

Teaching Staff	Dr. Abbasali Saboktakin	E-mail: alaptakin [at] gmail [dot] com
Course	FINITE ELEMENT METHOD	
Grading	<p>Grades will be based upon the following elements:</p> <ul style="list-style-type: none"> • Homework (10% of total grade) • Midterm Exam (30 % of total grade) • Final Exam (50 % of total grade) • Course Project (10 % of total grade) 	
Textbook	<ul style="list-style-type: none"> ➤ Robert D. Cook, Finite Element Modeling for Stress Analysis, John Wiley & Sons, 1995. ➤ Chandrupatla T., Introduction to Finite Elements in Engineering, Belegundu, Prentice Hall, 2001. ➤ Logan D., A First Course in the Finite Element Method, 2011. 	
Web Page	https://www.usb.ac.ir/astaff/Saboktakin/fa	
Course Policies	<ul style="list-style-type: none"> ➤ In general, no late homework will be accepted. ➤ It is anticipated, even encouraged, that students will consult with each other on assignments. It is expected, however, that all work submitted by the student represent his/her own effort. ➤ Instances of plagiarism on an assignment will result in full loss of credit for that assignment. ➤ Instances of cheating in any form during an exam will result in full loss of credit for that exam. 	
Consulting	If you would like to talk with me outside of the course hours, please make an appointment via Email: alaptakin [at] gmail [dot] com	
Topics	<p>I. Finite Element Analysis Theory</p> <ul style="list-style-type: none"> A. Method of Weighted Residuals B. Calculus of Variations <p>II. Implementation of Finite Element Analysis: The Constant Strain Triangle</p> <ul style="list-style-type: none"> A. Fundamentals B. Element Formulation C. Assembly D. Boundary Conditions E. Solution Methods and Examples <p>III. Implementation of Finite Element Analysis (Other Elements)</p> <ul style="list-style-type: none"> A. Quadrilateral Elements B. Higher-Order Triangular Elements <p>IV. Thermal Analysis</p> <p>V. Vibration and Dynamics</p> <p>VI. Finite Element Modeling Basics</p> <ul style="list-style-type: none"> A. Using ABAQUS B. Applying finite elements for complex problems C. Various examples solved using the finite element method and ABAQUS D. Convergence and accuracy of various plate elements in ABAQUS 	

Success is directly proportional to the amount of time devoted to study and learning new thing.