

## 420224702 Plantation Products and Polysaccharides Technology

Module Name	
	<b>Plantation Products and Polysaccharides Technology</b>
<b>Module Level, if applicable</b>	Advance
<b>Code if Applicable</b>	420224702
<b>Subtitle, if applicable</b>	-
<b>Courses, if applicable</b>	420224702 Plantation Products and Polysaccharides Technology
<b>Semester(s) in which the module is taught</b>	6 <sup>th</sup>
<b>Person responsible for the module</b>	Dahlia Elianarni, S.TP., M.Sc
<b>Lecturer</b>	Prof. Dr. Ir. Damat., MP
<b>Language</b>	Indonesian
<b>Relation to curriculum</b>	Elective Course for undergraduate program in the Food Technology Department, Faculty of Agriculture and Animal Science
<b>Type of teaching</b>	Lecture, Project, Lab Work
<b>Workload</b>	<ul style="list-style-type: none"> <li>● Lecture: 2 SKS X 50 minutes X 16 weeks</li> <li>● Project: 2 SKS X 60 minutes X 16 weeks</li> <li>● Independent learning: 2 SKS X 60 minutes X 16 week</li> <li>● Lab Work : 1 SKS x 170 minutes</li> </ul>
<b>Credit points</b>	3 SKS X 1.5 = 4.5 ECTS
<b>Requirements according to the examination regulations</b>	<ol style="list-style-type: none"> <li>1. Registered in this course</li> <li>2. Minimum 80% attendance in this course</li> </ol>
<b>Recommended prerequisites</b>	-
<b>Module Objectives (Intended learning outcomes)</b>	<p>On successful completion of this course, student should be able to:</p> <ul style="list-style-type: none"> <li>● Understand the concept of plantation products and their significance in various industries.</li> <li>● Identify different types of polysaccharides and their sources.</li> <li>● Comprehend the principles of polysaccharide extraction and purification.</li> <li>● Analyze the various technologies involved in polysaccharide processing for sustainability</li> <li>● Evaluate the applications of polysaccharides in different industries such as food, pharmaceuticals, and cosmetics for diversity</li> <li>● Develop practical skills in polysaccharide extraction, characterization, and utilization through laboratory exercises and case studies.</li> </ul>

<b>Module Content</b>	This course presents introduction, production, extraction, processing and application of polysaccharides in all industry
<b>Study and examination requirements and forms of examination</b>	<p><b>Cognitive:</b> Midterm exam, Final exam, Quizzes, Assignments</p> <p><b>Psychomotor:</b> Practice and Lab Work</p> <p><b>Affective:</b> Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.</p>
<b>Media employed</b>	Classical teaching tools with white board and power point presentation
<b>Recommended Literature</b>	<p>For Class</p> <p><b>A. Compulsory</b></p> <ol style="list-style-type: none"> <li>1. Stephen E. Harding, John F. Morris, and Richard A. Meyers. 2012. Polysaccharides: Structural Diversity and Functional Versatility. CRC Press.</li> <li>2. Se-Kwon Kim. 2015. Handbook of Marine Macroalgae: Biotechnology and Applied Phycology. John Wiley &amp; Sons.</li> <li>3. Bernd H. A. Rehm, Antonio Steinbüchel. 1999. Biopolymers, Volume 5, Polysaccharides II: Polysaccharides from Eukaryotes. Wiley-VCH.</li> </ol> <p><b>B. Option</b></p> <ol style="list-style-type: none"> <li>1. Stephen A. Morse, Louise Fortmann, and Edward A. Whiting. 2001. Trees, Grasses, and Crops: People and Plants at Work. Springer.</li> </ol>
<b>Date of Last Amendment</b>	22nd Agustus 2022