

Heavy Construction Estimation

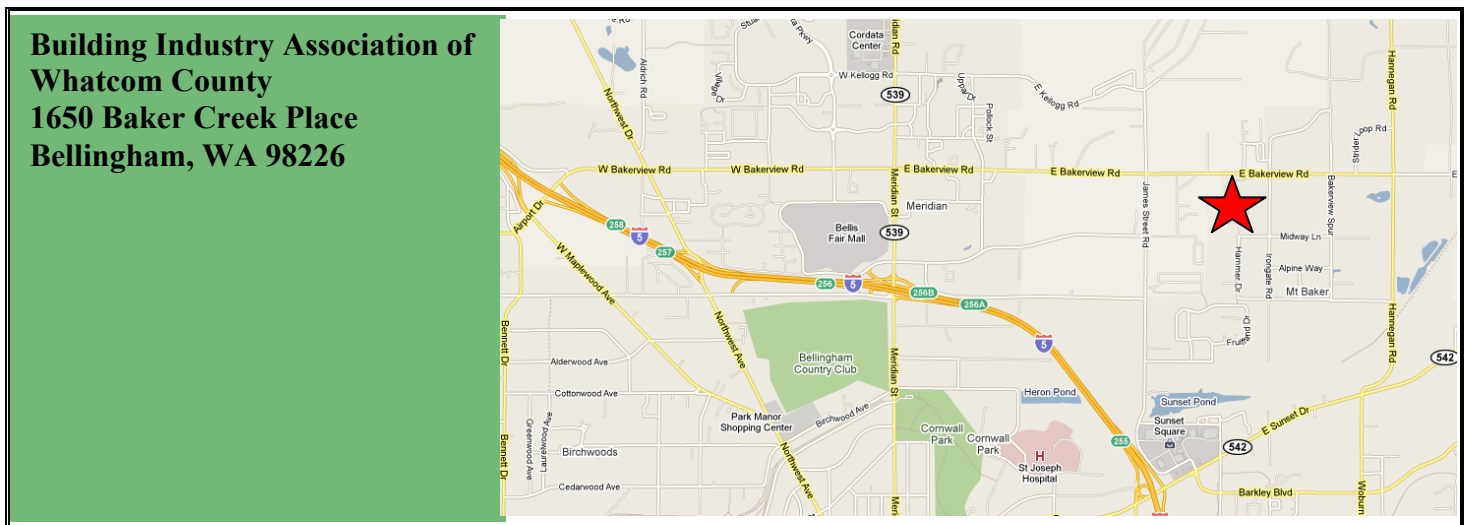
HCON 121 – 5 Credits – October 2010



Class Description:

This class combines the learning of the MS Excel software with a classic heavy civil construction estimation course. Students will learn conceptual project estimating as well as detailed unit cost estimation concepts. Students will practice timely quantity take offs for water, sewer, and stormwater piping and structures from civil plans. In addition, students will learn average end area methods for roadway material volumes and the grid method for site grading volumes. The course concludes with bid process fundamentals and a timely competitive bid.

Location:



Dates and Times:

The class is scheduled to run on **Monday and Wednesday evenings at 6:00-9:00 PM from October 4th to October 27th**. This provides a total of (10) evening or weekend classes to cover the course material. Please see the Class Calendar on the last page. The instructor has the option to schedule a Saturday morning meeting.

Tuition and Registration:

Tuition for this class is \$400. 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
Registration Office
PO Box 483
Custer WA 98240**

Washington Engineering Institute, PO Box 483, Custer WA 98240

website: www.weiedu.org

email: admin@weiedu.org

phone: (360) 739-1428

School Provided Materials:

- **Lecture Notes:** The school provides lecture handouts as needed.

Student Provided Materials:

- 3 Ring Binder, calculator, engineer calculations pad (green sheets), and small straight edge for linework.
- Laptop computer with wireless capability
- Open Office Calc (Free) or MS Excel Software
- Positive, motivated, respectful, and helpful classroom character

Co-Instructors

Stan LaNois

Experience: 34 years of progressive construction management experience from field superintendent to estimator/project manager. Project manager duties included estimating, bidding process, contract document preparations, budgets, billing schedules, purchase orders, and write subcontracts; process payments, and process change orders.

Education: BA Sociology, San Diego State University

Dave C. Bren, PE, MSCE

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 instructed the Civil Engineering Technology program at Bellingham Technical College from 1997-2006 while continuing to consult in the industry. Mr. Bren continues to consult in the industry while teaching at the Washington Engineering Institute.

Registration: Professional Engineer, State of Washington

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

Format:

Class Structure: Evenings 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:

Grades will be determined by attendance (20%), homework assignments, and projects (80%).

October 2010 – Heavy Construction Estimation – HCON 121

Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
								1		2		3	
4	Construction Process	5		6	Utilities & Linear Earthwork	7		8		9	TBD	10	
6:00-9:00 PM Construction Process Sequence Estimation and Bidding Process Install Open Office 3.2 Install Fastbid (Builders Exchange)				6:00-10:00 PM Utilities Takeoff Spread Sheet Equations Average End Area Method						9-12 AM Instructor Optional Class Time			
11		12		13	Site Earthwork	14		15		16	Paydirt	17	
Columbus Day Holiday				6:00-9:00 PM Grid Earthwork Method Spread Sheet Logic Statements						9-12 AM Paydirt Software Demo			
18	Unit Costs	19		20	Spreadsheet Lab	21		22		23	Hard Dollar	24	
6:00-9:00 PM RS Means Data Company Historical Data Competitor Historical Data Engineers Estimate Data				6:00-9:00 PM Spreadsheet Lab Bid Spreadsheet Preparations						9-12 AM Hard Dollar Software Demo			
25	Bid Documents	26		27	Bid Opening	28		29		30	TBD	31	
6:00-9:00 PM Assign Bid Teams Review Bid Documents Split Teams and Begin Bid Process				6:00-9:00 PM Open Bid Bid Documents Review Bid Item Review Declare Bid Winner						9-12 AM Instructor Optional Class Time			

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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	HCON 121 – Heavy Construction Estimation
Class Month / Date	October 2010

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