Doctor in Mathematics

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MODULE HANDBOOK

Module name:	*Topics in Advanced Computation of Statistics A*
Code, if applicable:	MMM 7504
Subtitle, if applicable	
Semester(s) in which the module is taught:	1st or 2nd semester
Person responsible for the module:	Chair of Computation of Statistics Research Group
Language:	Bahasa Indonesia
Relation to curriculum:	Elective Course
Teaching methods	Lecture, classroom discussion, project-based learning.
Workload (incl. contact hours, self-study hours)	Total workload is 232 hours per semester, which consists of 50 minutes lectures per week, 120 minutes structured activities per week, 120 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.
Credit points in Credit Units	3
Required and recommended prerequisites for joining the module	Students have learned some basic courses in statistics and statistical mathematics course. Students also have some knowledge of statistical software, such as *R.*
Module objectives/intended learning outcomes:	After completing this course, the students have abilities to: CO 1. analyze the theoretical aspect of Machine Learning, related to the doctoral research being studied CO 2. Use software for doing Machine Learning related to the doctoral research being studied CO3. to analyze some extended Machine Learning models and methods related to the doctoral research being studied
Content:	It will be derived from the research topic of the students. It will be focused on the theory, models, and method of specific data analysis used in the student research.
Examination forms	Oral presentation, essay, paper
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 (portfolio/essay/oral presentation)	35%
2	Mid-Term Examination (portfolio/essay/presentation)	35%
3	Class Activities: Presentation	30%

To pass the course, the minimum grade is B.

Media employed:	Board, LCD Projector, Laptop/Computer

Reading List:	1. Hastie, T., Tibshirani, R., Friedman, J., The Elements of Statistical Learning (2nd Edition), Springer Verlag, New York 2. Provost, F. and Fawcett, T., 2019, Data Science for Business, O'Reilly 3. Recent publication on machine learning topic

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		v	
CO 3	v	v	v		v	v

Last Modified Date : **February 10, 2024**

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MODULE HANDBOOK

Module name:	*Topics in Advanced Computation of Statistics A*
Code, if applicable:	MMM 7504
Subtitle, if applicable	Machine Learning Lanjut
Semester(s) in which the module is taught:	1st or 2nd semester
Person responsible for the module:	Chair of Computation of Statistics Research Group
Language:	Bahasa Indonesia
Relation to curriculum:	Elective Course
Teaching methods	Lecture, classroom discussion, project-based learning.
Workload (incl. contact hours, self-study hours)	Total workload is 232 hours per semester, which consists of 50 minutes lectures per week, 120 minutes structured activities per week, 120 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.
Credit points in Credit Units	3
Required and recommended prerequisites for joining the module	Students have learned some basic courses in statistics and statistical mathematics course. Students also have some knowledge of statistical software, such as *R*.
Module objectives/intended learning outcomes:	After completing this course, the students have abilities to: CO 1. analyze the theoretical aspect of Machine Learning, related to the doctoral research being studied CO 2. Use software for doing Machine Learning related to the doctoral research being studied CO3. to analyze some extended Machine Learning models and methods related to the doctoral research being studied
Content:	It will be derived from the research topic of the students. It will be focused on the theory, models, and method of specific data analysis used in the student research.
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2	Mid-Term Examination (portfolio/essay/presentation)	35%
3	Class Activities: Presentation	30%	 To pass the course, the minimum grade is B.

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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		v	
CO 3	v	v	v		v	v

Last Modified Date   :   February 10, 2024