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Faculty of Mathematics and Natural Sciences
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Doctoral Program in Mathematics

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MODULE HANDBOOK
Doctoral in Mathematics

Module name:	Capita Selecta in Computational Mathematics (*Kapita Selekta Komputasi Matematika*)
Module level, if applicable:	Doctoral Program
Code, if applicable:	MMM 6530
Semester(s) in which the module is taught:	I (first year)
Person responsible for the module:	Chair of Computational Mathematics Research Group
Lecturer(s):	Computational Mathematics Research Group Chair-appointed lecturer
Language:	Bahasa Indonesia
Relation to curriculum:	Doctoral Degree in Mathematics,
Credit points:	3
Type of teaching, contact hours:	3x50 minutes lectures, 3x50 minutes structured activities.
Workload:	• 3x50 minutes lectures, • 3x50 minutes structured activities, • 3x50 minutes individual study, • In 16 weeks per semester (including mid-term and final examinations).
Recommended prerequisites:	…….
Module objectives/intended learning outcomes:	After completing this course the students should have : • CO1. have better awareness and understanding of the scope and recent development of the subject in computational mathematics. • CO2. have a deep knowledge of the subject in computational mathematics that enables him to study it independently. • CO3. have a knowledge of more recent development to read some of the current research papers of the subject in computational mathematics.
Content:	This courses are aimed at upper level doctoral students wishing to deepen their knowledge of more recent and advanced of some specific topics in computational mathematics. It is hoped that the course gives interested students a taste of some areas of modern research in the field. These courses are in general of a computational mathematics containing subjects which may vary each year.
Study and examination requirements and forms of examination:	The final mark will be weighted as follows: No Assessment methods (components, activities) Weight (percentage) 1 Final Examination 40% 2 Mid-Term Examination 30% 3 Class Activities: Quiz, Homework, etc 30% Final grade will be determined as follows: Grade Criteria The initial cut-off points for grades A,B,C, and D should not less than 85%, 65%, 50%, and 40%, respectively.
Media employed:	Board, LCD Projector, Laptop/Computer
Reading List:	Decided by lecturer

Mapping of The COs and PLOs

	PLO – 1 S3 Mat	PLO – 2 S3 Mat	PLO – 3 S3 Mat	PLO – 4 S3 Mat	PLO – 5 S3 Mat	PLO –6 S3 Mat
CO 1	V	V	V		V	
CO 2	V		V		V	
CO 3	V	V	V			V

Programme Learning Outcomes (PLO) Doctoral Programme in Mathematics

PLO-1	:	**Attitude:** Devote to God Almighty, uphold the humanity values, internalize academic values and ethics, responsible in working in the area of expertise independently.
PLO-2	:	**Knowledge:** Mastering philosophy of mathematics and one of the fields in mathematics (algebra, analysis, applied mathematics, statistics, computational mathematics, computational statistics).
PLO-3	:	**Knowledge:** Able to think logically, analytically, inductively, deductively, and structured; having the ability to manage, lead, and develop research programs independently, and able to communicate the thoughts as well as his work to the scientific community and the general public.
PLO-4	:	**Skill:** Creating new concepts and / or new methods (original) in the field of mathematics that are recognized nationally and internationally.
PLO-5	:	**Skill:** Able to apply mathematics according to their field of expertise to solve problems including those that require a multidisciplinary, cross-disciplinary, or trans-disciplinary approach.
PLO-6	:	***Life Long Learning:*** Having lifelong learning skills and adaptive to the development of science and technology, especially in fields related to Mathematics and its applications.