

Module designation	<i>Mathematics for Economy Business (AGB107)</i>
Semester(s) in which the module is taught	<i>1st semester</i>
Person responsible for the module	<i>Zakiah</i>
Language	<i>English</i>
Relation to curriculum	<i>Compulsory module</i>
Teaching methods	<i>lecture, lesson, case, seminar.</i>
Workload	<ul style="list-style-type: none"> ▪ <i>100 minutes of lecture and discussion per week</i> ▪ <i>120 minutes of structured tasks per week</i> ▪ <i>190 minutes of independent activity per week</i> ▪ <i>100 minutes of laboratory work</i>
Credit points	<i>3 (lesson 2 and lab works 1) = 4.8 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> <i>1. Students are expected to understand the basic concepts and techniques of various mathematical methodologies, which will help them understand microeconomic and macroeconomic theories.</i> <i>2. Students are expected to understand the use of matrix algebra, static comparative analysis and differential calculus, able to complete static optimization with or without constraints.</i> <i>3. Students are expected to understand the use of mathematical application tools such as MatLab, Geogebra and other software that is considered supportive in solving economic mathematics problems.</i>
Content	<i>This lecture covers concepts and techniques in mathematics relevant to economics. It is intended to help students understand economic theory and perform specific economic analyses. Learning topics including linear models and matrix algebra, derivatives, and optimization will be discussed and practiced within various frameworks of economic analysis.</i>
Exams and assessment formats	<i>Essay, case study</i>
Study and examination requirements	<i>10% activity participative</i> <i>40% course work and study cases analysis</i> <i>10% Homework</i> <i>5% quizzes</i> <i>15% midterm examination</i> <i>20% final examination</i>
Reading list	<ol style="list-style-type: none"> <i>1. Chiang, A. C., & Wainwright, K. (2006). Dasar-dasar Matematika Ekonomi Jilid 1. Jakarta: Erlangga.</i> <i>2. Dowling, E. T. (1993). Schaum's Outline of Mathematical Methods for Business and Economics. New York: McGraw Hill.</i> <i>3. Jacques, I. (2018). Mathematics for Economics and Business. Harlow: Pearson.</i> <i>4. Kalangi, J. B. (2012). Matematika Ekonomi dan Bisnis. Jakarta: Salemba Empat.</i> <i>5. Purcell, E. J., & Varberg, D. (1994). Kalkulus dan Geometri Analisis. Jakarta: Erlangga.</i> <i>6. Ummer, E.K. (2012). Basic Mathermatics for Economics, Business, and Finance. Abingdon: Routledge.</i> <i>7. Simangunsong, W. (2005). Matematika Dasar. Jakarta: Erlangga.</i>