



UNIVERSITAS NEGERI YOGYAKARTA  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
DEPARTMENT OF PHYSICS EDUCATION  
**PHYSICS STUDY PROGRAM**

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**Bachelor of Physics**

**MODULE HANDBOOK**

Module name:	Antennas
Module level, if applicable:	Bachelor Program
Code:	FSK6344
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	5 <sup>th</sup>
Module coordinator:	Dr. Kuncoro Asih Nugroho, M.Pd., M.Sc.
Lecturer(s):	Agus Purwanto, M.Sc., Sumarna, M.Si., M.Eng.
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective course
Teaching format / class hours per week during the semester:	150 minutes lecture dan 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes individual study per week for 16 weeks.
Credit points:	3 SKS (4.86 ECTS)
Prerequisites course(s):	-
Course Outcomes	CO1. Memahami konsep dasar antena CO2. Menganalisis prinsip kerja berbagai macam antenna CO3. Memahami fungsi reflektor CO4. Memahami aplikasi dan konsep temperature pada Antena
Content:	Assessment to students includes affective, cognitive

	<p>components. Attitude assessment is done by observing the learning process. Attitude assessments will be observed that are outside the general range, namely very good or bad attitudes. Antenna concept understanding assessment through test.</p> <p>The final mark will be weight as follow:</p>															
Study / exam achievements:	<table border="1"> <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 CO2, CO3 and CO4</td> <td>a. class attendance b. Individual Assignment (class aktifitas) c. Group Assignment d. Quiz e. Mid f. Final Exam</td> <td>Presentation / written test</td> <td>5% 15% 20% 20% 20% 20%</td> </tr> <tr> <td colspan="4" style="text-align: right;">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1 CO2, CO3 and CO4	a. class attendance b. Individual Assignment (class aktifitas) c. Group Assignment d. Quiz e. Mid f. Final Exam	Presentation / written test	5% 15% 20% 20% 20% 20%	Total				100%
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Total				100%												
Forms of media:	Board, LCD Projector, Laptop/Computer															
Literature:	<ol style="list-style-type: none"> <li>Balanis, C.A., 2016, <i>Antenna Theory analysis and Design Fourth Edition</i>, New Jersey: John Wiley &amp; Son, Inc.</li> <li>Huang, Y., Bpyle, K., 2008, <i>Antennas From theory to practice</i>, wessex: John Wiley &amp; Sons Ltd.</li> <li>Hallas, J.R., 2009, <i>Basic Antennas understanding practical antennas and design</i>, Newington CT:ARRL</li> <li>Kraus, J.D., 1997, <i>Antennas for all Application second edition</i>, New york: McGraw-Hill companies, Inc.</li> <li>Stutzman, W.L., dan Thiele, G.A., 2013, <i>Antenna Theory and Design third Edition</i>, Hoboken: John Wiely 7 Sons, Inc.</li> </ol>															

### PLO and CO mapping

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