The University of Jordan  
School of Engineering  
Department of Civil Engineering  

Course Syllabus: Spring 2018/2019

1. Course Name: Prestressed Concrete  
   Course Number: 0941737  
   Credits: 3

2. Class schedule:  
   Time and place: Section #1: Monday: 3:30 pm – 6:30 pm (at Civil 103)  
   Office Hours: Monday and Wednesday: 2:00 pm – 3:30 pm, or by appointment

3. Instructor:  
   Name: Dr. Maha Alqam  
   E-mail address: m.alqam@ju.edu.jo  
   Office Phone: +9625355000 Ext.: 22778


5. Note: All lecture notes are taken in part or in whole from Ref. 1 – Naaman, A. E., “Prestressed Concrete Analysis and Design (Fundamentals)”, 2nd edition, Techno Press 3000, 2004. Specific figures, charts, tables, text, examples, etc...


7. Contents:  
   POWERPOINT PRESENTATION - Practical Applications of Cast-in-Place Post-Tensioned Concrete Construction (On-Site); Lifting of PT Beam; Stressing using PT Jacks.  
   CHAPTER 1 - PRINCIPLE METHODS OF PRESTRESSING  
   CHAPTER 2 - PRESTRESSING MATERIALS: STEEL AND CONCRETE  
   CHAPTER 3 - DESIGN PHILOSOPHY  
   CHAPTER 4 - FLEXURE: WORKING STRESS ANALYSIS AND DESIGN  
   CHAPTER 5 - FLEXURE: ULTIMATE STRENGTH ANALYSIS AND DESIGN  
   CHAPTER 6 - DESIGN FOR SHEAR  
   CHAPTER 7 - CAMBER AND DEFLECTION COMPUTATIONS  
   CHAPTER 8 – ANALYSIS AND DESIGN OF COMPOSITE BEAMS  
   CHAPTER 9 - END ANCHORAGE ZONE.

7. Minimum student materials: Class handouts and engineering calculator.

8. Instructional methods:  
   a. PowerPoint Presentations.  
   b. Lecture/Problem solving sessions.  
   c. Case studies.  
   d. Quizzes and Homework.  
   e. Reading assignments.

9. Homework Assignments: Homework will be assigned for each chapter.

10. Assessment Scheme:  
    | Evaluation       | Weight of 100% |
    |------------------|----------------|
    | Midterm Exam     | 30%            |
    | Coursework       | 30%            |
    | Final Exam       | 40%            |
    | Total            | 100%           |

Attendance: Students are expected to attend EVERY CLASS SESSION and they are responsible for all material, announcements, schedule changes, etc., discussed in class. The university policy regarding the attendance will be strictly adhered to.