460555398 Halal Authentication Analysis

Module Name	**Halal Authentication Analysis**
Module Level, if applicable	Advanced
Code if Applicable	460555398
Subtitle, if applicable	-
Courses, if applicable	460555398 Halal Authentication Analysis
Semester(s) in which the module is taught	6th
Person responsible for the module	Vritta Amroini Wahyudi, S.Si, M.Si Rista Anggriani, STP., MP., M.Sc
Lecturer	Rista Anggriani, STP., MP., M.Sc
Language	Indonesian
Relation to curriculum	Elective Course for undergraduate program in the Food Technology Department, Faculty of Agriculture and Animal Science
Type of teaching	Lecture, project
Workload	Lecture: 2 SKS X 50 minutes X 16 weeks Project: 2 SKS X 60 minutes X 16 weeks Independent learning: 2 SKS X 60 minutes X 16 week
Credit points	2 SKS X 1.5 = 3.0 ECTS
Requirements according to the examination regulations	1. Registered in this course 2. Minimum 80% attendance in this cours
Recommended prerequisites	Analytical Chemistry
Module Objectives (Intended learning outcomes)	On successful completion of this course, student should be able to: ● Learn about scope of halal authentication in global perspective, including it defferences than kosher food ● Explain the principle of halal authentication (identification and validation) based on - Metabolic - Genomic - Proteomic approachment ● Describe and give perspective to choose the effective approaching method based on the each case in halal authentication field.
Module Content	Halal authentication analysis is an advance selective course to support student in specific study field. Consider the current issue in global, this course more focused study in metabolic, genomic, and proteomic approchment.

Study and examination requirements and forms of examination	**Cognitive**: Midterm exam, Final exam, Quizzes, Assignments **Affective**: Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.
Media employed	Presentation, case discussion from paper
Recommended Literature	**A. Compulsory** ● AOAC, 2005. Official Methods of Analysis of the Association of Official Analytical Chemist. Association of Official Analytical Chemist. Washington **B. Option** 1) Mortas, M., Awad, N. and Ayvaz, H., 2022. Adulteration detection technologies used for halal/kosher food products: an overview. Discover Food, 2(1), p.15. 2) Usman, I., Sana, S., Afzaal, M., Imran, A., Saeed, F., Ahmed, A., Shah, Y.A., Munir, M., Ateeq, H., Afzal, A. and Azam, I., 2024. Advances and challenges in conventional and modern techniques for halal food authentication: A review. Food Science & Nutrition, 12(3), pp.1430-1443. 3) Ng, P.C., Ahmad Ruslan, N.A.S., Chin, L.X., Ahmad, M., Abu Hanifah, S., Abdullah, Z. and Khor, S.M., 2022. Recent advances in halal food authentication: Challenges and strategies. Journal of Food Science, 87(1), pp.8-35. 4) Aini, S.R., MULYANTO, M., Erwanto, E., Ansar, A., Handayani, B.R. and IRNAWATI, I., The Metabolomics Approach Used for Halal Authentication Analysis of Food and Pharamaceutical Products: a Review. Food Research, 7(3), pp.180-187. 5) Windarsih, A., Rohman, A., Riswanto,

	F.D.O., Dachriyanus, Yuliana, N.D. and Bakar, N.K.A., 2022. The metabolomics approaches based on LC-MS/MS for analysis of non-halal meats in food products: A review. Agriculture, 12(7), p.984. 6) Ortea, I., O'Connor, G. and Maquet, A., 2020. Review on proteomics for food authentication. Proteomics for Food Authentication, pp.3-36. 7) Afzaal, M., Saeed, F., Hussain, M., Shahid, F., Siddeeg, A. and Al-Farga, A., 2022. Proteomics as a promising biomarker in food authentication, quality and safety: A review. Food Science & Nutrition, 10(7), pp.2333-2346. 8) Muflihah, Hardianto, A., Kusumaningtyas, P., Prabowo, S. and Hartati, Y.W., 2023. DNA-based detection of pork content in food. 9) Dirong, G., Nematbakhsh, S., Selamat, J., Chong, P.P., Idris, L.H., Nordin, N., Fatchiyah, F. and Abdull Razis, A.F., 2021. Omics-based analytical approaches for assessing chicken species and breeds in food authentication. Molecules, 26(21), p.6502.
Date of Last Amendment	23rd Agustus 2022