



MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
SRIWIJAYA UNIVERSITY

FACULTY OF TEACHER TRAINING AND EDUCATION
BACHELOR PROGRAM IN MATHEMATICS EDUCATION

Jl. Raya Palembang – Prabumulih Km.32, Indralaya Ogan Ilir 30662 Website: <https://fkip.unsri.ac.id/mathedu/>

Bachelor Program in Mathematics Education

MODULE HANDBOOK

Module designation	Trigonometry / GMA1208
Semester	2 nd (second) / Even
The person responsible for the module	Weni Dwi Pratiwi, S.Pd., M.Sc. Rahma Siska Utari, S.Pd., M.Pd.
Language	Indonesian and English
Relation to the curriculum:	Study Program Compulsory Course
Teaching methods	Teaching methods: <ul style="list-style-type: none"> ● Expository and Class Discussion (Week 1) ● Presentation, and Group Discussion (Week 2 - Week 10, Week 11 - Week 12) ● Independent Activities: review session, practicing problems (Week 13 - Week 14)
Workload	14 weeks per semester excluding the Midterm Exam and Final Exam which consist of: <ul style="list-style-type: none"> ● 1.67 hours lectures (2 x 50 minutes) per week ● 2 hours structured assignments (2 x 60 minutes) per week ● 2 hours independent activities (2 x 60 minutes) per week ● 2.83 hours practice (1 x 170) per week $14 \times 170 \times 3 = 7140 \text{ Minute} = 119 \text{ hours} = 4.8 \text{ ECTS}$
Credit points	3 SKS (4.8 ECTS)
Prerequisite's course(s)	-
Module objectives	After completing this course, the students have ability to: CO 1 : Express the basic concepts of angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometric identities, product to sum identities, sum to product identities, sine and cosine law. CO 2 : Interpret basic concepts related to angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometric identities, product to sum identities, sum to product identities, sine and cosine law. CO 3 : Solve problems related to the basic concepts of angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometric identities, product to sum identities, sum to product identities, sine and cosine law. CO 4 : Analyze problems in daily life related to the basic concepts of angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometric identities, product to sum identities, sum to product identities, sine and cosine law.



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Content	<p>This course discusses:</p> <ol style="list-style-type: none"> 1. trigonometric: angles, degrees, and triangles 2. definition 1 of trigonometric functions: right triangle ratios, applications of right triangle trigonometry: solving right triangles 3. definition 2 of trigonometric functions: cartesian plane, trigonometric functions of non-acute angles, radian measure and applications 4. definition 3 of trigonometric functions: unit circle approach, graphs of sine and cosine functions, graphs of other trigonometric functions 5. analytic trigonometry: basic trigonometric 6. identities, verifying trigonometric identities, sum and difference identities, double-angle identities, half-angle 7. identities, product-to-sum and sum-to-product identities, inverse trigonometric functions, trigonometric equations 8. additional topics in trigonometry: sinus and cosines law
Examination forms	<p>Examinations in this course include:</p> <ol style="list-style-type: none"> 1. Midterm Exam 2. Final Exam 3. Assignments 4. Affective Assessment
Study and examination requirements	<p>Total Score = (30 % x Midterm Exam Score) + (35% x Final Exam Score) + (25% x Assignment: presentation, HOTS Problem, Quiz)+ (10% x Affective Score: responsibility, class attendance)</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Midterm Exam <ul style="list-style-type: none"> ✓ The Midterm Exam is held at the 8th meeting ✓ Midterm Exam is a written exam (essay test) and carried out in the classroom with an implementation time of 100 minutes according to the module schedule 2. Final Exam <ul style="list-style-type: none"> ✓ Final Exam is held at the 16th meeting ✓ The final Exam is a written exam (essay test) carried out in the classroom with an implementation time of 120 minutes which follows the Final Exam implementation schedule of the department 3. Assignments <ul style="list-style-type: none"> ✓ Assignments are given as exercises before the Midterm Exam and before the Final Exam



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	<ul style="list-style-type: none"> ✓ Assignments are about analyzing problems in daily life and solving them related to the content of Basic Algebra and Trigonometry ✓ HOTS Problems and QUIZ are given as individual tasks and it is submitted in a limited time ✓ Presentations: Students are divided into several groups and discuss topics related to Trigonometry. After that, they present it in a face-to-face meeting <p>4. Affective Assessment</p> <ul style="list-style-type: none"> ✓ Affective assessment is held in every meeting by observing students' attitudes in the classroom and daily interaction at campus such as punctuality, responsibility, etc. ✓ The assessment is based on an observation sheet
Literature:	<ol style="list-style-type: none"> 1. Stewart, J., Redlin, L., & Watson, S. (2016). Algebra and Trigonometry, Fourth Edition. USA: Boston. 2. Larson, R. & Falco, D.C. (2014). Algebra and Trigonometry, Ninth Edition. USA: Boston. 3. Chintya Young, (2013). Algebra and Trigonometry. Third Edition. USA: John Wiley & Sons, Inc. 4. Zill, D.G. & Dewar, J.M. (2012). Algebra and Trigonometry, Third Edition. USA. 5. Beecher, Judith. A. 2008. <i>Algebra and trigonometry</i>. Newyork: Pearson Addison Wesley 6. <u>Nanney, J. Louis</u>. 1980. <i>Trigonometry: a skill approach a skill approach</i>. Boston, Massachusetts: Allyn and Bacon

PLO	CO
PLO 4 : Having knowledge of mathematical concepts in solving mathematical problems and supporting further studies.	CO 1 : Express the basic concepts of angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometric identities, product to sum identities, sum to product identities, sine and cosine law.
PLO 7 : Able to apply mathematical knowledge logically, critically and systematically in solving problems.	CO 2 : Interpret basic concepts related to angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometry identities, product to sum identities, sum to



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	product identities, sine and cosine law.
PLO 10 : Able to utilize technology in solving mathematics and learning problems.	<p>CO 3 : Solve problems related to the basic concepts of angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometry identities, product to sum identities, sum to product identities, sine and cosine law.</p> <p>CO 4 : Analyze problems in daily life related to the basic concepts of angle, degrees, triangle, trigonometric function, analytic trigonometry, trigonometries identities, product to sum identities, sum to product identities, sine and cosine law.</p>



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