



Reinforced Concrete Design I

INC-316

Instructor	Kalil Erazo, Ph.D.
Course Description	Principles of behavior of reinforced concrete structural members in bending, including topics such as flexural design of beams and slabs, ACI code based design, shear and serviceability.
Prerequisites:	INC-310 (Structural Analysis)
Recitations (TA)	Wednesday 4:00pm – 6:00pm (subject to change, location TBA)
Textbooks	Reinforced Concrete: Mechanics and Design (5th edition), Wight and MacGregor ACI Building Code Requirements and Commentary for RC (ACI 318-11)

Grading

25%	Homework
25%	Midterm 1
25%	Midterm 2
25%	Final Exam

Grading Policy

1. Homework sets must be submitted to the instructor on the date they are due at the *beginning* of the class. Late homework will not be accepted without the instructor's prior approval.
2. Cooperative effort at understanding the material and assignments is encouraged. However, you may only submit work that you have completed individually.
3. All exams are pledged. Submitting any individual assignment that is not the result of a student's own effort is considered a violation of the honor code.
4. Consistently absent students (three consecutive classes or more) may be penalized with a reduction of homework grade at the discretion of the instructor, unless the student submits written evidence to support the reason for doing so promptly as soon as he/she returns to class.

Course Topics

- *Design process of reinforced concrete members*
- *Mechanical properties and behavior of reinforced concrete*
- *Members in flexure: Behavior and strength*
- *Design of beams and slabs: flexure, shear and torsion*
- *Reinforcement considerations (development, anchorage and splicing)*
- *Serviceability*

Syllabus Change Policy

This syllabus is subject to change with reasonable advance notice, as deemed appropriate by the instructor.