

Appendix 4.1

1. 589435210 Chocolate Formulation Techniques

Module Name	Chocolate Formulation Techniques
Module Level, if applicable	Advanced
Code if Applicable	589435210
Subtitle, if applicable	-
Courses, if applicable	589435210 Chocolate Formulation Techniques
Semester(s) in which the module is taught	6 th
Person responsible for the module	Afifa Husna, STP., MTP., M.Sc
Lecturer	Lois Merry Sujiati Wijanto, S.T
Language	Indonesian
Relation to curriculum	Chocolate Profesional Class (CoE) Courses for undergraduate program in Departement of Food Technology, Faculty of Agriculture and Animal Science
Type of teaching	Lecture, Field Study, Practicum
Workload	<ul style="list-style-type: none"> • Lecture: 2 sks X 50 minutes X 16 weeks • Practicum: 1 sks X 170 minutes X 16 weeks • Project: 2 sks x 60 minutes x 16 weeks • Independent learning: 2 sks X 60 minutes X 16 weeks
Credit points	3 SKS X 1.5 = 4.5 ECTS
Requirements according to the examination regulations	<ol style="list-style-type: none"> 1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	
Module Objectives (Intended learning outcomes)	<p>On completion of this course, student should be able to :</p> <ul style="list-style-type: none"> • Understand various kinds of chocolate ingredients and its standards (chocolate; non-chocolate: milk, types of sweeteners; BTP; accompanying ingredients) • Solve chocolate industrialization standards problems and adapt local ingredients to international standards. • Present the potential of local raw materials • Identify standard chocolate ingredients and finished chocolate

	<ul style="list-style-type: none"> • Evaluate nutrition in processing and in chocolate formulations used by industry and artisans • Carry out chocolate product recipe techniques with local food and comply with the standards; Brem chocolate, ginger chocolate, herbal medicine chocolate, spice chocolate
Module Content	This course discusses the ingredients for making chocolate, standards for chocolate products exported to European and American markets, nutritional evaluation techniques between raw materials and final chocolate products, chocolate recipe techniques, and standard operational procedures in chocolate product formulation.
Study and examination requirements and forms of examination	<p>Cognitive: Midterm exam, Final exam, Quizzes, Practicum Report, Assignments</p> <p>Affective: Assessed from the element/variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.</p>
Media employed	Presentation, white board, sets of practicum tools
Recommended Literature	<p>A. Compulsory</p> <ol style="list-style-type: none"> 1. Afoakwa, E. 2010. Chocolate Science and Technology. Blackwell publishing, John Wiley & Sons Ltd, West Sussex, United Kingdom. 2. Backet, ST. 2000. The Science of Chocolate. RSC Paper Backs Published by The Royal Society of Chemistry, Thomas Graham House, Science Park Milton Road. Cambridge 3. Departemen Pertanian. 2005. Prospek dan Arah Pengembangan: Agribisnis Kakao, Lembaga Riset Perkebunan Indonesia. Bogor. 4. Sudjata, W., Permana IDG. M., dan Puspawati N.N. 2015. Teknologi Pengolahan Kakao. Buku Arti. Universitas Udayana. Denpasar. 5. Thompson,S.S., K.B. Miller, A.S Lopez. 2001. Cocoa And Coffee. In Food Microbiology. M.P. Doyle, L.R. Beuchat, T.J. Montville.(Eds). ASM. Press

	<p>B. Option</p> <ol style="list-style-type: none">1. Alshekhli, O., Foo, D.C.Y., Hii, C.L., Law, C.L. 2011. Process Simulation and Debottlenecking for an Industrial Cocoa Manufacturing Process. Food and Bioproducts Processing. 89: 528-5362. Tim Bina Karya Tani. 2009. Pedoman Bertanam Cokelat. Penerbit CV. Yrama Widya. Bandung.
Date of Last Amendment	22 nd April 2024