor

**Experience:** 15 years of experience in the public and private civil engineering industry. Most recent experience was as the Assistant Public Works Director for the City of Blaine. Mr. Bren established and taught the Civil Engineering Technology program at Bellingham Technical College from 1997-2006 while continuing to consult in the industry.

**Registration:** Professional Engineer  
State of Washington License #43156

**Education:** Master of Science in Civil Engineering  
University of Washington  
  
Bachelor of Science in Civil Engineering  
University of Washington

## Format:

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

2:00 PM – Class setup and first hour  
2:50 PM – Break  
3:00 PM – Class  
3:50 PM – Break  
4:00 PM – Class last hour

## Final Exam and Grades:

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**Continuing education** students will receive an **AU** audit grade. Full career program enrolled students will be graded by attendance (50%) and a final exam (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

# January 2012 – Civil 3D Level 1 – ENGR 211

Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
2		<b>3</b>	<b>Interface &amp; Styles</b>	4		<b>5</b>	<b>Alignments</b>	6		7		8	
		2:00-5:00 PM Orientation Interface Styles				2:00-5:00 PM Horizontal Alignments Labeling Alignments ASCII Stakeout File Exporting Point Files							
9		<b>10</b>	<b>Points</b>	11		<b>12</b>	<b>Surfaces</b>	13		14		15	
		2:00-5:00 PM Point Description Keys and Styles Point Import and Export Parcel Definition Parcel Line Labels and Tables				2:00-5:00 PM Surface Definition Breakline Definition Contour Styles Contour Labeling							
16		<b>17</b>	<b>Parcels</b>	18		<b>19</b>	<b>Profiles</b>	20		21		22	
		2:00-5:00 PM Parcel Styles and Labeling Parcel Division by Alignment Parcel Layout Tools				2:00-5:00 PM Design Grid Profile Styles EG Profiles FG Profiles							
23		<b>24</b>	<b>Road Corridors</b>	25		<b>26</b>	<b>Site Grading</b>	27		<b>28</b>	<b>Exam</b>	29	
		2:00-5:00 PM Road Assemblies Road Corridors Road Sections Road Surfaces				2:00-5:00 PM Grading Feature Lines Grading Criteria Grading Groups and Composite Surfaces Volume Calculations				9:00-12:00 AM <b><u>Full Career Program Enrolled Students Only</u></b>			



PO Box 483  
 Custer WA 98240  
[admin@weiedu.org](mailto: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.**

<b>Name</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Email</b>	

<b>Class Requested</b>	<b>ENGR 211 – Civil 3D Level 1</b>
<b>Class Month / Date</b>	<b>January 2012</b>

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

<b>Student ID #</b>		
<b>SSN #</b>		
<b>Date of Birth</b>		
<b>Gender</b>		
<b>Disability</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Race</b>	<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	
<b>Prior Education</b>	<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 _____
<b>Name of Last School Attended</b>		

\_\_\_\_\_  
**Student Signature**

\_\_\_\_\_  
**Date**