

SYLLABUS

Date/ Revision	29 June 2016
Faculty	Business & Social Science
Approval	Dr. Samuel Prasetya

SUBJECT : BUSINESS MATHEMATICS 1

1. Identification of Subject:

Name of Subject	: Business Mathematics 1
Code of Subject	: MGNT-1100
SKS / ECTS	: 2/3
Semester	: 1
Study Program	: B-IBA/B-MGT/B-HTM/B-INR
Lecturer	:

2. Competency

After having the course, students are expected to:

- Use mathematical skill for solving Equations and Inequalities.
- Understand what a function is and know how to graph them.
- Develop the line properties of the demand and supply curves and its equation, calculate maximum revenue through quadratic functions, and determine the point of equilibrium, Break Even Points and its Profit and Loss in Systems of Equations.
- Study exponential function and their applications to compound interest.
- Extend the notion of compound interest to include effective rates and to solve interest problems whose solutions requires logarithm.
- Calculate the present values; solve problems involving the time value of money, net present value of cash flows by using equations of value.
- Have broad knowledge of ordinary annuities, annuities due by using geometric series to model the present value and the future value of an annuity.
- Determine payments to be placed in a sinking fund.
- Know how to amortize a loan and set up an amortization schedule.

3. Description of Subject:

This course is designed to enable students to learn and apply mathematics skills to a business and management setting in the company. It covers topics using mathematics in the workplace as well as in one's personal life.

4. Learning Approach

Approach	: Combination of Expository - inquiry and collaborative
Method	: Discussion, question answer, sample problem, group work
Student Task	: Home work, quizzes
Media	: LCD projector, film.

5. Evaluation

a) Absence maximum	: 25%
b) Participation in discussion	: 5 points
c) Homework, Classwork	: 5 points
d) Presentation, Simulation	: 10 points
e) Daily Quiz	: 20 points
f) Final Examination	: 60 points
Total	: 100 points

6. Contents/ Topics of Lecturing:

Week	Topics	Content	Remark
1	Chapter 1 Applications of Equations and Inequalities	1.1 Applications of Equations 1.2 Linear Inequalities	
2	Chapter 1 Applications of Equations and Inequalities	1.3 Applications of Inequalities Quiz Chapter 1	Quiz
3	Chapter 2 Functions and Graphs	2.1 Functions 2.2 Special Functions	
4	Chapter 2 Functions and Graphs	2.3 Combination of Functions 2.4 Graphs in Rectangular Coordinates	
5	Review of Chapter 2	Group Discussion Quiz Chapter 2	Quiz
6	Chapter 3 Lines, Parabolas, and Systems	3.1 Lines 3.2 Applications and Linear Functions	
7	Evaluation	Evaluation of chapter 1-3.2	Mid Term Test
8	Chapter 3 Lines, Parabolas, and Systems	3.3 Quadratic Functions 3.4 Systems of Linear Equations	
9	Chapter 3 Lines, Parabolas, and Systems	3.6 Applications of Systems of Equations Quiz Chapter 3	Quiz
10	Chapter 4 Exponential and Logarithmic Functions	4.1 Exponential Functions	
11	Chapter 5 Mathematics of Finance	5.1 Compound Interest 5.2 Present Value	
12	Chapter 5 Mathematics of Finance	5.3 Annuities 5.4 Amortization of Loans	
13	Chapter 5 Mathematics of Finance	5.4 Group Discussion Quiz Chapter 4-5	Quiz

14	Review of material	Chapter 1 - 5	
15	Final Examination	Chapter 1 - 5	Final Examination

7. Book Reference:

- a. Text Book: Ernest Haeussler, Richard Paul, Richard Wood (2013). *Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences: Pearson New International Edition 13th Edition*. Paperback, 864 pages ISBN: 9781292021140