**Module Handbook**

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| Module Title | *Dairy Processing Industry* |
| Module Level, if available | *Undergraduate Program* |
| Course Code | *PET60016* |
| Headings, if available |  |
| Course (MK) | *Dairy Processing Industry* |
| Semester | *Odd/Even* |
| Course Coordinator | *Dr.Ir. Purwadi, MS* |
| Language of instruction | 1. *Dr.Ir. Purwadi, MS* 2. *Prof. Dr. Ir. Lilik Eka Radiati, MS., IPU., ASEAN Eng* 3. *Dr. Ir. Imam Thohari, MP., IPM., ASEAN Eng* 4. *Dr. Manik Eirry Sawitri, Ir.MS.* 5. *Dr. Abdul Manab, S.Pt., MP* 6. *Dr. Herly Evanuari, S.Pt., MP* 7. *Dr. Khotibul Umam A., S.Pt., Msi* 8. *Dr. Premy Puspitawati Rahayu, S.Pt., MP* 9. *Ria Dewi Andriani, S.Pt, MSc. MP* 10. *Mulia Winirsya A.,S.Pt., MP* |
| Linkages with the Curriculum | *Indonesian language /~~English/Combination~~ (Indonesian language and English)* |
| Learning Methods and Duration | *Study Program: Animal Science*  *Specialization: Animal Product Technology*  *Type: ~~Compulsory~~/Non-Compulsory* |
| Student Study Load | 1. Lecture: Duration and Number of Students   100 minutes/meeting   1. Practicum of 150 minutes/meeting 2. Structured Assignments: Duration and Number of Students 3. Presentation: Duration and Number of Students |
| Language of instruction | Estimated total and detailed study load  The duration of the meeting (lectures, practicum, review session, etc.) and independent learning, including exam preparation*.*   1. Lecture: 14 meetings\*100 minutes 2. Practicum: 14 meetings\*150 minutes 3. Independent learning: 16 times\*150 minutes |
| Credit Weight | 3 credits (2 credits of lectures, 1 credit of practicum) |
| Requirements for Passing the Course | *Midterm Exam : 25%*  *Final Exam : 25%*  *Practicum : 25%*  *Assignments : 15%*  *Quiz : 5%*  *Activeness/Discipline/attitude: 5%* |
| Prerequisite Courses | *Microbiology, Introduction to Animal Product Technology, Animal Product Technology, Quality Control* |
| Learning Outcomes | 1. *LO 4: Able to develop comprehensive insight and mindset according to the science and field of the animal industry.* 2. *LO 12: Able to design and conduct experiments, analyze and interpret data to make correct decisions in solving problems in the field of animal science, meet ethics, and have environmental insight.* 3. *LO 13: Able to apply animal technology that is oriented towards improving production, efficiency, quality, and sustainability based on mastery of animal science including breeding, feed, processing of products, marketing management and organizing a sustainable animal production system, and applying entrepreneurial concepts.* |
| Learning Content | *Learning Guidelines for MK Dairy Processing Industry Course*  *Competencies to be achieved:*   1. *Familiarize with the requirements for the milk processing industry including industrial establishment, regulations, and design).* 2. *Able to familiarize with and analyze internal factors (Human Resources, Raw Material Capital, Infrastructure and Facilities, and Culture) and external factors (Socio-Economic, Political, Environmental, and Technological) of the Milk Processing Industry.* 3. *Able to work as a team in generating SWOT and PEST analyses.* 4. *Able to design a Business Plan in the Milk Processing Industry.*   *Scope of teaching materials:*   1. *Introduction (development of the dairy industry in Indonesia, related to inputs, processes, and outputs).* 2. *Dairy Industry Tree* 3. *Pasteurized, Sterilized, and UHT Milk Industry* 4. *Sweetened Condensed Milk and Milk Powder Evaporation Industry* 5. *Fermented Milk Industry of Liquid and Solid Products* 6. *Ice Cream and Butter Industry* 7. *Industrialization of Traditional Dairy Products* 8. *Internal factors affecting the milk processing industry* 9. *External factors affecting the milk processing industry* 10. *SWOT and PEST Analyses* 11. *Business Plan, lecture rules, assignments, and assessments* |
| Test Terms and Forms | *A minimum attendance of 80% to take the Midterm Exam and Final Exam*  *Final Exam of Multiple Choice/Essay/Group Presentation/etc.* |
| Learning Media | *Projector and screen, VLM, Google Classroom* |
| References | 1. *Alfalafal. 1980. Dairy Handbook. Lund. Sweden.* 2. *Bylund, G. 1995. Dairy Processing Handbook. Lund. Sweden.* 3. *Walstra, P., J.T.M., Wouters., and T.J., Geurts. 2006. Dairy Science and Technology. Second Edition. CRC Press Taylor & Francis.* 4. *Reddy, S., and A.K., Puniya. 2018. Introductory Dairy Microbiology. http://www.agrimoon.com/introductory-dairy-microbiology-pdf-book/* |