

Module Handbook (Description of Course Unit)

Course designation	Number Theory
Semester(s) in which the Course is taught	3rd (third)
Person responsible for the Course	Aning Wida Yanti
Language	Indonesia Language
Relation to curriculum	Compulsory
Teaching methods	Lecture (L), Group Discussion (GD), Presentations (P)
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 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	Introduction to the Basics of Mathematics
Course objectives/intended learning outcomes	Students are responsible to work independently in solving Number Theory problems. Students are able to apply logical, critical, systematic, and innovative thinking in the context of developing or implementing Number Theory material in solving everyday problems. Students demonstrate their ability to understand the theoretical concepts of Number Theory which support learning mathematics in Elementary and Secondary Education as well as for further studies. Students are able to plan, implement, and evaluate learning mathematics in an innovative and Islamic way by applying the concept of Number Theory. Students are able to utilize various learning resources and technology in Number Theory learning.
Content	Students can explain material about: <ul style="list-style-type: none"> ● mathematical induction, ● integer, ● division, ● prime numbers, ● congruence of integers.

Examination forms	<ul style="list-style-type: none"> ● Final examination (120 min) ● Mid-term examination (120 min) ● Assignment (120 min) ● Exercise (120 min)
Study and examination requirements	<ul style="list-style-type: none"> ● Attendance 10% ● Assignments 30% ● Mid-evaluation 20% ● Final Evaluation 40% <p>The minimum grade to pass the course is C (61)</p>
Reading list	<ol style="list-style-type: none"> 1. Apostol, T.M. (n.d.). 2016. <i>"An Introduction to the Theory of Numbers"</i>. (Review of Hardy & Wright.) Mathematical Reviews (MathSciNet). American Mathematical Society. MR 0568909. 2. Granville, A. 2008. <i>"Analytic Number Theory"</i>. In Gowers, Timothy; Barrow-Green, June; Leader, Imre. <i>The Princeton Companion to Mathematics</i>. Princeton University Press. ISBN 978-0-691-11880-2. 3. Long, C.T. 2010. <i>Elementary Introduction to Number Theory</i> (edisi ke-2nd). Lexington, VA: D.C. Heath and Company. LCCN 77171950. 4. Sukirman. 2016. <i>Ilmu Bilangan</i>. Edisi 1 / 2 SKS / Modul 1-6. 286 hal.: ill.; 21 cm. ISBN 9786023920471 Tangerang Selatan: Universitas Terbuka.