UNESCO-UNITWIN OCW/OER INITIATIVE
HANDONG GLOBAL UNIVERSITY

[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

The course Mathematical methods in economics. Part II is oriented on the freshmen students of Faculty of Management and Marketing National Technical University of Ukraine "Igor Sikorsky Kiev Polytechnic Institute".
The second part of the course is dedicated applications of mathematical analyses methods in economics . Generally the course Mathematical methods in economics covers all the part of mathematics necessary to economics students.
The course contains:
- Lecture material
- A set of solved tasks
- A set of examples of mathematical methods applications in economics

2. Course Goals and Objectives (Approximately 100 words)

The study of modern economic sciences is impossible without the application of mathematical models and methods. Teaching the course “Mathematical methods in economics. Part II” is a basic at:
- students’ mastering the fundamentals of mathematical apparatus;
- development of logical thinking;
- economic problem statement and application of this problems;
- application of methods and algorithms for economic problems solution.

For the study of the course “Mathematical methods in economics. Part II” the knowledge of mathematics at the level of secondary school is necessary.
The course belongs to the cycle of fundamental disciplines and provides a study of general and special economic disciplines.

3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

1.Вища математика для економістів. Частина І. Методи лінійної алгебри та аналітичної геометрії. Конспект лекцій (І курс) / Уклад.: Ю. П. Буценко, О. О. Диховичний, О. А. Тимошенко. — К: НТУУ «КПІ», 2017. — 106 с.
2.Математичні моделі в економічних задачах. Практикум.Уклад.: Ю. П. Буценко, О. О. Диховичний, О. А. Тимошенко. — К: НТУУ «КПІ», 2014. — 57 с.
3. Вища математика для економістів. Конспект лекцій (І курс) / Уклад.: Ю. П. Буценко, О. О. Диховичний, О. А. Тимошенко. — К: НТУУ «КПІ», 2014. — 256 с.

4. Reference

1. Булдигін В.В., Алєксєєва І.В., Гайдей В.О., Диховичний О.О., Федорова Л.Б. Лінійна алгебра та аналітична геометрія. Навчальний посібник. — К: ТВіМС, 2011. — 224с.
2. В.В. Барковський , Н.В. Барковська. Вища математика для економістів.-Київ: центр учб. Літ, 2010.
3. Грисенко М.В. Математика для економістів. Методи і моделі, приклади та задачі. – Київ : «Либідь», 2007 .
4. Колесников А.Н. Краткий курс высшей математики для экономистов: Учебное пособие. – М.: Инфра – М,1997.

5. Course Requirements and Grades

Course "Mathematics for engineers and economists. I-VIII"
The most important requirement is a bit of mathematical maturity: a combination of patience, logical and analytical thinking, motivation, systematism, decision-making, and the willingness to persevere through failure until success is achieved.

6. Course Calendar

Week	Main Content
1	Functions in economics.
2	Sequences in financial problems.
3	Limits of sequences and functions.
4	Discontinuity of functions in economics.Comparison of infinetesimal values.
5	Derivative and differentiation .
6	Differential and elasticity.
7	Problems of finding extrema. Convexity.
8	Differentiation in economic and business problems.
9	Antiderivative. Indefinite integral.
10	Methods of integration.
11	Definite integral and its geometric applications.
12	Economic applications of definite integral. Cumulative characteristics. Mean
13	
14	