



UNIVERSITAS NEGERI YOGYAKARTA
POSTGRADUATE PROGRAM DEPARTMENT OF
ELECTRONICS AND INFORMATICS ENGINEERING
EDUCATION

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**Master of Education in Electronics and Informatics
Engineering**

MODULE HANDBOOK

Module name:	Kecerdasan Buatan (Artificial Intelligence)
Module level, if applicable:	Postgraduate
Code:	PTI 8206
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	2 nd
Module coordinator:	Dr. Ir. Fatchul Arifin, M.T.
Lecturer(s):	Dr. Ir. Fatchul Arifin, M.T.
Language:	English
Classification within the curriculum:	Elective Course
Teaching format / class Hours per week during the semester:	100 minutes lectures and 120 minutes structured activities per week.
Workload:	Total workload is 90,67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes self-study per week for 16 weeks
Creditpoints:	2
Prerequisites course(s):	-
Course outcomes:	After taking this course the students have ability to: CO1. Understand the concepts about Artificial Intelligent CO2. Develop Artificial Intelligent Sistem for educational and industrial applications CO3. Provide solutions to contemporary problems based on Artificial Intelligence Systems CO4. Analyze data based on Artificial Intelligent Systems

Content:	<p>Artificial Intelligent (AI) course provides basic knowledge of AI and its applications. Broadly speaking, AI material includes:</p> <ul style="list-style-type: none"> - Introduction to AI - Definition of AI - Kinds of AI applications - Conventional AI - AI Searching - Modern AI (Soft Computing) - Coding of Rule: Fuzzy Logic - Machine Learning: Neural Network <p>Three basic things consisting of Searching, fuzzy logic, and Machine Learning - Neural Network are basic things that must be understood by students regarding the Artificial Intelligence Concept. Several applications in the educational, industrial, and social world will be described as case studies.</p>																								
Study/exam achievements:	<p>Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1" data-bbox="615 1182 1406 1480"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO1</td> <td rowspan="4">Individual Assignment, Group Assignment, Quiz</td> <td rowspan="4">Written Test, Oral test, Observation, portfolio</td> <td>25%</td> </tr> <tr> <td>2</td> <td>CO2</td> <td>25%</td> </tr> <tr> <td>3</td> <td>CO3</td> <td>25%</td> </tr> <tr> <td>4</td> <td>CO4</td> <td>25%</td> </tr> <tr> <td colspan="3"></td> <td>Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1	Individual Assignment, Group Assignment, Quiz	Written Test, Oral test, Observation, portfolio	25%	2	CO2	25%	3	CO3	25%	4	CO4	25%				Total	100%
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1	CO1	Individual Assignment, Group Assignment, Quiz	Written Test, Oral test, Observation, portfolio	25%																					
2	CO2			25%																					
3	CO3			25%																					
4	CO4			25%																					
			Total	100%																					
Forms of media:	LCD/Projector, Laptop, White Board, Internet/ E-Learning																								
Literature:	<ol style="list-style-type: none"> 1. Artificial Intelligence and the Future of Humanity - Kindle edition by Lennox, John C.. Religion & Spirituality Kindle 2. Artificial Intelligence: A Guide for Thinking Humans (Audible Audio Edition): Melanie Mitchell, Abby Craden, Melanie Mitchell, Tony Wolf, Macmillan Audio (accessed Oct. 05, 2020). 3. Machine Learning 2020: The Ultimate Guide to Data Science, Artificial Intelligence, and Neural Networks in Modern Business and Marketing applications: The Data Science Guide, Book 1 (Audible Audio Edition): Bill Hanson, Kevin Tromp, Bill Hanson: Books. (accessed Oct. 05, 2020). 4. Analytics, Data Science, & Artificial Intelligence: Systems for 																								

	<p>Decision Support: Sharda, Ramesh, Delen, Dursun, Turban, Efraim: 9780135192016 (accessed Oct. 05, 2020).</p> <p>5. T. Taulli, Artificial Intelligence Basics: A Non-Technical Introduction, 1st ed. Edition. Apress, 2019.</p> <p>6. Artificial Intelligence with Python: Your complete guide to building intelligent apps using Python 3.x, 2nd Edition: Artasanchez, Alberto, Joshi, Prateek: 9781839219535: (accessed Oct. 05, 2020).</p> <p>7. S. Russell and P. Norvig, Artificial Intelligence: A Modern Approach, 4th Edition. Hoboken: Pearson, 2020</p> <p>8. L. Xing, M. L. Giger, and J. K. Min, Eds., Artificial Intelligence in Medicine: Technical Basis and Clinical Applications, 1st Edition. Academic Press, 2020</p>
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1		✓								
CO2					✓					
CO3							✓			
CO4								✓		