Module designation	Plant Physiology
Semester(s) in which the module is taught	Even/2nd
Person responsible for the module	Nur Aeni Ariyanti SP., MP., M.Agr., Ph.D., Lili Sugiyarto S.Si., M.Si., Dr. Drs. Suyitno Aloysius M.S.
Language	Bahasa Indonesia
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, project, seminar, exam
Workload (incl. contact hours, self-study hours)	Total workload is 91 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points	2 SKS (3.2 ECTS)
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	PLO 2 PLO 3 PLO 4 PLO 6 PLO 7 PLO 9
Content	This course addresses important topics, including: water absorption and loss processes, nutrition, metabolism including photosynthesis, NPS metabolism and respiration, assimilate translocation, enzymes and hormones, growth and development, and seed physiology. To guide students in mastering the material, learning is developed through tutorials, discussions, and presentations of the results of reference studies, case studies, and/or other relevant problem-solving activities, in the form of group projects and/or individual projects.
Examination forms	Presence, task, quiz, mid semester exam, final semester exam, case study, team based project.

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<td>Study and examination requirements</td>
<td>The final mark will be weight as follow:
<table>
<tr><th>NO</th><th>Assessment Techniques</th><th>Percentage Weight Assessment (%)</th><th>Information</th></tr>
<tr><td rowspan="6">1</td><td>Cognitive</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr>
<tr><td>Presence</td><td>5</td><td></td></tr>
<tr><td>Task</td><td>10</td><td></td></tr>
<tr><td>Quiz</td><td>5</td><td></td></tr>
<tr><td>Mid Semester Exam</td><td>15</td><td></td></tr>
<tr><td>Final Semester Exam</td><td>15</td><td></td></tr>
<tr><td rowspan="3">2</td><td>Participatory</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr>
<tr><td>Case Study</td><td>40</td><td></td></tr>
<tr><td>Team Based Project</td><td>10</td><td></td></tr>
<tr><td></td><td>Total</td><td>100</td><td></td></tr>
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<td>Reading list</td>
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A. Urry, Cain, Wasserman, Minorsky, Jackson & Reece. 2014. Campbell Biology in Focus. International Edition. Pearson Education, Inc.
B. Hopskin, W.G & Huner,N.P.A. 2008. Introduction to Plant Physiology 4th Edition.
C. Taiz, L., Moller, I.M., Murphy, A., Zeiger, E. 2022. Plant Physiology and Development 7th Ed. Sinauer Associates.
D. Shatis C. Bhatla and Manju A. Lal. 2018. Plant Physiology, Development, and Metabolism. Pringer Nature Singapore Pte.Ltd.: Singapore.
E. Narpat Singh Shekhawat. & Gaurav Sablok. 2002. Plant physiology & Biochemistry
F. Richards Creng; Sheila Lions-Sobaski and Robert Wise. 2018. Plant Anatomy : A Concept Based Approach to the Structure of Seed Plants. Springer
G. Nobel, P.S. 2009. Physicochemical and Environmental Plant Physiology. Elsevier Acad.Press. London
H. Naeem M; Abid A. Ansari; Sarvajeet Singh Gill. 2017. Essential Plant Nutrients. Springer International Publishing: Switzerland

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