Course Schedule - Fall 2007

Agricultural and Biological Engineering

100 ***Intro to Agr Engineering*** credit: 1 hours.
Introduction to the engineering profession with career opportunities in the agricultural engineering discipline. Interactive class activities include concepts necessary for becoming a successful engineer including time management, design concepts, ethics, and teambuilding. Students become familiar with laboratories, computer facilities, internships and other opportunities that are available to agricultural engineering students. A team design experience is included. Class emphasis on technical communication and problem-solving skills as well as career planning. Approved for both letter and S/U grading.

CRN	Type	Section	Time	Days	Location	Instructor
31263	lecture	B	01:00 PM - 01:50 PM	R	room 204 Agricultural Engr Sciences Bld	Bode, L

199 ***Undergraduate Open Seminar*** credit: 1 to 5 hours.
Experimental course on a special topic in Agricultural Engineering. May be repeated to a maximum of 12 hours.

CRN	Type	Section	Time	Days	Location	Instructor
10141	independent study		ARRANGED			
10141: Instructor Approval Required						

221 ***Agr & Bio Engineering I*** credit: 4 hours.
Introduction to engineering methods used in the design and management of agricultural, biological and environmental systems. Topics covered include the hydrologic cycle, soil-water properties and relationships, water runoff, surveying, soil erosion, water management, engine power, fluid power, traction and weight transfer, and off-road vehicle systems. Prerequisite: One of MATH 220, MATH 221, MATH 234.

CRN	Type	Section	Time	Days	Location	Instructor
31265	laboratory	AB1	10:00 AM - 11:50 AM	T	room 248 Agricultural Engr Sciences Bld	Kalita, P; Grift, T
31267	laboratory	AB2	08:00 AM - 09:50 AM	T	room 248 Agricultural Engr Sciences Bld	Kalita, P
31270	lecture	AL1	10:00 AM - 10:50 AM	MWF	room 204 Agricultural Engr Sciences Bld	Kalita, P; Grift, T

361 ***Princ of Off-Road Machines*** credit: 3 hours.
Design and development concepts of agricultural and industrial machines; analysis and synthesis of tillage, planting, harvesting, chemical application, material handling mechanisms, and precision farming tools. Includes laboratory. Prerequisite: ABE 221and TAM 212.

CRN	Type	Section	Time	Days	Location	Instructor
29647	laboratory	AB1	01:00 PM - 02:50 PM	T	room 137 Agricultural Engr Sciences Bld	Tian, L
29651	lecture	AL1	11:00 AM - 11:50 AM	TR	room 208 Agricultural Engr Sciences Bld	Tian, L

396 ***UG Honors Research or Thesis*** credit: 1 to 4 hours.
Individual research, special problems, thesis, development and/or design work for James Scholars under the direction of the honors advisor. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10163	independent study		ARRANGED			
10163: Instructor Approval Required						

397 ***Independent Study*** credit: 1 to 4 hours.
Individual research, special problems, thesis, development and/or design work under the supervision of a member of the faculty. May be repeated to a maximum of 8 hours.

CRN	Type	Section	Time	Days	Location	Instructor
50272	independent study		ARRANGED			
50272: Please see instructor for appropriate CRN.						

420 ***Kinem and Dynm of Mechanl Sys*** credit: 3 hours.
Same as ME 440. See ME 440.

CRN	Type	Section	Time	Days	Location	Instructor
36870	lecture-discussion	N	01:00 PM - 01:50 PM	TR	room 336 Mechanical	Dankowicz, H

					Engineering Bldg	

430 ***Project Management*** credit: 2 hours.
Engineering team effectiveness; project definition; assessing related technologies; marketing and business planning related to engineering; budgeting and financial analyses of engineering projects; safety, ethics and environmental considerations; intellectual property; engineering proposal presentation. Same as TSM 430.

CRN	Type	Section	Time	Days	Location	Instructor
36669	lecture-discussion	A	02:00 PM - 03:50 PM	R	room 272 Agricultural Engr Sciences Bld	Zahos, S
	lecture-discussion	A	02:00 PM - 03:50 PM	M	room 204 Agricultural Engr Sciences Bld	Zahos, S
40242	lecture-discussion	B	04:00 PM - 05:50 PM	R	room 204 Agricultural Engr Sciences Bld	Zahos, S
	lecture-discussion	B	04:00 PM - 05:50 PM	M	room 204 Agricultural Engr Sciences Bld	Zahos, S

440 ***Applied Statistical Methods I*** credit: 4 hours.
Same as ANSC 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

Students must register for one lab-discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
33575	lecture	AL1	08:00 AM - 09:20 AM	TR	room 150 Animal Sciences Laboratory	Bollero, G
33576	laboratory-discussion	AY1	01:00 PM - 02:50 PM	T	room N120 Turner Hall	Bollero, G
34029	laboratory-discussion	AY2	05:00 PM - 06:50 PM	T	room N120 Turner Hall	Bollero, G
34047	laboratory-discussion	AY3	01:00 PM - 02:50 PM	W	room N120 Turner Hall	Bollero, G
34061	laboratory-discussion	AY4	03:00 PM - 04:50 PM	T	room N120 Turner Hall	Bollero, G
34085	laboratory-discussion	AY5	10:00 AM - 11:50 AM	T	room N120 Turner Hall	Bollero, G

455 ***Erosion and Sediment Control*** credit: 2 hours.

Processes, estimation, and control of soil erosion by water, wind and resultant sedimentation. Upland, in-channel, urban, agricultural, disturbed (both military training and mining), and forested environments are discussed. Site planning and design constitute a capstone laboratory exercise. Same as CEE 455 and TSM 455. 2 undergraduate hours. 2 graduate hours. Prerequisite: CEE 350 or NRES 401; CEE 380 or NRES 201.

CRN	Type	Section	Time	Days	Location	Instructor
49611	laboratory-discussion	AB1	01:30 PM - 02:50 PM	MWF	room 242 Agricultural Engr Sciences Bld	Hirschi, M
49611: Meets 15-Oct-07 - 07-Dec-07.						

459 ***Drainage and Water Management*** credit: 3 or 4 hours.
Design, construction, performance, and maintenance of agricultural drainage systems to meet both production and water quality objectives. Modeling drainage systems. Principles of conservation drainage. Includes laboratory. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

CRN	Type	Section	Time	Days	Location	Instructor
29655	laboratory	A3	03:00 PM - 05:50 PM	W	room 242 Agricultural Engr Sciences Bld	Cooke, R
	lecture	A3	11:00 AM - 11:50 AM	MWF	room 208 Agricultural Engr Sciences Bld	Cooke, R
: 3 hours						
39805	laboratory	A4	03:00 PM - 05:50 PM	W	room 242 Agricultural Engr Sciences Bld	Cooke, R
	lecture	A4	11:00 AM - 11:50 AM	MWF	room 208 Agricultural Engr Sciences Bld	Cooke, R
: 4 hoursRestricted to graduate students.						

466 ***Engineering Off-Road Vehicles*** credit: 3 hours.
Engineering aspects of design and application of off-road vehicles for farm and construction use; thermodynamics of engines; measurement of power and efficiencies; power transmission and traction; chassis mechanics; and operator environment. Includes laboratory. Prerequisite: ME 300.

CRN	Type	Section	Time	Days	Location	Instructor
31273	laboratory	AB1	03:00 PM - 05:50 PM	T	room 242 Agricultural Engr Sciences Bld	Hansen, A

31277	laboratory	AB2	03:00 PM - 05:50 PM	R	room 242 Agricultural Engr Sciences Bld	Hansen, A
31280	lecture	AL1	10:00 AM - 10:50 AM	TR	room 204 Agricultural Engr Sciences Bld	Hansen, A

476 ***Indoor Air Quality Engineering*** credit: 3 hours.
Principles and applications of indoor air quality. Topics include particle mechanics, gas kinetics, air quality sampling principles and techniques, air cleaning technologies (i.e. filters, cyclones, electrostatic precipitation) for indoor environments, and ventilation effectiveness. Includes laboratory. Prerequisite: PHYS 213, MATH 385, and TAM 335.

CRN	Type	Section	Time	Days	Location	Instructor
29660	laboratory	AB1	03:00 PM - 04:50 PM	W	room 248 Agricultural Engr Sciences Bld	Zhang, Y
29662	lecture	AL1	09:00 AM - 09:50 AM	TR	room 242 Agricultural Engr Sciences Bld	Zhang, Y

483 ***Eng Properties of Food Mat*** credit: 3 hours.
Physical properties of foods and biological materials; design of processing equipment and the sensing and control of food processes; thermal, electromagnetic radiation, rheological, and other mechanical properties. Includes laboratory. Prerequisite: TAM 251; either CHBE 421 or both ME 330 and TAM 335.

CRN	Type	Section	Time	Days	Location	Instructor
29663	lecture	A	11:00 AM - 12:50 PM	TR	room 158 Agricultural Engr Sciences Bld	Rausch, K

489 ***Process Des for Corn Milling*** credit: 3 hours.
Engineering and scientific principles involved in the major corn fractionation processes of wet milling, dry milling and alkali cooking, including structural and diffusional characteristics of corn, steeping phenomena and chemical and mechanical fractionation methods. Principles of process design and mill operation. Prerequisite: One of CHBE 421, ME 300, ME 320.

CRN	Type	Section	Time	Days	Location	Instructor
29665	lecture-discussion	A	09:00 AM - 09:50 AM	MWF	room 208 Agricultural Engr Sciences Bld	Eckhoff, S

497 ***Independent Study*** credit: 1 to 4 hours.
Individual research, special problems, thesis, development and/or design work under the supervision of a member of the faculty. 1 to 4 undergraduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
50183	independent study		ARRANGED			
50183: Instructor Approval Required						

498 ***Special Topics*** credit: 1 to 4 hours.
Group discussion or an experimental course on a special topic in agricultural engineering. May be repeated to a maximum of 16 hours.

CRN	Type	Section	Time	Days	Location	Instructor
48018	lecture-discussion	LR1	01:00 PM - 01:50 PM	M	room 204 Agricultural Engr Sciences Bld	Rodriguez, L
48018: Topics/Biological Sys Analysis						
48031	lecture-discussion	LR2	01:00 PM - 01:50 PM	M	room 204 Agricultural Engr Sciences Bld	Rodriguez, L
48031: Topics/Biological Sys Analysis						

501 ***Graduate Research I*** credit: 1 hours.
Basic research orientation, research methods, presentation skills, laboratory practices, case studies, and professional and ethical conduct.

CRN	Type	Section	Time	Days	Location	Instructor
39806	lecture-discussion	A	01:00 PM - 01:50 PM	F	room 204 Agricultural Engr Sciences Bld	Zhang, Y

594 ***Graduate Seminar*** credit: 0 hours.
Presentations of thesis research by graduate students; other presentations on teaching or current research issues related to agriculture, biology, and engineering. Approved for S/U grading only. May be repeated up to a maximum of 6 times.

CRN	Type	Section	Time	Days	Location	Instructor

47356	lecture-discussion	LB1	12:00 PM - 12:50 PM	F	room 204 Agricultural Engr Sciences Bld	Zhang, Y; Bode, L

597 ***Independent Study*** credit: 1 to 4 hours.
Individual investigations or studies of any phases of agricultural engineering selected by the student and approved by the advisor and the faculty member who will supervise the study. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10174	independent study		ARRANGED			
10174: Instructor Approval Required						

599 ***Thesis Research*** credit: 0 to 16 hours.
Approved for S/U grading only. May be repeated.

CRN	Type	Section	Time	Days	Location	Instructor
10177	independent study		ARRANGED			
10177: Instructor Approval Required						
48298	independent study	KB	ARRANGED			Bhalerao, K