

UNDERGRADUATE PROGRAM IN ELECTRONICS AND INSTRUMENTATION
DEPARTMENT OF COMPUTER SCIENCE AND ELECTRONICS
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNIVERSITAS GADJAH MADA

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| Module name | Electronic Mathematics II | |
| Module level | Undergraduate | |
| Code | MII-2812 | |
| Courses (if applicable) | Electronic Mathematics II | |
| Semester | even (Genap) | |
| Contact person | Catur Atmaji, S.Si., M.Cs. | |
| Lecturer | Catur Atmaji, S.Si., M.Cs. | |
| Language | Bahasa Indonesia | |
| Relation to curriculum | Undergraduate degree program, mandatory, 4 th semester | |
| Type of teaching, contact hours | Lectures, < 60 students, 3 hours | |
| Workload | 1. Lectures: 3 x 50 = 150 minutes (2 hour and 30 minutes) per week. 2. Exercises and Assignments: 3 x 50 = 150 minutes (2 hour and 30 minutes) per week. 3. Private study: 3 x 60 = 180 minutes (3 hours) per week. | |
| Credit points | 3 credit points (sks) | |
| Requirements according to the examination regulations | A student must have attended at least 75% of the lectures to sit in the final exams. | |
| Mandatory prerequisites | MII-2807 Electronic Mathematics I | |
| Learning outcomes and their corresponding PLOs | After completing this module, a student is expected to: CO-1 Understanding the basics of complex number and numeric analysis CO-2 Master techniques to analyze complex function, including analytic function and harmonic equation CO-3 Master numeric analysis techniques to solve numeric problems including interpolation and Gauss elimination CO-4 Able to implement the concept of linear programming in real live problem CO-5 Understanding the basic of graph for optimization CO-6 Able to do data analysis using probability and statistics concept CO-5 Able to implement the concept of probability and statistic in real problem | PLO2 PLO3 PLO3 PLO4 PLO2 PLO3 PLO4 |
| Content | Complex number, introduction to numeric analysis, graph theory, probability, and statistics. | |
| Study and examination | <ul style="list-style-type: none"> • Assignments • Mid-term examination | |

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| requirements and forms of examination | <ul style="list-style-type: none"> • Final examination |
| Media employed | LCD, whiteboard, websites (eLisa). |
| Assessments and Evaluation | CO-1 Quiz, Midterm exam (total: 24%) CO-2 Midterm exam (total: 7%) CO-3 Midterm exam, assignment (total: 19%) CO-4 Final exam (total: 9%) CO-5 Quiz, Final exam (total: 15%) CO-6 Final exam (total: 7%) CO-4 Final exam, assignment (total: 19%) |
| Reading List | <ol style="list-style-type: none"> 1. Attenborough, M., 2003: Mathematics for Electrical Engineering and Computing, Newnes. 2. Kreyzig, E., 2011: Advanced Engineering Mathematics, 10th ed., John Wiley, New York. |