

Module Name	<b>Herbs, Spices, and Essential oil Processing Technology</b>
<b>Module Level, if applicable</b>	Advanced
<b>Code if Applicable</b>	420225735
<b>Subtitle, if applicable</b>	
<b>Courses, if applicable</b>	420225735 Herbs, Spices, and Essential oil Processing Technology
<b>Semester(s) in which the module is taught</b>	6 <sup>th</sup>
<b>Person responsible for the module</b>	Rista Anggriani, STP.MP.MSc
<b>Lecturer</b>	Ir.Sukardi, MP
<b>Language</b>	Indonesian
<b>Relation to curriculum</b>	Elective Course for Undergraduate Program in the Department of Food Technology, Faculty of Agriculture and Animal Science
<b>Type of teaching</b>	Lecture, Field Study
<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> </ul>
<b>Credit points</b>	2 SKS X 1.5 = 3 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>	<ul style="list-style-type: none"> <li>● Understand various raw materials for herbs, spices and essential oils and their characteristics</li> <li>● Explain and determine the processing technology used to process spices and essential oils.</li> <li>● Explain and engineer functional and nutraceutical food products using herbs, spices and essential oils as raw materials.</li> <li>● Know and explain the latest developments in spice and essential oil nanotechnology.</li> </ul>
<b>Module Content</b>	<p>This course studies processing technology and analysis of the physicochemical characteristics of spices, essential oils and oleoresins and their application in the food sector.</p> <p>It discusses the classification, structure, and benefits of herbal bioactive compounds on health, as well as bioactive sources of herbs both derived from fruits, vegetables and tubers, cereals and legumes, herbs and seasonings, and seafood ingredients and the extraction process of bioactive component compounds. This course also explains Regarding the factors that affect herbal bioactive compounds both during the harvesting process as well as the processing process. In addition, this course also provides</p>

	material on the stability of herbal bioactive compounds during processing process, during storage, and during the fortification process and formulation of herbal food products.
<b>Study and examination requirements and forms of examination</b>	<p><b>Cognitive:</b> Midterm exam, Final exam, Quizzes, Assignments</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 PowerPoint presentation
<b>Recommended Literature</b>	<ol style="list-style-type: none"> <li>1. Peter KV. 2000. Handbook of Herbs and Spices, Vol. 2. CRC Press</li> <li>2. Tiwari BK, Brunton NP, Brennan CS. 2013. Handbook of Plant Food Phytochemicals : Sources, Stability and Extraction. Wiley-Blackwell</li> <li>3. Meireles MAA. 2009. Extracting Bioactive Compounds for Food Products : Theory and Applications. CRC Press</li> <li>4. Kumar DS. 2016. Herbal Bioactives and Food Fortification : Extraction and Formulation. CRS Press</li> </ol>
<b>Date of Last Amendment</b>	8 <sup>th</sup> January 2022