Introduction to Mathematics

Department : Introduction to Mathematics

Grade : 2nd semester (Even Semester 2022/2023)

Credits : 3 (150 minutes / meeting, 16 meetings in 1 semester)

Instructor : Dr. Agus Tri Basuki, M.Si. (agus.tri@umy.ac.id)

Description :
The Introductory Mathematics course discusses basic mathematical concepts and techniques that will later be used in the field of economics.

The Course Features

Students will be able to:

- Understand the concept of the basic Mathematics
- Understand self-potential exploration
- Build creativity and innovation
- Understand economic concepts and theories in depth and be able to formulate economic problems based on Technology, Information and Communication.
- Apply thinking critically, logically, systematically, creatively, innovatively in the context of the development of Science and Technology in accordance with the field of Economics.

REFERENCES

- *Weber, E. John. 2010. Mathematical Analysis: Business and Economics. McGraw-Hill, New York*
- *Alpha Chiang and Kevin Wainwright. 2005. Fundamental Methods of Mathematical Economics. Fourth Edition. Mc.Graw-Hill Book, Inc. New York*
- *Ian Jacques. Mathematics for Economics and Business. Addison-Wesley, New York*
- *Dumairy. 2010. Matematika Terapan untuk Bisnis dan Ekonomi. Edisi keduabelas. BPFE. Yogyakarta*

Assessment :
1. **A** = 80 ≥ (Excellence)

Achieve learning outcome with excellence grade
Convertion Value : 4

2. **AB** = 75 ≤ AB < 80 (Very Good)
   Achieve learning outcome with very good grade
   Convesrtion Value : 3.5

3. **B** = **65** ≤ B < 75 (Good)
   Achieve learning outcome with good grade
   Convertion Value : 3

4. **BC = 60** ≤ BC < 65 (Good Enaough)
   Achieve learning outcome with good enough grade
   Convertion value : 2.5

5. **C =** 50 ≤ < 50 (Enough)
   Achieve learning outcome with enough grade
   Convertion value : 2

6. **D =** 35 ≤ D < 50 (Less)
   Achieve learning outcome with less grade
   Convertion value : 1

7. **E =** ...< 35 (Failed)
   Failure to achieve learning outcomes
   Convertion vlaue : 0

Syllabus

Week	Session	Content
1	1	Study contract and RPS
1-3	2,3	Powers & logarithms (Rule of powers & logarithms)
2-3	4, 5	Row (Arithmetic & geometric series)
3-4	6,7	Aljabar (Basic algebra, Advanced algebra, Algebraic factorization, Algebraic equations)
4-5	8.9	Differentiation (Basic differentiation, Differentiation rules, Partial differentiation)
5-7	10-13	Integral (Basic integral, Matrix arithmetic operations)
7-9	14-17	Matrix (Matrix arithmetic operations)