Subject title: Engineering Economics

Course Basic Information	
Academic Unit:	**Faculty of Civil Engineering and Architecture**
Course Name:	**Engineering Economics**
Level:	**MA**
Course Status:	**Elected**
Year of Study:	**2nd year, IIIrd semester**
Number of Hours per Week:	**2+2**
ECTS Credits:	**6**
Time /Venue:	**According to the Timetable**
Course Teacher:	**Prof.ass.Dr. Esat Gashi**
Contact Details:	*e*-mail: **esat.gashi@uni-pr.edu**
Course Description	*Fizibility of construction projects, Price Analysis in construction, project financial planning, return of investment, project life-cycle cost, Capitalisation and depretiation of property and plant, project cash flow.*
Course Objectives:	*Learning and understanding of financial part of engineering projects.*
Learning Outcomes:	*After completion of this course the Student will be able to understand how to:* • *Prepare and evaluate project feasibility,* • *Prepare construction price analysis,* • *Analyze project RoI,* • *Prepare financial proposal,* • *Follow up project finances.*

Student Workload (Consistent with the Learning Outcomes)			
Activity	**Hours**	**Day/ Week**	**Total**
Lectures	2	15	30
Theory/ Lab Work	2	15	30
Practical Work			
Contact Hours with Teacher /Consultations during Office Hours	1	15	15
Field Work			
Colloquium, Seminars	1	15	15
Homework	2	15	30
Self-study Time (in the Library or at Home)	2	5	10
Final Exam Preparation	3	50	15
Evaluations (Tests, Quiz, Final exam)	3	1	3
Projects, Presentations, etc.	2	1	2
Total			**150**

Teaching Methodology:	*Lecturing, exercises, and fieldwork*
Evaluation Methods:	• *Evaluation of the student's capability for resolving of case studies,*

	• *Presentation of the finding from field work in correlation with theoretical knowledge,* • *Participation during the lecturing and exercise hours,* • *Evaluation of final exam which is divided in two parts, project problem solving and discussion of case studies.*
Basic Literature:	*Proposed Literature:* 1. *Gashi E, Engineering Economica (working book) 2020,* 2.
Additional Literature:	*Additional literature:* 1. *Donald N, Engineering Economic Analysis ;* 2. *Panneer selvam R., Engineering Economics;* *James L.RIGGS, Economic Engineering*

Course Plan:	
Week	**Title of the Lecture**
Week 1:	*Introduction with the subject and general and particular notions and abbreviations.*
Week 2:	*Importance of the economic environment in construction projects.*
***Week 3*:**	*Financial project targets and project finances.*
Week 4:	*Project feasibility*
Week 5:	*Financial evaluation of engineering proposals, selection of the methods for the evaluation, initial expenditures in the project, operational and maintenance cost.*
***Week 6*:**	*Fix and variable cost in construction*
Week 7:	*Other cost in the project, project cash flow.*
Week 8:	*S curve for the cash flow of purchase and expenditure, project life cycle cost.*
Week 9:	*Project finances*
Week 10:	*Price analysis in construction, methods and calculation*
***Week 11*:**	*Calculation of construction cost and margin of construction*
***Week 12*:**	*Capitalisation and depretiation of property and plant,*
***Week 13*:**	*Calculation of the interest, simple and composed interest.*
***Week 14*:**	*Calculation of the end profit in the construction*
***Week 15*:**	*Financial outlook of construction Companies*

Academic Policies and Rules of Civility:
Rules of conduct: *1. Regular attendance during lectures and exercises is compulsory,* *2. Following up general faculty ruling and peace,* *3. Turning of mobile phones during classes,* *4. Entering in to the classroom on time,* *5. The student has no right to be absent more than 3 class hours during the semester without justification.* *6. Preparation and conducting the case studies in line with theoretical knowledge and presentation the findings in class. Students who have prepared and presented during the classes and pass the exam complete the subject duties and will be granted with passing grade.*