Module Handbook (Description of Course Unit)

Course designation	Numerical Methods
Semester(s) in which the Course is taught	4th (fourth)
Person responsible for the Course	Sutini
Language	Indonesian Language
Relation to curriculum	Compulsory
Teaching methods	Lecture (L), Group Discussion (GD), Presentations (P)
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 119 Hours in Class, specified in hours: 35 (Lecture) Private study including examination preparation, specified in hours: 84 (Group Discussion & Presentation)
Credit points	3 CP / 4.8 ECTS
Required and recommended prerequisites for joining the Course	Integral Calculus
Course objectives/intended learning outcomes	The students are able to demonstrate attitudes as individuals who uphold religious, humanist, moral, and ethical values in the field of Mathematics Education. They are able to apply information and data literacy to solve problems in Mathematics Education, explain the theoretical concepts of mathematics for school level or for their continuing study at graduate level that support the mathematics education in both levels, to modify learning tools, implement, and evaluate the application of mathematics learning tools in an innovative way and in accordance with Islamic values by applying mathematical and scientific pedagogic-didactic concepts, and utilizing various learning resources and science and technology that are oriented towards life skills.
Content	Numerical Method discusses: ● non-linear root-finding method ● interpolation ● numerical derivatives ● numerical integration

Examination forms	● Final examination (120 min) ● Mid-term examination (120 min) ● Assignment (120 min) ● Exercise (120 min)
Study and examination requirements	● Attendance 10% ● Assignments 30% ● Mid-evaluation 20% ● Final Evaluation 40% The minimum grade to pass the course is C (61).
Reading list	1. Atkinson, K., & Han, W. 2003. *Elementary Numerical Analysis*. Iowa City: University of Iowa Press. 2. Fuad, Y. 2014. *Metode Numerik*. Madura: UTM Press. 3. Munir, R. 2015. *Metode Numerik*. Bandung: Informatika. 4. Maharani, S., & Edy Suprapto, E. 2018. *Analisis Numerik*. AE. Media Grafika. 5. Suli, E., David, F., Mayers. 2003. *An Introduction to Numerical Analysis*. Cambridge: Cambridge University Press. 6. Salusu, A. 2008. *Metode Numerik*. Yogyakarta : Graha Ilmu.