

COURSE SYLLABUS

CGN 6505 PROPERTIES, DESIGN AND CONTROL OF CONCRETE SPRING 2020

INSTRUCTOR: Mang Tia, 265M Weil, 352-294-7768
OFFICE HOURS: M, W & F 10:45 A.M. - Noon
CLASS WEB SITE: through e-learning at <http://elearning.ufl.edu/> (use CANVAS)

OBJECTIVE: To learn the “how” and “why” of the behavior, design, control, evaluation and construction practices of Portland cement concrete.

CLASS SCHEDULE: Tuesday 9:35-11:30 AM, WEIM 1092
 Thursday 9:35-10:25 AM, WEIM 2050

TEXT BOOKS: (1) Concrete Microstructure, Properties and Materials by Mehta & Monteiro, Fourth Edition
 (2) Design and Control of Concrete Mixtures by PCA, 15th Edition

<u>Date</u>	<u>Lecture Topic</u>	<u>Readings</u>	
1/7	Introduction to Concrete	Ch. 1 of (1) & (2)	
1/9	Aggregates	Ch. 7 of (1) & Ch. 6 of (2)	
1/14	Aggregates	Ch. 7 of (1) & Ch. 6 of (2)	
1/16	Portland Cement	Ch. 6 of (1) & Ch. 3 of (2)	
1/21	Portland Cement		
1/23	Structure of Concrete	Ch. 2 of (1)	
1/28	Structure of Concrete	Ch. 2 of (1)	
1/30	Strength of Concrete	Ch. 3 of (1)	
2/4	TEST NO. 1 (2 hours)		
2/6	NO CLASS		
2/11	Concrete at Early Age	Ch. 10 of (1)	Topic for term paper due
2/13	Hot & Cold Temperature Concreting	Ch. 10 of (1)	
2/18	Admixtures	Ch. 8 of (1) & Ch. 7 of (2)	
2/20	Proportioning Concrete Mix	Ch. 9 of (1) & Ch. 12 of (2)	
2/25	Stress-Strain Relationship	Ch. 4 of (1)	
2/27	Shrinkage and Creep		
3/2 – 3/6	SPRING BREAK		

<u>Date</u>	<u>Lecture Topic</u>	<u>Readings</u>
3/10	Shrinkage and Creep	
3/12	Sustainability of Concrete	Outline for term paper due
3/17	TEST NO. 2 (2 hours)	
3/19	Concrete Durability	Ch. 5 of (1)
3/24	Concrete Durability	
3/26	Special Concretes	Ch.12 of (1) & Ch. 19 & 20 of (2)
3/31	Special Concretes	
4/2	Concrete Mechanics	Ch. 13 of (1)
4/7	Test No. 3 (2 hours)	
4/9	Student presentations	
4/14	Student presentations (2 hours)	
4/16	Student presentations	
4/21	Student presentations (2 hours)	
4/27	Term paper due	

BASIS FOR GRADES:

Three tests	75%
Term paper and presentation	20%
Homework	5%

Grading Scale:

<u>Grade</u>	<u>% Scale</u>
A	90.0 - 100
A-	87.0 – 89.9
B+	84.0 – 86.9
B	80.0 – 83.9
B-	77.0 – 79.9
C+	74.0 – 76.9
C	70.0 – 73.9
C-	67.0 – 69.9
D+	64.0 – 66.9
D	60.0 – 63.9
D-	57.0 – 59.9
E	<57.0

Presentations:

Each student will be required to write a 10 to 20 page term paper on a topic related to concrete technology and to make a 15-minute presentation on the term paper.

Attendance

Class attendance is required. Students with a perfect attendance record will be given 1% bonus point. A penalty point of 1% will be assessed for each unexcused absence. For example, those with 1 absence will have zero bonus point, and those with 4 absences will have penalty points of 3%.

Make-up Exam Policy:

No make-up tests will be given except for medical reasons or unless arrangements have been made prior to tests.

Homework assignments are usually due one week following the lab or as specified by the instructor. A penalty of 10% per school day shall be assessed on materials turned in late.

Honesty Policy:

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

Accommodation for Students with Disabilities:

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services:

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

* UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.

* Career Resource Center, Reitz Union, 392-1601, career and job search services.

Software Use:

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.