FACULTY OF AGRICULTURE

Department of Animal Science

UNDERGRADUATE PROGRAM **MODULE HANDBOOK**

Module designation	BEEF PROCESSING TECHNOLOGY
Semester(s) in which the module is taught	*7th semester*
Person responsible for the module	Prof. Dr. Ir. Amhar Abubakar, M.S, IPU, Asean Eng
Language	Indonesian
Relation to curriculum	Compulsory module for Animal Science Program
Teaching methods	Lecture, lesson, case
Workload (incl. contact hours, self-study hours)	▪ 100 minutes of lecture and discussion per week ▪ 120 minutes of structured tasks per week ▪ 120 minutes of independent activity per week
Credit points	2SCH x (1.6) = 3.2 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	1. Understand the importance of meat processing technology and its scope, the utility value of meat, basic meat processing techniques, and the macro and micro components of meat. 2. Understand the principles of meat preservation, cooling, freezing, smoking, and canning. 3. Understand the principles of wet processing, dry processing, fermentation, the use of chemical additives, the microbiology of meat, and the application of microbiology to livestock food processing.
Content	This course provide learning about understanding of the meat processing technology and its scope, the utility value of meat, basic meat processing techniques, and the macro and micro components of meat. Understand the principles of meat preservation, cooling, freezing, smoking, and canning. Understand the principles of wet processing, dry processing, fermentation, the use of chemical additives, the microbiology of meat, and the application of microbiology to livestock food processing.
Exams and assessment formats	Essay, case study
Study and examination requirements	51,7 % casemethod 6,7 % quiz 16,7 % assignment 8,3 % midterm examination 16,7 % final examination

Reading list	Main References 1. El-Tahlawy, A. S. (2025). Green processing technology of meat and meat products: A review. *Theory and Practice of Meat Processing, 10*(1), 32–44. https://doi.org/10.21323/2414-438X-2025-10-1-32-44 2. Zhou, C., & Cao, J. (2023). Green processing technology of meat and meat products. *Foods, 12*(12), 2356. https://doi.org/10.3390/foods12122356 3. Ren, Z., Li, Z., Hu, Z., Xia, W., Zhou, M., Pan, Z., ... Li, J. (2024). Recent insights into bonding technologies in restructured meat production: A review. *Food Chemistry: X, 23*, 101712. 4. Food, Nutrition and Health Editorial Team. (2025). Cold plasma and high-pressure processing in sustainable meat preservation: A review. *Food, Nutrition and Health, 2*, 22. https://doi.org/10.1007/s44403-025-00032-1 5. Kusuma N. S., Purnawan, M. A., & Stevviani, R. (2025). High-pressure processing energy efficiency and scalability challenges in ultra-processed meat: A review. *Journal of Clean Technology, 2*(1), Article 27944. https://doi.org/10.15294/joct.v2i1.27944