Course Syllabus

Fluvial Sediment Transport
Fall 2006

Instructor: Andy Moore, 672-9465, amoore5@kent.edu
We meet TTh 12:30-1:45 PM in McGilvrey 234

Text (of sorts):
Rivers and Floodplains by John Bridge (B) and *Lecture notes on sediment transportation and channel stability* by Vito Vanoni, Norman Brooks, and John Kennedy (VBK). For those who are interested, a fine book on rivers is Leopold's *Water, Rivers, and Creeks*. See me if you'd like to look at any of these (and if you want a copy of VBK).

Grading:	Problem sets	20%
	Lab exercises	30%
	Midterm	30%
	Final Projects	20%

Weekly Schedule:

Week	Topic(s)	Reading	Notes
Aug. 28-Sept. 1	Introduction to fluvial sediment transport	B: Ch. 1 VBK: Ch. 1	
Sept. 4-8	LAB #1: Fluvial Discharge		
Sept. 11-15	LAB #2: Suspended Load		Lab 1 due (15th)
Sept. 18-22	LAB #3: Bed Load		Lab 2 due (22nd)
Sept. 25-29	LAB #4: Acoustic Methods		Lab 3 due (29th)
Oct. 2-6	Hydraulics	B: Ch. 2	PS 1 out (3rd) Lab 4 due (5th)
Oct. 9-13	Turbulence	B: Ch. 2	PS 1 due (12th) PS 2 out (12th)
Oct. 16-20	Sediment description Fall velocity LAB #5: Sediment Characterization	B: Ch. 3 VBK: Ch. 3	PS 2 due (19th)
Oct. 23-27	Dimensional analysis Initiation of motion		GSA (22nd-25th) PS 3 out (26th)
Nov. 6-10	Initiation of motion		PS 3 due (9th)

Nov. 13-17	Bedforms	B: Ch. 3 VBK: Ch. 4	MIDTERM (14th)
Nov. 20-24	Bedload and bedload transport	B: Ch. 4 VBK: Ch. 2	NO CLASS (23rd)
Nov. 27-Dec. 1	Suspended load and suspended transport	B: Ch. 3 VBK: Ch. 5	PS 4 out (28th)
Dec. 4-8	Sediment routing		PS 4 due (5th)

Office Hours: Wednesday and Thursday 2 to 4 PM in my office.

Problem Sets: There will be four homework problem sets this semester. They will be due in class about one week after they are assigned, unless you have made arrangements with me before the due date. You are encouraged to work with other students on the problem sets, but each person must turn in his or her own work.

A note on the labs: Labs will be held each week for the first four weeks of the semester. On lab week, I will present a demonstration/lecture on Tuesday during class, but in place of class on Thursday, we'll go outside for lab. Time for the lab will be determined once class starts, but will be one continuous 2 or 3 hour block.

Note that labs will be outside, and will not be called because of bad weather. Consider owning good raingear (suitable for standing around in the rain for three hours at a stretch). You will also be wading in hip-deep water. Although there will be stocking-foot waders available, you may well be happier with your own pair of hip-waders. Trust me on this—the failure rate on stocking-foot waders is nearly 100%.

Midterm and Final: The midterm will be held in class, on the 14th of November. You will be free to use your own notes and the class notes (plus the texts, if you want). Naturally, you can't use your classmates.

Late assignments and missing exams: Problem sets and labs will be due about one week after they're assigned (check syllabus for dates). Late assignments will be devalued at a rate of 5% per school day. This means if you got an 8 out of ten, but it was six days late, it is now a 5.6 out of ten (8 * 0.7).

You have to take the midterm and complete the final project to receive a grade in the class. So there!

Final Project: In lieu of a final, each of you will be asked to develop an annotated bibliography on some aspect of sediment transport. The bibliography should include approximately 20 current research articles in the topic you've chosen, and each entry should include a short (1-2 paragraph) statement of what's in the article and why it's useful. Please see me for examples!

Help: Should you need help, please drop by my office or email me. You're guaranteed to find me in during office hours, but you may get me elsewhen (mostly in the afternoon). If you want to set up a different time, give me a call, email me, or talk to me after class. ***If something in class doesn't make sense….ASK.***