

Course : CEE 768 (CRN 87536) - BEHAVIOR/DESIGN OF FRP MEMBERS

Semester : Fall 2014

Course Format 3 hr Lecture
And Credit hours : 3 hr Credit

Prerequisites : Instructor(s) Consent

Instructor : Dr. Vijay P.V.
Rm. 653C Engineering Sciences Building,
p.vijay@mail.wvu.edu
(304)-293-9985

Schedule : Tuesday 11.00 to 12.15 p.m.
Thursday 11.00 to 12.15 p.m.

Location : Room ESB-E 215

Office Hours: Tuesday and Thursday: 10:00 AM- 11:00 AM or by appointment

Required Texts:

This course draws from several sources such as ACI committee guidelines, ASCE design manuals, composite text books, manufacturing and design handbooks, course instructor notes, military handbooks. List of all relevant material and related text will be provided. Any recommended reading will be placed on reserve at the Evansdale Library, as required.

<u>Grading :</u>	Exams	30
	Homework	40
	Final Exam/Project	30
	Total	<u>100</u>

<u>Grade Assignment :</u>	100 - 90	A
	89 - 80	B
	79 - 70	C
	69 - 60	D
	59- 0	F

Grading Policy : No make-up exams except by prior arrangement with instructor.
Late assignments will not be accepted.
Exam grading appeals in writing on the day the exam is returned.

HW Assignments: Homework assignments will be given approximately every two weeks or earlier, and each assignment will be worth approximately the same credit (Typically there will be between 5 and 6 homework assignments each worth the same amount with the total worth being 40% of the final grade).

Exams:

During this course, you are expected to work independently on in-class/take home exams to solve design problems, analysis of composites and related information covering material presented in this course. Two in-class and/or take home exams, and final exam/project are worth 60% of the final grade. In-class and/or take-home exams will be decided based upon the exam content and duration.

Academic Integrity/
Honesty Policy:

West Virginia University expects that every member of its academic community shares the historic and traditional commitment to honesty, integrity, and the search for truth. Students should act to prevent opportunities for academic dishonesty to occur, and in such a manner to discourage any type of academic dishonesty. Academic dishonesty includes plagiarism; cheating and dishonest practices in connection with examinations, papers, and projects; and forgery, misrepresentation, and fraud. Complete policy statements and definitions on academic integrity/dishonesty can be accessed at WVU graduate student website.

Attendance Policy:

Consistent with WVU guidelines, students absent from regularly scheduled examinations because of authorized University activities will have the opportunity to take them at an alternate time. Make-up exams for absences due to any other reason will be at the discretion of the instructor.

Social Justice
Statement :

"West Virginia University is committed to social justice. Instructor(s) concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and nondiscrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class. Please advise the instructor(s) and make appropriate arrangement with Disability Services by contacting them at Phone: (304) 293-6700.

COURSE SCHEDULE 768- FALL 2014
(TOPICS MAY BE VARIED WITHIN EACH WEEK DEPENDING ON STATE-OF-THE ART)

Week	Starting	Topic
1	8/18/14	Introduction and Review of Composite Material Mechanics and infrastructure applications
2	8/25/14	Polymer/Fiber Properties and their Design
3	9/01/14	Manufacturing of Composites
4	9/08/14	Laminate Mechanics/Design/Analysis
5	9/15/14	Laminate/shape Mechanics/Design/Analysis/Failure Theories
6	9/22/14	Review of Composite Laminate Mechanics/Design/Analysis EXAM 1
7	9/29/14	Internal Reinforcing of Concrete Structures with FRP
8	10/06/14	Energy Absorption in concrete Structures with FRP
9	10/13/14	External Reinforcing/Rehabilitation of structures with FRP (FALL RECESS 10/13-10/14)
10	10/20/14	Analytical modeling of structures with FRP reinforcement
11	10/27/14	Confinement Effects of FRP in column members
12	11/03/14	EXAM 2 (11/04 CLOSED) FRP Structural Shapes Analysis
13	11/10/14	FRP Structural Shapes Analysis
14	11/17/14	FRP Structural Shapes Design/Durability
15	11/24/14	THANKSGIVING RECESS
16	12/01/14	Test Methods for Composites/ Sustainable Materials/ Recycling of Polymers
17	12/08/14	LAST DAY OF CLASSES REVISION/FINALS
18	12/11/14	FINAL WEEK (12/11-12-17)