

**UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE**  
**DEPARTMENT OF COMPUTER SCIENCE AND ELECTRONICS**  
**FACULTY OF MATHEMATICS AND NATURAL SCIENCES**  
**UNIVERSITAS GADJAH MADA**

Module name	Philosophy of Computer Science
Module level	Undergraduate
Code	UMS-4000
Courses (if applicable)	Philosophy of Computer Science
Semester	Spring (Even)
Contact person	Dalijo, Drs., Dipl.Comp.
Lecturer	Dalijo, Drs., Dipl.Comp.
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program, mandatory, 6 <sup>th</sup> semester. 2. International undergraduate program, mandatory, 6 <sup>th</sup> semester.
Type of teaching, contact hours	
Workload	1. Lectures: 2 x 50 = 100 minutes per week. 2. Exercises and Assignments: 2 x 60 = 120 minutes (2 hours) per week. 3. Private study: 2 x 60 = 120 minutes (2 hours) per week.
Credit points	2 credit points (sks).
Requirements according to the examination regulations	A student must have attended at least 75% of the lectures to sit in the exams.
Recommended prerequisites	None
Learning outcomes and their corresponding PLOs	(LO-1) Understand the differences of philosophy , science, knowledge, and technology (LO-2) Ability to explain computer science, information technology, and information system (LO-3) Understand the difference of computer science and computer technology (LO-4) Ability to form mathematical function, algorithm and procedures, and solving a problem using computer's theory and technique (LO-5) Ability to do teamwork and having required soft skills work in a team

	(LO-6) Ability to analyze required ability needed to be improved to answer information technology development challenges																																																										
Content	This subject will discuss philosophy of computer sciences, a branch of sciences which has been applied in various field, especially Artificial Intelligence (AI). Philosophy of computer science is not a well developed subject yet. Therefore this subject will be comprised of topics representing philosophy of computer sciences. This subject is also important for training students' critical thinking skill.																																																										
Study and examination requirements and forms of examination	In class group discussion , Quiz, Midterm examination, and Final examination																																																										
Media employed	LCD, blackboard, websites, and ACL tools.																																																										
Assessments and Evaluation	<table border="1"> <thead> <tr> <th>LO</th> <th>Metode</th> <th>Jenis</th> <th>Persentase</th> <th>Jumlah</th> </tr> </thead> <tbody> <tr> <td rowspan="2">LO1</td> <td>Quiz/Discussion 1</td> <td>Formatif</td> <td>5%</td> <td rowspan="2">15%</td> </tr> <tr> <td>Problem 1 MIDTERM EXAM</td> <td>Summatif</td> <td>10%</td> </tr> <tr> <td rowspan="2">LO2</td> <td>Quiz/Discussion 2</td> <td>Formatif</td> <td>5%</td> <td rowspan="2">15%</td> </tr> <tr> <td>Problem 2 MIDTERM EXAM</td> <td>Summatif</td> <td>10%</td> </tr> <tr> <td rowspan="2">LO3</td> <td>Quiz/Discussion 3</td> <td>Formatif</td> <td>5%</td> <td rowspan="2">20%</td> </tr> <tr> <td>Problem 3,4 MIDTERM EXAM</td> <td>Summatif</td> <td>5%</td> </tr> <tr> <td rowspan="2">LO4</td> <td>Quiz/Discussion 4</td> <td>Formatif</td> <td>5%</td> <td rowspan="2">15%</td> </tr> <tr> <td>Problem 1 FINAL EXAM</td> <td>Summatif</td> <td>5%</td> </tr> <tr> <td rowspan="2">LO5</td> <td>Quiz/Discussion 5</td> <td>Formatif</td> <td>5%</td> <td rowspan="2">15%</td> </tr> <tr> <td>Problem 2 FINAL EXAM</td> <td>Summatif</td> <td>5%</td> </tr> <tr> <td rowspan="2">LO6</td> <td>Quiz/Discussion 6</td> <td>Formatif</td> <td>5%</td> <td rowspan="2">20%</td> </tr> <tr> <td>Problem 3,4 FINAL EXAM</td> <td>Summatif</td> <td>5%</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Total</td> <td>100%</td> </tr> </tbody> </table>	LO	Metode	Jenis	Persentase	Jumlah	LO1	Quiz/Discussion 1	Formatif	5%	15%	Problem 1 MIDTERM EXAM	Summatif	10%	LO2	Quiz/Discussion 2	Formatif	5%	15%	Problem 2 MIDTERM EXAM	Summatif	10%	LO3	Quiz/Discussion 3	Formatif	5%	20%	Problem 3,4 MIDTERM EXAM	Summatif	5%	LO4	Quiz/Discussion 4	Formatif	5%	15%	Problem 1 FINAL EXAM	Summatif	5%	LO5	Quiz/Discussion 5	Formatif	5%	15%	Problem 2 FINAL EXAM	Summatif	5%	LO6	Quiz/Discussion 6	Formatif	5%	20%	Problem 3,4 FINAL EXAM	Summatif	5%				Total	100%
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Reading List	<ol style="list-style-type: none"><li>1. Darmodjo, H., Buku Materi Pokok Filsafat Ilmu Pengetahuan Alam, Universitas Terbuka.</li><li>2. Rapaport, W.J., 2004, Philosophy of Computer Science, <a href="http://www.cse.buffalo.edu/rapaport/">http://www.cse.buffalo.edu/rapaport/</a></li><li>3. Suriasumantri, J., 2005, Filsafat Ilmu Sebuah Pengantar Populer, Pustaka Sinar Harapan, Jakarta.</li><li>4. Tim Dosen Filsafat Ilmu, Fakultas Filsafat UGM , 2003 ; "Filsafat Ilmu", Penerbit Liberty, Yogyakarta.</li><li>5. The Liang Gie, 1991; " Pengantar Filsafat Ilmu ", Penerbit Liberty, Yogya karta.</li><li>6. Francis Lim, 2008 ; "Filsafat Teknologi, Don Ihde Tentang Dunia, Manusia, dan Alat.", Penerbit PT Kanisius; Yogyakarta</li><li>7. Yesaya Sandang, 2013 ; "Dari Filsafat ke Filsafat Teknologi (sebuah pengantar awal)" , Penerbit PT Kanisius; Yogyakarta</li></ol>