

### **ENGINEERING ECONOMY**

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## Course objectives

#### Goals of this course:

- To build an understanding of the theoretical and conceptual basis upon which the practice of financial project analysis is built.
- To satisfy the very practical needs of the engineer toward making informed financial decisions when acting as a team member or project manager for an engineering project.
- To incorporate some of the critical decision-making tools.

#### Outline

- Week 1 (09.10) Engineering Economic Decisions
- Week 2 (16.10) Accounting and Financial Decision Making
- Week 3 (23.10) Interest Rate and Economic Equivalance
- Week 4 (30.10) Understanding Money and Its Management
- Week 5 (06.11) Present-Worth Analysis
- Week 6 (13.11) Annual Equivalent-Worth Analysis
- Week 7 (20.11) Midterm exam
- Week 8 (27.11) Rate-of-Return Analysis
- Week 9 (04.12) Cost Concepts Relevant to Decision Making

#### Outline

- Week 10 (11.12) Depreciation and Corporate Taxes
- Week 11 (18.12) Developing Project Cash Flows
- Week 12 (25.12) Inflation and Its Impact on Project Cash Flows
- Week 13 (01.01) New Year Holiday ☺
- Week 14 (08.01) Project Risk and Uncertainity
- Final exam date: to be announced

#### Timeline

• Weeks 1-6 Lectures

Week 7 Midterm exam

Weeks 8-14 Lectures

Week 15 Preparation for final exam

Week 16 Final exam

#### Assessment

• Assignments\* 15% + 15%

Midterm exams 30%

• Final exam 40%

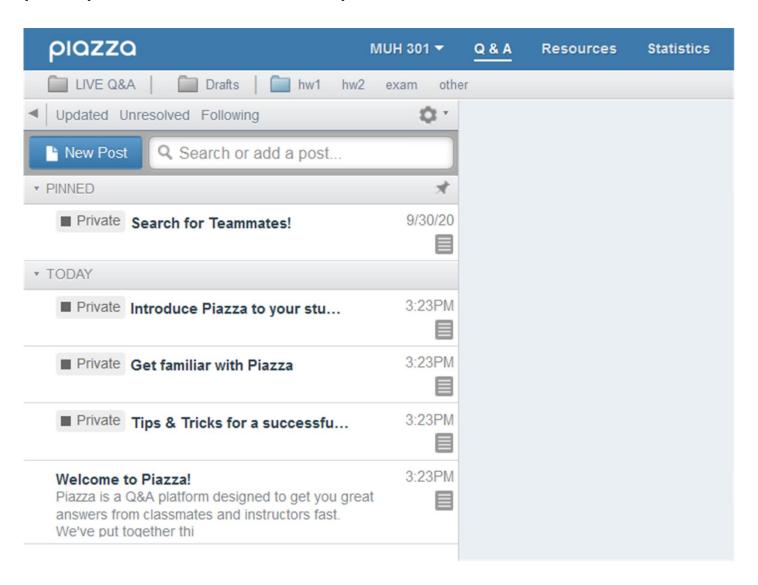
Bonus points for class participation

TOTAL 100%

<sup>\*</sup> Homework assignments will be due 2 weeks after they are handed out.

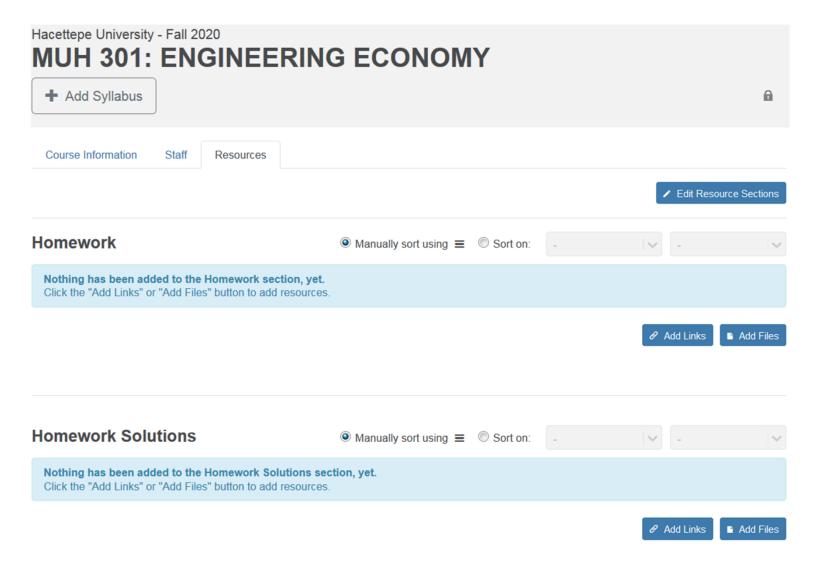
#### Course website

https://piazza.com/hacettepe.edu.tr/fall2020/muh301



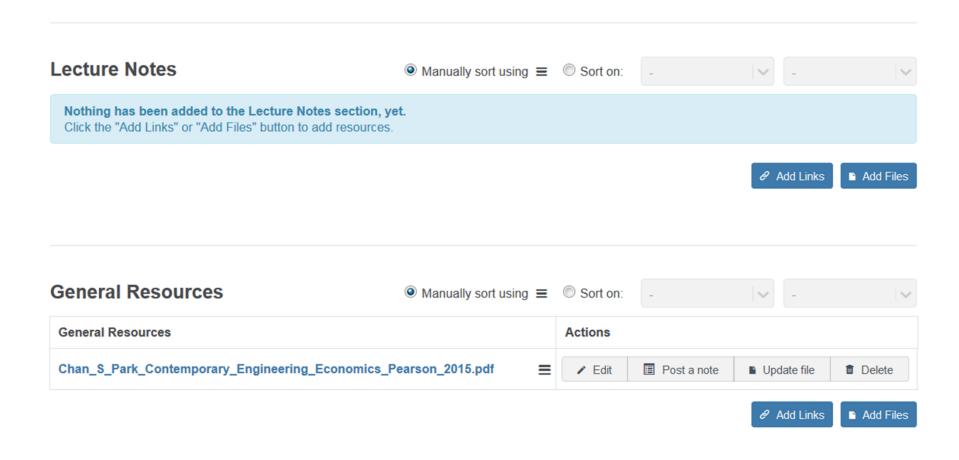
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#### References & books

 Course materials presented in the class and additional texts will be available online throughout the course

#### References:

- Contemporary Engineering Economics, 6th Edition. Chan S. Park,
   Auburn University. 2016 | Pearson
- John A. White, Kenneth E. Case, David B. Pratt, Principles of Engineering Economic Analysis, Wiley, 2010
- William G. Sullivan, Elin M. Wicks, and C. Patrick Koelling, "Engineering Economy", 16th ed., Prentice Hall, 2014.
- Donald G. Newnan, Jerome P. Lavelle, and Ted G. Eschenbach, "Engineering Economic Analysis", 12th ed., Oxford University Press, 2013.

## Be Careful with this Lecture!!!

- Although it contains little advanced math and few truly difficult concepts, the introductory engineering economics course is often challenging.
- To the first-time student of engineering economics, anything related to money matters may seem quite strange when compared to other engineering subjects.
- Because this course is the student's first analytical consideration of money ©

### Be Careful with this Lecture!!!

 There will be too many new English words even for a senior student.

A different nomenclature related to Economics.

# READING THE REFERENCE BOOK IS A MUST FOR THE STUDENTS!!!

# **ANY QUESTIONS?**