COURSE SYLLABUS

COURSE NUMBER: CIVE 525
COURSE TITLE: Design of Steel

COURSE DESIGNATION
Technical elective for Civil and Construction Engineering majors.

COURSE DESCRIPTION
Mechanical behavior of structural steel. Design of steel beams, girders, columns and members subjected to combines stresses. Design of various types of connections of steel structures: plate girders, continuous beams and rigid frames. (3 credits)

PRE-REQUISITE
Credit in CIVE 321.

LECTURES/LABORATORY SCHEDULE
Lecture – 3 sessions per week, 50 minutes per session

TEXTBOOKS


COURSE LEARNING OUTCOMES
1) Solve problems in mathematics through multi-variable calculus, calculus-based physics, and one additional area of science
2) Solve well-defined engineering problems in four technical areas appropriate to Civil engineering
3) Apply relevant techniques, skills, and modern engineering tools to solve a simple problem
4) Analyze a complex situation involving multiple conflicting professional and ethical interests, to determine an appropriate course of action
5) Demonstrate the ability to learn on their own, without the aid of formal instruction

TOPICS COVERED
- Introduction and Materials
- Loads and Design Methods
- Tension Members
- Axially Loaded Compression Members
- Beams
- Beam – Columns
- Simple Connections
- Eccentric Connections
- Composite Beams
- Advanced Topics

GRADING
Homework Assignments and Quizzes 15%
Exams 45%
Final 40%