FAKULTAS
TEKNOLOGI PANGAN
DAN AGROINDUSTRI
UNIVERSITAS MATARAM

BUKU PEDOMAN AKADEMIK
2021-2022

PROGRAM STUDI :

- Ilmu dan Teknologi Pangan (S1)
- Teknik Pertanian (S1)

Alamat : Jl. Majapahit No. 62 Mataram 83125,Telp/fax : (0370)649879
url http://fatepa.unram.ac.id, email : fatepa@unram.ac.id

Title : Book Academic Guidelines 2021-2022
Faculty of Food Technology and Agroindustry, University of Mataram

Drafting team : Baiq Rien Handayani, SP., M.Sc., Ph.D.
Ir. Zainuri, PGDip., M.App.Sc., Ph.D.
Dr. Eng. Sukmawaty, S.TP., M.Sc.
Ir. Ahmad Alamsyah, MP.
Dr. Ir. Satrijo Saloko, MP.
Murad, SP., MP.
Mutia Devi Ariyana, S.Sc., MP
Gagassage Nanaluih De Side, ST., M.Sc
Muh. Ridwan Amin, S. Kom
Muhammad, SP
Irmayani Marzuka, S.Kom

Published by:
Faculty of Food Technology and Agroindustry
Jalan Majapahit No 62 Mataram, NTB
Tel/Fax. (0370) 649879
e-mail : fatepa@unram.ac.id
Food Science & Technology e-mail :psitpfatepa@unram.ac.id
Bachelor of Agricultural Engineering e-mail : pstepfatepa@unram.ac.id
Web : http://www.fatepa.unram.ac.id/

Printed by:

Eleventh Printing Revision: 2022

Handbook of
the Faculty of Food Technology and
Agroindustry
University of Mataram

DEAN OF FATEPA

Baiq Rien Handayani, SP., M.Sc., Ph.D

VICE DEAN I

Ir. Zainuri, PGDip., M.App.Sc., Ph.D

VICE DEAN II

Dr. Eng. Sukmawaty, STP, M.Sc

VICE DEAN III

Ir. Ahmad Alamsyah, MP

Head of *PS ITP*

Dr. Ir. Satrijo Saloko, MP

Secretary of *PS ITP*

Siska Cicilia, STP., M.Sc

Head of BAE

Murad, SP., MP

Secretary of BAE

Dr. Joko Sumarsono, STP., MP.

Dean's Decree
Number : 0218/UN18.F10/HK/2022

ABOUT

ACADEMIC MANUAL 2021-2022

FACULTY OF FOOD TECHNOLOGY AND AGROINDUSTRY UNIVERSITY OF MATARAM

FACULTY OF FOOD TECHNOLOGY AND AGROINDUSTRY
UNIVERSITAS MATARAM
2022

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
UNIVERSITAS MATARAM
FAKULTAS TEKNOLOGI PANGAN DAN AGROINDUSTRI
Jl. Majapahit 62 Mataram 83127

KEPUTUSAN
DEKAN FAKULTAS TEKNOLOGI PANGAN DAN AGROINDUSTRI UNIVERSITAS MATARAM
NOMOR : 0218/UN18.F10/HK/2022

TENTANG

Penetapan Buku Pedoman Akademik Revisi Kurikulum Tunggal
FAKULTAS TEKNOLOGI PANGAN DAN AGROINDUSTRI UNIVERSITAS MATARAM
Tahun 2022

DEKAN FAKULTAS TEKNOLOGI PANGAN DAN AGROINDUSTRI UNIVERSITAS MATARAM

Menimbang :
a. Bahwa untuk memberikan arah terhadap proses Belajar Mengajar di Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram perlu Penetapan Buku Pedoman tahun akademik 2021/2022
b. Berdasarkan hasil Keputusan Rapat Senat Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram pada hari jum'at 11 Januari 2022 telah menyetujui dokumen buku pedoman akademik tahun 2022
c. Bahwa sesuai maksud pada butir a dan b di atas, maka dipandang perlu menerbitkan Surat Keputusannya

Mengingat :
1. Undang-Undang nomor: 20 tahun 2003 tentang Sistem Pendidikan Nasional;
2. Undang-Undang nomor: 4 tahun 2014 tentang Penyelenggaraan Pendidikan Tinggi dan Pengelolaan Perguruan Tinggi
3. Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia nomor: 116/2014 tentang Organisasi dan Tata Kerja Universitas Mataram
4. Peraturan Menteri Riset, Teknologi Pendidikan Tinggi Republik Indonesia nomor 45 tahun 2017 tentang Statuta Universitas Mataram
5. Kepmenristekdikti RI Nomor 123/M/KPT.KP/2018 tentang Pengangkatan Rektor Universitas Mataram Periode tahun 2018-2022
6. Keputusan Rektor Universitas Mataram:
   a. Nomor: 5105/J18.H/Hk.01.12/2002 tentang Pendelegasian sebagian wewenang kepada Dekan Fakultas di lingkungan Universitas Mataram untuk membuat dan menandatangani Surat Keputusan;
   b. Nomor:1450/UN18/KP/2020 tentang Pengangkatan Dekan Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram periode tahun 2020 - 2024
   c. Nomor:3825/UN18/KP/2020 tentang Pengangkatan Wakil Dekan Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram periode tahun 2020 – 2024

MEMUTUSKAN

Menetapkan :
Pertama : Buku Pedoman Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram tahun akademik 2021/2022 adalah sebagaimana tercantum dalam lampiran Surat Keputusan ini
Kedua : Keputusan ini berlaku mulai sejak tanggal ditetapkan
Ketiga : Apabila dikemudian hari ternyata terdapat kekeliruan dalam penetapan ini, akan diadakan perbaikan sebagaimana mestinya.

Ditetapkan di Mataram
Pada tanggal, 21 Januari 2022
Dekan,

Baiq Rien Handayani
NIP. 19681115 199403 2 013

KATA PENGANTAR

Puji Syukur kehadirat Allah SWT, yang telah memberikan rahmat dan hidayahNya sehingga penyusunan "Buku Pedoman Fakultas Teknologi Pangan dan Agroindustri (Fatepa) Universitas Mataram Berbasis Dengan Kurikulum Merdeka Belajar Kampus Merdeka" dapat terselesaikan. Buku pedoman ini disusun sebagai panduan bagi dosen dan mahasiswa dalam melakukan kegiatan belajar mengajar di lingkungan Fatepa.

Buku Pedoman ini memuat 9 (sembilan) bab isi yang terdiri dari Bab I (Pendahuluan), Bab II (Visi, misi, tujuan dan sasaran fakultas, Bab III (Organisasi), Bab IV (Sistim Pendidikan), Bab V (Administrasi akademik), Bab VI (Proses Pembelajaran), Bab VII (Kompetensi dan kurikulum) dan Bab VIII (Silabi Mata Kuliah), dan Bab IX (Program Merdeka Belajar Kampus Merdeka). Selain itu buku pedoman ini dilengkapi dengan lampiran-lampiran yang memuat contoh administrasi surat menyurat dan daftar nama dosen di lingkungan Fatepa. Dengan informasi yang ada, diharapkan buku pedoman ini tidak hanya bermanfaat bagi lingkungan akademisi Fatepa tetapi juga bagi pihak-pihak lain yang memerlukan.

Buku pedoman ini tersusun berkat dukungan berbagai pihak terutama dukungan Fakultas Induk (Fakultas Pertanian UNRAM) yang memberikan kontribusi besar dalam penyusunan materi pokok buku pedoman. Selain itu dukungan yang penuh diberikan oleh staff akademisi dan tim penyusun buku pedoman Fatepa. Oleh karena itu pada kesempatan ini disampaikan terima kasih atas dedikasi dan kerja keras semua pihak yang terlibat.

Semoga buku pedoman ini bisa memberi manfaat yang sebesar-besarnya bagi dosen dan mahasiswa Fatepa serta pihak-pihak yang berkepentingan. Segala saran yang konstruktif sangat dibutuhkan untuk perbaikan dan penyempurnaan buku pedoman ini untuk mendorong terwujudnya Fatepa yang besar, maju dan lebih baik.

Mataram, 10 Januari 2022

Dekan,

Baiq Rien Handayani, SP., M.Si., Ph.D

NIP. 19681115 199403 2 013

TABLE OF CONTENTS

		Page
TITLE PAGE		i
FOREWORD		vi
TABLE OF CONTENTS		vii
LIST OF TABLES		ix
LIST OF FIGURES		x
APPENDIX LIST		xi
I	**INTRODUCTION**	1
	1.1. Name and Faculty Address	1
	1.2. History	1
II	**VISION, MISSION, OBJECTIVES, AND TARGETS OF THE FACULTY**	3
	2.1. Vision	3
	2.2. Mission	3
	2.3. Objectives	3
	2.4. Targets	3
III	**ORGANIZATION**	4
	3.1. Program Studies	5
	3.2. Laboratory / Technical Implementation Unit	5
	3.3. Supporting Units and Centers	5
IV	**EDUCATION SYSTEM**	7
	4.1. Definition of Semester Credit Units	7
	4.2. Study Load	8
	4.3. Performance Evaluation	8
	4.4. Classification of Graduation Predicate	10
	4.5. Graduation	10
V	**ACADEMIC ADMINISTRATION**	12
	5.1. Academic Calendar	12
	5.2. Admission	12
	5.3. Lesson Plan	13
	5.4. Study Interest	15
	5.5. Academic Advisor	16
	5.6 Student Academic Plan	17
	5.7. Student Transfer	17
	5.8. Field Internship Program	19
	5.9. Preparation Essay	20
	5.10 Judiciary	22
	5.11 Short Semester Lectures	23
	5.12 Academic Leave	23
	5.13 Absent	24
	5.14 Academic sanctions	24

VI LEARNING PROCESS 26
6.1. Provisions in the Implementation of Learning 26
6.2. Implementation of Lectures 26
6.3. Practicum Implementation 28
6.4. Learning Evaluation 28
6.5. Remedial Exam 35

VII COMPETENCE AND CURRICULUM 37
7.1. Base 37
7.2. Competence 37
7.3. Curriculum 40

VIII COURSE SYLLABUS 58

IX INDEPENDENT LEARNING INDEPENDENT CAMPUS 76

APPENDICES 82

LIST OF TABLES

		Page
5.1.	Maximum Number of Semester Credit Units (SCU) programmed	16
6.1.	The weight of the score according to the level of mastery of the learning material is calculated based on the PAP	37
6.2.	The weight of the score according to the level of mastery of the learning material is calculated based on PAN	37
7.1.	The curriculum that applies to each study program in the Faculty of Food Technology and Agroindustry UNRAM	45

LIST OF FIGURES

		Page
1	Organizational Structure Chart of the Faculty of Food Technology and Agroindustry	6

APPENDIX LIST

		Page
I	Semester examination regulation	83
II	Rules for the use of laboratories for practicum within the Faculty of Food Technology and Agroindustry, University of Mataram	84
III	Rules for the use of laboratories/studios/upt for research activities	85
IV	Sample letter of application for supervisor of scientific thesis/seminar	86
V	Sample f application letter to conduct a thesis exam seminar	87
VI	Sample application letter for use of laboratory/upt for research	88
VII	Sample application letter for academic leave	89
VIII	Sample application letter to return to active learning	90
IX	Sample application letter to move study program	91
X	Sample application letter for follow-up examination	92
XI	Sample application letter for remedial examination	93
XII	Sample letter of request for data collection/research implementation	94
XIII	Sample letter of choice of interest in study program	95
XIV	Data lecturer Faculty Technology Food and Agro industry,University of Mataram	96

I. INTRODUCTION

1.1. Faculty Name and Address

Name	:	Faculty of Food Technology and Agroindustry
Address	:	Jalan Majapahit No. 62 Mataram 83125 Lombok West Nusa Tenggara
Telephone. / Fax	:	0370-649879
e-mail	:	fatepa@unram.ac.id
PS ITP e-mail	:	psitpfatepa@unram.ac.id
PSTEP e-mail	:	pstepfatepa@unram.ac.id
Website	:	http://www.fatepa.unram.ac.id/

1.2. History

University of Mataram (UNRAM) is the only state university in West Nusa Tenggara Province which was established in 1962. As part of UNRAM, the history of the establishment of the Faculty of Food Technology and Agroindustry (FATEPA) began with the formation of the Agricultural Technology Study Program as one of Study Programs (PS) at UNRAM founded in 1984 (Decree of the Director General of Higher Education Ministry of Education and Culture of the Republic of Indonesia Number 49/DIKTI/Kep/1984), then became Agricultural Product Technology Study Program in 1996 based on the Decree of the Director General of Higher Education Ministry of Education and Culture of the Republic of Indonesia No. 232/DIKTI/Kep/1996. onesia No. 232/DIKTI/Kep/1996.

Administratively, the Agricultural Product Technology Study Program was under the management of the Department of Agricultural Cultivation, Faculty of Agriculture. In 1998, Agricultural Product Technology Study Program received grade B accreditation (Accreditation Decree No. 02139/Ak-II.1/UMWLLP/XII/1998), valid until 2003. The Agricultural Product Technology Study Program received a Due-Like Dikti grant (2000 to 2004) used for improving laboratory equipment facilities and libraries, improving the quality of lecturers, creating a new curriculum for Agricultural Product Technology Study Program, and planning the establishment of the Bachelor of Agricultural Engineering under the framework of establishing the Agricultural Technology Major. The new curriculum was implemented in the 2001/2002 academic year so that those year graduates held a Bachelor of Agricultural Technology (STP) approved by the Rector's Decree No. 9055/J.18.H./HK01.11/2002.

In 2005, the Agricultural Technology Major was established with two study programs, the Agricultural Product Technology Study Program and the Bachelor of Agricultural Engineering, based on the Decree of the Director General of Higher Education No. 27/Dikti/Kep/2005. In response to the Letter of the Director General of Higher Education No. 163/DIKTI/Kep/2007 concerning the study program codification name in April 2010, the University of Mataram then changed the study program name from Agricultural Product

Technology to the Food Science and Technology.

Preparations for the Faculty of Agricultural Technology establishment started in 1989 and have been carried out by recruiting human resources and adding laboratory facilities and infrastructure. Based on the commitment to establish the Faculty of Agricultural Technology, it is stated in the 1997 University of Mataram STRATEGIC PLAN (RENSTRA) that the Faculty of Agricultural Technology was planned to be established by 2010. To implement the Strategic Plan, the University of Mataram 2010 formed a Task Force for the Establishment of the Faculty of Agricultural Technology and asked for funds from the Ministry of National Education to improve laboratory facilities and equipment and to elevate the learning quality in Agricultural Technology Major.

Originally planned as the Faculty of Agricultural Technology was finally designated as the Faculty of Food Technology and Agroindustry based on the Decree of the University of Mataram Rector No. 1569/UN18/HK.00.01/2012 dated February 4, 2012. The Minister of Education and Culture of the Republic of Indonesia inaugurated the faculty building on 2 July 2012.

Two study Programs under the Faculty of Food Technology and Agroindustry have been accredited. The Food Science and Technology Study Program (PS ITP) is accredited B which is valid until 2025 (Accreditation Certificate from BAN PT No.6955/SK/BAN-PT/Ak-PPJ/S/XI/2020 dated 1 November 2020). Likewise, the Bachelor of Agricultural Engineering (PS TEP) is accredited B which is valid until 2026 (Accreditation Certificate from BAN PT No. 9604/SK/BAN-PT/Ak-PPJ/S/VII/2021 dated 21 July 2021).

According to the Decree of the Minister of Research, Technology and Higher Education of the Republic of Indonesia No. 257/M/KPT/2017 regarding the Study Program name in Higher Education and Degrees for graduates of each Study Program which has been set on September 5, 2017, and taking into account of the current curriculum, graduates of the Food Science and Technology Study Program who graduated in October 2017 held a Bachelor of Food Technology (S.T.P), while graduates of the Bachelor of Agricultural Engineering is awarded a Bachelor of Agricultural Technology (S.TP).

II. VISION, MISSION, OBJECTIVES AND TARGETS OF FACULTY OF FOOD TECHNOLOGY AND AGROINDUSTRY

2.1 Vision

To become a faculty qualified to develop quality, dynamic and innovative science, technology, and human resources based on research in the fields of Food, Agroindustry, and Biosystems with an environmental perspective and international competitiveness in 2025.

2.2 Mission

1. Carrying out scientific, professional, and entrepreneurial-oriented education.
2. Conducting research to develop food science and technology, agroindustry, and biosystems.
3. Actively being engaged in the application of food technology, agroindustry, and biosystems in order to advance the agricultural industry.

2.3 Objectives

1. Producing competent graduates characterized by skill, independence, character, entrepreneurship, and responsive to the development of science and technology in the field of food, Agroindustry and biosystems
2. Developing science and technology in the field of food, agroindustry and biosystems
3. Disseminating and applying food science and technology, agroindustry and biosystems in society in order to support sustainable agricultural development.

2.4 . Target

To achieve the objectives of the Faculty of Food Technology and Agroindustry, University of Mataram, the targets to be achieved are:

1. Improving learning process quality following the standards set by professionalism and government
2. Improving graduates' quality accepted by the job market at the regional, national and international levels
3. Improving research quality and increasing the number of technology packages that receive IPR
4. Increasing community service through dissemination and application of science and technology.
5. Increasing networking power with stakeholders as participation in developing food technology and agroindustry.

III. ORGANIZATION

The Faculty is one of the academic implementation units at the University of Mataram (UNRAM), carrying out main tasks and functions given by UNRAM under the guidance ofthe Rector. The Faculty of Food Technology and Agroindustry Ucoordinates and implementsnting academic and/or professandeducation in a set of branches of science and technology related to technology and agroindustry in the areas of: agriculture, fiheries and animal husbandry.

The organisation and working relations at the Faculty of Food Technology and Agroindustry UNRAM are led by the Dean and assisted by Deputy Deans I, II and III and other units

ORGANISATIONAL STRUCTURE OF

FACULTY OF FOOD TECHNOLOGY AND AGROINDUSTRY

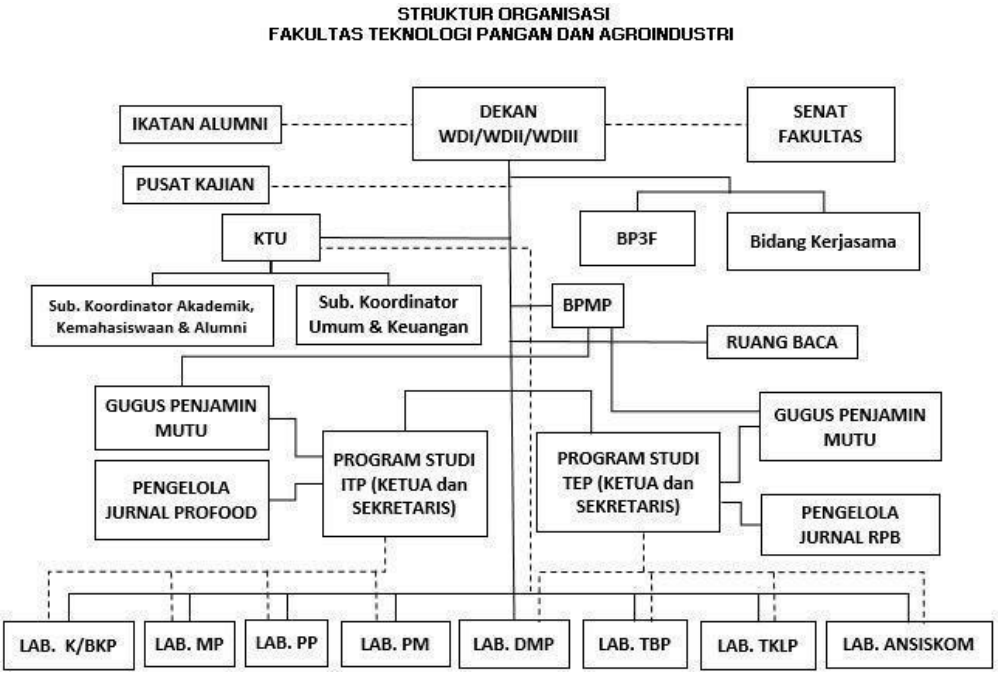

Figure 1. Organisational Structure Chart of the Faculty of Food Technology and Agroindustry Description:
WD: Deputy Dean, BP3F: Research Development Agency and Faculty Service, BPMPF: Faculty Education Quality Assurance Agency, UPT: Integrated Management Unit, ITP: Food Science and Technology, TEP: Bachelor of Agricultural Engineering, K/BKP: Food Chemistry and Biochemistry, MP: Food Microbiology, PP: Food Processing, PM: Quality Control, DMP: Agricultural Power and Machinery, TBP: Bioprocess Engineering, TKLP: Agricultural Environmental Conservation and Engineering. ASK: Systems and Computer Analysis.

3.1. Study program

In carrying out academic functions and administration, the Faculty of Food Technology and Agroindustry currently has two study programs: Food Science and Technology and Bachelor of Agricultural Engineering. To produce graduates with expertise in the field of food science and technology, agroindustry and biosystems as well as achieved determined graduate competencies, each study program has several academic disciplines, as follows:

1. Food Science and Technology Study Program
   a. Food Technology
   b. Food Microbiology
   c. Food Nutrition
2. Bachelor of Agricultural Engineering
   a. Agricultural Power and Machinery
   b. Bioprocess Engineering
   c. Bachelor of Agricultural Engineering and Environmental Conservation

3.2. Laboratory / Technical Implementation Unit

To support the implementation of the Three Pillars of Higher Education Institutions, FATEPA is equipped with several laboratories and other supporting facilities, as follows:

1. Food Chemistry and Biochemistry Laboratory
2. Food Microbiology Laboratory
3. Food Processing Laboratory
4. Quality Control Laboratory
5. Agricultural Power and Machinery Laboratory
6. Bioprocess Engineering Laboratory
7. Bachelor of Agricultural Engineering and Environmental Conservation Laboratory
8. System Analysis and Informatics Laboratory
9. Library

3.3. Supporting Agencies and Centers

Fatepa has several supporting units namely the Faculty Quality Assurance Board, Faculty Research and Service Development Agency, Center for Traditional Food Studies and Development, and Center for Halal Food Studies.

1. Faculty Quality Assurance Board (GPMF)

A Faculty Quality Assurance Board was formed to guarantee the quality of education. GPMF is rresponsible for carryingut internal quality audits,collectingt information on education quality standaranalyselyze data on education quality standards, and provide recommendations to institutions to make quality improvements on an ongoing basis.

2. Faculty Research and Service Development Agency (BP3F)

A Faculty Research and Service Development Agency was formed to ensure the quality of research and community service. The task of BP3F is to determine the direction of research and service policies following the vision, mission, and strategic plan of the Faculty of Food Technology and Agroindustry UNRAM.

3. Center for Research and Development of Traditional Foods (PKPMT)

This study centre aims to empower and coordinate teaching staff interested in conducting research in traditional food development and to build netwin buildingith agencies/institutions engaged in the development of traditional food.

4. Center for Halal Food Studies

This study centre aims to empower and coordinate teaching staff interested in conducting research and community service related to the development of halal food and building networking with agencies/institutions engaged in this field, in supporting the delopment of halal tourism in the West Nusa Tenggara (NTB) area.

IV. EDUCATION SYSTEM

The education system that applies at Fatepa UNRAM is the Semester Credit Unit (SCU), which is the smallest unit of time to express the magnitude of the burden of students programmed for one semester. The amount of recognition of the efforts cumulatively for a particular program is divided into semester programs. Thus, a student must decide lesson plan every single semester. By the end of the semester, the evaluation will be done to measure the students of students.

The faculty presents the semester program and is announced at the beginning of each semester. One academic year is divided into two semesters, namely the odd semester and the even semester and the time is adjusted according to the academic calendar issued by the University of Mataram Rector. The semester program consists of lectures, practicum activities, fieldwork, and other forms needed, complemented by evaluating the success of the process implemented. One semester is equivalent to 16 working weeks of implementing lecture programs followed by evaluations in the middle and at the end of each semester for 2 working weeks with a quiet week for 1 working week. This means there is a total of 21 weeks.

4.1. Definition of Semester Credit Unit

Measurement of student study load and lecturer workload is carried out based on a standardized unit called the semester credit unit (SCU). The details regarding the credits are as follows.

1. One credit for a student is the student's study load to take part in 3 (three) academic activities per week as a whole, ie
   a. 50 minutes per week per semester of scheduled academic activity events with lecturers, for example in the form of lectures,
   b. 60 minutes per week per semester structured academic activity events, namely study activities that are not scheduled but planned by the lecturer, for example in the form of giving assignments, solving questions/homework or book/library reviews, and
   c. 60 minutes per week per semester for independent academic activities, namely activities that students must carry out independently to explore, prepare for or other purposes of an academic assignment, for example in the form of reading reference books.
2. One credit for a lecturer is the burden of implementing the learning process that a lecturer must fulfil to carry out all 3 (three) activity programs per week, namely:

a. 50 minutes scheduled class meetings with students,
b. 60 minutes event planning and evaluation of structured academic activities, and
c. 60 minutes of material development.

3. One Semester Credit Unit (1 credit) in the learning process in the form of seminars or other similar forms, consisting of:
   a. Learning process activities of 100 (one hundred) minutes per week per semester; and
   b. Independent activity of 70 (seventy) minutes per week per semester.
4. Laboratory practicum, time allocation of 170 (one hundred and seventy) minutes per week per semester, 2 - 4 hours per week or a total of 32 - 64 hours per semester, equivalent to 1 credit load.
5. Field Internship Program (PKL) involves abilities: psychomotor, observation, data collection, data processing, data analysis, and the like; then one credit minimum equivalent to 170 (one hundred and seventy) minutes per week per semester or 32 – 64 hours for one semester or at least equivalent to 2 – 4 hours of work per day or 50 – 100 hours of work for one month.
6. Thesis credit load is 5 credits for the Food Science and Technology Study Program and the Bachelor of Agricultural Engineering.

4.2. Semester Study Load

Semester Study Load in one semester is determined based on individual student abilities. A student's performance and academic achievement will be measured and shown through the Grade Point Average (GPA) at the end of the semester. Each student is free to plan study load to be taken according to their wishes and abilities (based on the previous semester's GPA).

For undergraduate education programs, the cumulative study load is at least 144 (one hundred and forty four) credits that can be taken in a maximum of 13 (thirteen) semesters or 6.5 (six point five) academic years, starting from the time the student first registered as a student. For transfer students who are registered as transfer students, the study deadline for transfer students is set separately following applicable regulations (explained in Chapter V).

4.3. Performance Evaluation

Evaluation is an ongoing effort to determine student success after participating in an educational/study program for a certain period. The evaluation is focused on the cognitive field, the results of which are also feedback for lecturers to improve the quality of their

teaching.

Evaluation of student study success is expressed by the Semester Grade Point Average and the Grade Point Average (GPA) which are calculated using the following formula:

$$IP = \frac{\sum_{i=1}^{n} N_i x K_i}{\sum_{i=1}^{n} N_i} \quad \text{..... (1)}$$

N_i = credit course
K_i = course conversion value
n = number of courses

Performance evaluation of the semester program is carried out continuously at the end of each semester and after semesters 4 and 13, the evaluation is carried out on:

1. At the end of each semester, determine the success of each student on the programmed several courses in each semester. The evaluation results can be used by Academic Advisor to help students plan learning activities for the following semester.
2. Evaluation of the first four semesters or the first two years is carried out to determine whether students can continue their stud not. Student can continue their studies if they have achieved at least the best 40 credits with a minimum GPA of 2.00, calculated by grades given to courses (credits) that meet the intended requirements.
3. They can continue their studies if they have achieved at least 113-semesterter maximum the of study period, to determine whether the student can be declared to have completed studies or not.
4. Students who cannot fulfil the conditions above are declared failed or dropped out (DO). If necessary, the student concerned will be given a statement or certificate stating the number of credits and GPA achieved.
5. For students who have studied for 13 semesters but have not been able to complete their final assignment (thesis) it is possible to apply for an extension of the study period for a maximum of one semester, if according to the faculty's considerations that the person concerned can complete the entire program within the extension period.
6. An application for an extension of the study period is submitted to the Rector with a recommendation from the Dean and the student's thesis supervisor concerned, no later than one month before the end of the 13th semester.
7. If the Rector gives approval for the application for an extension of the study period, the

person concerned must immediately pay the tuition fee (UKT) for the semester during the extended study period.

The final evaluation of the education program is that students are declared to have completed the education program if they have achieved the following requirements

1. GPA of 2.00 with a minimum credit score of 144.
2. The maximum value of D and D+ is 15 credits.
3. Subjects that are not allowed to score D and D+ are Scientific Method courses and General Subject courses which are specified in the study program curriculum, namely Religion, Basic Social Sciences & Culture, Pancasila, Indonesian Language and Citizenship.
4. No E grade.
5. Submit a thesis.

The results of the final evaluation of the study program are decided at a judiciary meeting held at the faculty, and set forth in the Dean's Decree.

4.4. Graduation Predicate Classification

The graduation predicate classification is determined by the GPA value with the following details:

1. Students are declared to have graduated with a satisfactory predicate if they achieve a GPA of 2.76 (two point seven six) to 3.00 (three point zero zero).
2. Students are declared to have graduated with a very satisfactory predicate if they achieve a GPA of 3.01 (three point zero one) to 3.50 (three point five zero).
3. Students are declared to have graduated with cum laude (praise) if they achieve a GPA of 3.51 (three point five one) to 4.00 (four point zero zero) with the following additional conditions:
    a. Courses that are repeated are at most 3 (three) courses
    b. Each course is repeated a maximum of 1 (one) time
    c. The lowest grade for all courses is B, and
    d. The maximum study period needed is n years plus 1 (one) semester

4.5 Graduation

Provisions for students entitled to attend graduation are:

1. Students who have been declared graduated with a judicial decree from the Dean.
2. The graduation ceremony must be attended by every student as a condition for issuing a diploma.
3. Graduation is held 4 times a year. The schedule for graduation activities is in

accordance with the Academic Calendar of the University of Mataram.

4. The holding of the graduation ceremony is coordinated by the Bureau of Academic Administration, Student Affairs, Planning and Information Systems (BAAKPSI) Universitas Mataram.
5. The terms and procedures as well as the technical implementation of the graduation will be determined later in a separate provision.

V. ACADEMIC ADMINISTRATION

5.1. Academic Calendar

To set the time for the implementation of various activities at the University, an Academic Calendar is issued every academic year (two semesters, Odd and Even). The academic calendar is published based on the Rector's Decree, and contains main activities related to academics practiced in the University. Academic activities start of new student admissions to the implementation of graduation for students studied at the University of Mataram.

5.2. Student Admissions

Acceptance of students is divided to acceptance of new students and acceptance of transfer students. Acceptance of new students is carried out through three channels, namely Invitation Scheme through State University National Entrance Exam (SNMPTN) scheme, Joint Admission Selection of State Universities (SBMPTN) using computer-based written exam results (UTBK), and the Independent Examination.

1. New student registration requirements:
    a. Pass the selection, as stated in the announcement (SNMPTN, SBMPTN, and Mandiri Pathways).
    b. Healthy and drug-free as stated by a doctor's certificate by taking into account the special conditions set for the study program of his choice.
    c. Pay tuition fee (SPP/UKT) and other donations in accordance with the amount and conditions stipulated in the Decree of Rector of University of Mataram.
    d. Fill out the lesson plan (SCU) in each faculty.

2. Requirements for student re-enrollment:
    a. Have paid the tuition fee/UKT in the relevant semester in accordance with the applicable schedule and conditions.
    b. Show a certificate of re-activaton issued by the university for those taking academic leave.
    c. Show a letter of revocation of suspension from the Rector/Dean/Head of the Study Program for students who are undergoing suspension sanctions.
    d. Not college dropouts (DO).
    e. Not a student who was dishonorably dismissed.

3. Foreign student registration requirements:

a. Submit an application to become a student at the University of Mataram to the Rector and send the copy to the Director General of Institutions/Ministry of Education and Culture, Director General of Higher Education.
b. Obtain a study permit from the Director General of Institutions/Ministry of Education and Culture Director General of Higher Education.
c. Have met the immigration requirements to study and live in Indonesia.
d. Agree to comply with the rules and regulations of education at the University of Mataram.
e. Have a sponsor for studying in Indonesia.

Students who have been accepted and registered at FATEPA can apply for scholarships to support their tuition fees, one of which is through the PPA (Academic Achievement Improvement Scholarships) Scholarship scheme managed by the University of Mataram.

5.3. Study Planning

Study planning is a lecture planning program that must be carried out by students every semester in each study program. This activity is carried out through the faculties, starting with filling out the Semester Credit Unit (SCU).

The provisions and procedures for registering the semester program and completing the SCU are as follows:

1. Students entitled to register for the semester program are students who have completed administrative registration process.
2. The UNRAM Registration Section uploads tuition fee (SPP/UKT) evidence provided by partner banks.
3. The SCU filling process is carried out online. After obtaining approval from the academic advisor, the SCU was printed by the students (4 copies).
4. For new undergraduate program students, the amount of credit load programmed in the first semester is 19-24 credits, while in the second semester and so on it is determined on the basis of the quality of learning achievement expressed by the GPA and the number of credits earned in the previous semester. The maximum number of credits that can be programmed by each student depends on the student's grade point average per semester, as shown by semester grade point average in the previous semester. To determine the maximum number of credits, the guidelines in Table 5.1 are used.

Table 5.1. Maximum Programmable Number of Semester Credit Units (SCU).

Amount of credits in the previous semester		Previous semester's GPA				
		0.00 -1.49	1.50 -1.99	2.00 -2.49	2.50-2.99	3.00-4.00
Plan	achieved*)	The maximum number of credits taken on upcoming semester				
19 – 24	19 – 24	16	18	20	22	24
19 – 24	13 – 18	15	17	19	21	23
19 – 24	7 – 12	13	15	17	19	21
19 – 24	0 – 6	10	12	14	16	18
13 – 18	13 – 18	14	16	18	20	22
13 – 18	7 – 12	12	14	16	18	20
13 – 18	0 – 6	9	11	13	15	17
7 – 12	7 – 12	11	13	15	17	19
7 – 12	0 – 6	8	10	12	14	16
0 – 6	0 – 6	7	9	11	13	15

*) Note: E is not considered to be successed

5. Consultations for SCU filling with academic advisor are carried out within the period determined according to the University's Academic Calendar.
6. New students taking the first semester, the number of credits allowed is the entire package ctotal for the first semester legalized by the head of each study program.
7. Students who are late in completing their SCU will automatically not be able to take part in lectures because the online SCU system applies.
8. If the academic advisor is unable to do consultations during the SCU filling period and/or during the delay period, the completion of the SCU filling is delegated to the head of study program, and if head of study program is unable to do so, the SCU completion can be done through the deputy dean I.
9. After lesson plan is decided, the academic advisor (or head of study program or deputy dean I) signs all the SCU sheets or the online SCU validated by academic advisor are printed and then distributed with the following conditions: after obtaining approval from the academic advisor, the student continues to the academic section to be approved by the academic sub-coordinator. The next academic section submits one sheet to students to be used as a guide for students, and three sheets in the academic sub-section and for further processing.
10. Students must keep the approved SCU to be used as evidence that the student is legally registered in the current semester and is entitled to receive academic services related to the course as stated in the SCU.
11. For students who carry out field study programme (KKN) and field field internship program (PKL) in the current semester, they are given the opportunity to fill in the SCU before carrying out lecture/work practice activities with a total of 7 to 15 credits. The number of credits is determined together with the academic advisor on the basis of

the number of credits earned. obtained in the previous semester. For example, a student earned > 15 credits in the previous semester allowed to program 15 credits. However, earned <10 credits will only be given 7 credits.

12. Students taking independent learning program should include it in the SCU and register with the study program/faculty/university that offers the course or the intended institution. Provisions related to the independent learning program are presented in Chapter IX.
13. Students take courses in other study programs under same university should put it in SCU with a maximum of 20 (twenty) credits and have received approval from the intended study program.
14. Students can take credits outside of university for a maximum of 2 (two) semesters or the equivalent of 40 (forty) credits and have received approval from the intended tertiary institution.
15. Students failed to fill SCU during the filling period or the late period are considered not to take part in the Semester Program that will take place. Thus these students are not entitled to receive academic services in that semester, and are advised to apply for academic leave.
16. If the student fills in the SCU with minimum credits where the SCU is filled in during the period when the SCU is filled out according to the (official) schedule, the student has not done it (for example due to absence, as stipulated in point 14 and beyond point 8), then students are advised to keep attend lectures in the courses that will be planned, and completion of SCU can be done at the time the SCU change schedule (provisions for the number of credits taken will be adjusted with semester grade point average achieved) will be programmed later although has not been includeyet to be SCU with the minimum credits.

5.4. Study Interests

Each study program at Fatepa, namely Food Science and Technology Study Program and Bachelor of Agricultural Engineering, has three academic disciplines, which students will choose after completing semester IV (Food Science and Technology Study Program) or semester V (Bachelor of Agricultural Engineering). The selection of study interest is carried out at the same time as completing the SCU. Statements of study interest are made in 3 (three) copies for the student, study program, and faculty. The division of study interests is carried out by the study program based on the concept of equity. Each interest gets an allocation of 33% of the total for each batch.

5.5. Academic Advisor

1. Each permanent lecturer can become an Academic Advisor for students in the study program.
2. Determination of Academic Advisor:
    a. Academic Advisors are proposed by the study program to be determined by the Dean from the start of the academic year until the student completes their study.
    b. If for any reason an academic advisor is unable to carry out their duties, the task will be taken over by the head of the study program and can be transferred to another permanent lecturer.
3. The duties and functions of academic advisors include all academic advisory and mentoring efforts aimed at enabling students to complete their study programs effectively and efficiently in accordance with their interests, talents and abilities, including:
    a. Determine the types of courses to be programmed, including:
        1) Serving student consultation in determining the type and number of courses that students should program each semester.
        2) Provide students with an understanding of courses that require prerequisites.
    b. Completion of the lesson plan (SCU) by adjusting the credit load according to the student's academic development each semester.
    c. Help solve student academic problems, including:
        1) Monitor student academic development through student academic development cards.
        2) Give directions in determining student interest in completing the final project.
        3) Help solve academic problems and non-academic problems that have the potential to affect student academic activities.
        4) Issuing and validating academic development cards and student grade excerpts.
4. Academic guidance can be done at any time, at least once at the beginning of each semester.
5. At the end of each semester/academic year the academic advisor provides a report to the study program/department/section/faculty on the academic achievements of their students.
6. If it is deemed necessary, the academic supervisor can direct the student under their guidance to consult the Counseling Guidance and Career Development Unit (BKPK) at the University.

5.6. SCU changes

The provisions regarding changes to SCU, are as follows:

1. Students can change their SCU during the change period determined based on the academic calendar, by replacing or adding or subtracting courses that have been registered with other courses offered in the current semester, provided that the number of credits planned does not exceed the maximum number of credits allowed.
2. SCU changes are made with the approval of Academic Advisors, and only serve students who have previously filled out SCU in the current semester.
3. SCU changes for KKN or PKL students can be made after returning from KKN or PKL, namely during the SCU change period or during a special period determined by the faculty.
4. If until the SCU filling period, the semester grade point average has not been completed (dropped out), then the SCU filling is still carried out according to the academic calendar with the number of credits between 7-16.

5.7. Student Transfer

Student transfers can occur for three reasons. First, the transfer of students from other universities or state universities (PTN) to one of the study programs at the University of Mataram. Second, the transfer of students from one study programs at UNRAM to study programs at universities outside UNRAM. Third, student transfers between study programs within UNRAM. During their study period, students are only allowed to change study programs once. The study period of students who have been taken before moving to study programs is still calculated according to applicable regulations.

Procedures and requirements for transfer students:

1. Migration from outside the university
   a. Students submit a letter of application to become a student at the University of Mataram to the Rector.
   b. Applications are made no later than onbye the current semester ends.
   c. Submit a letter of transfer from the university of origin.
   d. Registered (active in college) for at least 2 semesters at the initial state university (PTN) whose accredited study program is at least the same as the intended study program.
   e. Have a minimum GPA of 3.00.
   f. Not a student dropping out and/or being penalized and expelled with no respect.
   g. Pay tuition fee (SPP/UKT) in accordance with the transfer year.

h. Transfer student study period is calculated based on the initial year of entry at the home university.
i. Bring recommendation from university origin stating well behaved and drug free.
j. Fulfill other obligations determined by the university.
k. Students who have received approval to move from the Rector will be given a new student number according to the order of entry in the destination study program, thus data on academic development as a student in the original study program will be transferred to the new study program.
l. Transfer student study period is calculated based on the initial year of entry at the home university.

2. Transfer of students between faculties within the University of Mataram:
   a. Transfer of students between faculties within the University of Mataram is possible as long as it meets the conditions set by the receiving faculty.
   b. The transfer application is submitted to the Rector no later than 1 month before the current semester ends.
   c. Registered (active lecture) at the original faculty for at least 2 semesters.
   d. Transfer requests must be approved by parents/guardians, academic advisers, and the dean.
   e. Students who have received approval to move from the Rector will be given a new student number according to the order of entry in the destination study program and their academic development in the original study program will be transferred to the new study program.
   f. Transfer student study period is calculated based on the initial year of entry at the original faculty.

3. Transfer of students between study programs in one faculty:
   a. Transfer of students between study programs within one faculty is possible as long as they meet the conditions set by the receiving study program.
   b. The transfer application is submitted to the Rector no later than 1 month before the current semester ends.
   c. The transfer application letter must obtain approval from parents/guardians, academic advisers, head of program study and dean.
   d. Registered (actively studying) in the original study program for at least 2 semesters.
   e. Students who have received transfer approval from the Rector will be given a new student number according to the order of entry in the destination study program, thus

data on academic progress in the original study program will be transferred to the new study program.

f. Transfer student study period is calculated based on the initial year of entry in the original study program.

4. Transfer of students outside UNRAM
   a. When submitting a transfer application, the student concerned is registered as an active student in one of the study programs at Fatepa UNRAM, and has taken at least 2 semesters of study in the original study program.
   b. Not students who are threatened with dropping out of college o.
   c. The level of education, faculty or part of the faculty (study program) at the tertiary institution of destination must be similar and/or equivalent to those enrolled in the original study program.
   d. Applications for transfer are addressed to the Rector of UNRAM no later than one month before the end of the semester in the current academic year at UNRAM.
   e. The transfer application letter must obtain approval from parents/guardians, academic advisers, the head of study program and the dean.
   f. Students who have received approval to move from the Rector do not have the status of UNRAM students.
   g. If students move to another tertiary institution after the course has started, tuition fees and other fees cannot be withdrawn.

5.8. Work Practice

1. Field Internship Program

Field internship program is part of the curriculum set and generally applicable at FATEPA. This activity is intended to provide experience in applying the knowledge that has been obtained during college so that students get additional skills as provisions when they enter the world of work.

The requirements to take part in PKL are that students have programmed a minimum of 100 credits with a minimum cumulative GPA of 2.0 (regular field internship program scheme), a minimum of 80 credits with a minimum cumulative GPA of 3.0 (MBKM field internship program scheme in semester 5, specifically for Bachelor of Agricultural Engineering).

Other requirements for each PS, namely:

a. In the Food Science and Technology study program, student conducts regular field internship program have or are currently programming courses in Industrial

Management, Quality Control, Industrial Sanitation, Machinery and Equipment, and Design of Processing Units.

b. In the Bachelor of Agricultural Engineering, student conducts regular field internship program have or are currently programming courses in Agricultural Production Machinery, Bioprocess Engineering I, Agricultural Energy and Electricity, Agricultural Buildings and the Environment, and Agroindustry Management.
c. Field internship program (PKL) implementation steps in more detail can be read in the guideline provided.

2. Student Work Course

Every undergraduate program student (S-1) is required to attend student work courses (KKM). Student Work Course (KKM) is an intra-curricular activity that has a certain credit weight and is a unit of credit load in related programs.

To be able to take part in the KKM program students must meet the following requirements:

a. Obtain 110 credits with a minimum GPA of 2.00 for regular KKN and 108 credits for KKN MBKM with a minimum GPA of 3.00
b. The KKM activity weight is 4 credits.
c. Student Work Course (KKM) can take the form of: regular real work lectures (KKN), thematic KKN (KKNT) which consists of 4 forms of programs namely extended KKN, Empowerment and Development KKNT in Villages, Teaching KKNT in Villages and Free Form KKNT, lectures business work (KKU), professional work courses (KKP), or field introduction practice (PPL).
d. Students who have met the requirements are required to register at the faculty (to the academic section) by submitting proof of requirements in the form of grade transcripts and SCU. Then the faculty sends a list of students who meet the requirements (grade transcripts and SCU) collectively to LPPM.
e. SCU repairs for KKM students can be carried out during the SCU repair period according to the UNRAM academic calendar.

5.9. Thesis Compilation

The preparation of a thesis is a stage that must be passed by every Fatepa UNRAM student to be able to complete their undergraduate studies. The preparation of the thesis aims to train students in applying scientific principles in solving problems that occur in the field.

The requirements that must be met by students to be able to program a thesis are as follows:

a. Students have completed at least 80% of the minimum credits or 116 credits with a minimum grade of D.
b. The cumulative grade point average (GPA) that must be achieved is > 2.00 with a maximum sum of D and D+ scores of 15 credits.
c. Have passed the Scientific Method and Indonesian Language courses with a minimum grade of C.
d. The credit score for Thesis is 5 for PS ITP and PS TEP.
e. Procedures for submitting supervisors and completing thesis are regulated in separate guidelines in the Thesis Compilation and Guidance Guidebook.

Important stages in the process of writing a thesis include:

1. Submission of Thesis Supervisor

The stages of the process for submitting a thesis advisor are arranged as follows:

a. Students submit applications to the Study Program by making an application letter containing the proposed research title and the name of the prospective supervisor. The application is accompanied by attaching a grade transcript, photocopy of SCU and recommendations from Academic Advisors. Each requirement is made in duplicate.

b. During emergencies such as the Covid-19 pandemic or other emergencies, applications are submitted online by attaching the soft file of the required documents.
c. Thesis advisor lecturers are determined by the head of the PS based on the topic of research study and taking into account the guidance load of each lecturer and have met the requirements to become supervisors.

2. Evaluation of Thesis guidance

If within 3 months of the issuance of the assignment letter as supervisor by the head of the PS, the student concerned does not show any progress in the development of his proposal or research, then the supervisor or student has the right to submit an objection to the PS to consider transferring the supervisor. In this case, the student concerned is required to submit a supervisor application process starting from the beginning. Detailed provisions regarding the evaluation of thesis guidance are regulated in the Thesis Guidance Guidebook.

3. Thesis examination

Thesis examination can be done if students have met the following requirements:

a. Supervisors have approved the thesis manuscript for examination, which is indicated by the signature or initials of each supervisor.
b. Students have taken the TOEFL and received a certificate with a minimum score of 400 issued by a recognized institution (the UNRAM Language Center).

5.10. Judiciary

Judiciary is a meeting for determining student graduation in a particular study program after students have completed all their academic obligations in the study program they are participating in. Judiciary at the faculty is held no later than tbyr to graduation at the university level. The judiciary at Fatepa UNRAM is carried out according to the schedule of academic calendar activities at the University of Mataram.

Prior to the implementation of the judiciary at the faculty level, the Study Program submits data completeness of the requirements which include:

a. Complete Academic Development Card with thesis and seminar scores and signed by the Academic Advisor and verified by the Study Program.
b. Manuscripts of articles that have been submitted to journals as evidenced by a receipt from the journal manager.

Each study program holds a meeting to check data on the completeness of graduation requirements and determine which students will take part in graduation. Meeting activities are held no later than three days before graduation. Students do not meet theneed torements, they cannot take part in the graduation in that period.

The following are the provisions that apply in the implementation of the judiciary.

1. Students have completed the entire study load in the curriculum that applies to the study program they are participating in.
2. Free from responsibility for learning facilities such as books, laboratory equipment and others, both at the Faculty level and at the University level, as evidenced by a valid certificate of independence.
3. Students have submitted a thesis manuscript that has been approved by the Dean.
4. Students have shown evidence of having scientific articles that will be or have been published in a scientific journal.
5. The judiciary is carried out based on the decision of the Faculty meeting regarding student graduation which is stipulated by the Dean's Decree.

6. In carrying out the graduation, students are required to attend. For prospective judiciary participants who are absent without reason, the implementation of the judiciary concerned is postponed until the next judiciary period.

5.11. Short Semester Lecture (KSP)

Short Semester Lectures (KSP) are held to speed up the process of completing student studies and to help students improve their grades through lectures in the regular semester. The provisions regarding KSP are as follows (in the educational regulations and guidelines for the implementation of the University of Mataram credit system):

1. Short Semester Lectures (KSP) are held at the end of each semester and or their implementation is regulated in a guideline stipulated by a Rector's Decree.
2. The courses that are offered for implementation in KSP are courses where the tutor lecturer is willing to carry out KSP for that course.
3. KSP participants are students who are actively enrolled in the semester period before the current academic year's KSP period is implemented. Students who are in a period of academic leave are not allowed to take part in the KSP.
4. Students can only choose courses to take part in KSP if these courses have been programmed in the regular semester, but have not achieved sayet to achieverades.
5. The maximum number of credits that can be programmed by students in KSP is 9 credits.
6. For courses that have practicums, KSP is only intended for improving grades related to face-to-face material (lectures), while practicum improvements are only carried out regularly or not through the KSP program.

5.12. Academic leave

Students are allowed to take academic leave in accordance with the provisions in force at the University of Mataram, namely:

1. Academic leave is submitted to the Rector no later than 2 weeks from the start of the lecture.
2. Paid leave academic new can filed after student follow studying minimum 1(one) semester.
3. Academic leave is also applied if students are late in payneed to payKT.
4. Academic leave can be given to students for a maximum of 3 semesters either at once or intermittently.
5. The period of academic leave is not counted as an active period of study.
6. During the academic leave period students do not need to pay tuition fees.
7. Students who take academic leave after lectures have started, tuition fees that have

been paid cannot be withdrawn.

8. The application for academic leave must obtain approval from parents/guardians, academic advisors, and the Academic Sub-Coordinator.
9. Submissions to be active again for students taking academic leave must be carried out before payment of tuition fees/UKT for the semester concerned.
10. Students who take academic leave consecutively for more than one semester, may apply to be active again before the requested leave ends.
11. Students who wish to return to active studies after taking academic leave must submit a letter of application for active studies to the Rector. this application letter must have been submitted no later than 1by payment of tuition fees (SPP/UKT/UKT) takes place.

5.13. Absent

Non-active students (absent) are regulated as follows:

1. Students who are absent from lectures for more than 2 (two) semesters are declared to have resigned
2. The period of time absent from college is counted as an active study period in relation to the study time limit
3. Absent students who will return to active college must submit a letter of application for active college to the Rector no later than 1 (one) month before the tuition fee (UKT/SPP) payment date
4. Absentee students are required to semester fees that are not attended due to being absent plus the semester fees registered after obtaining an active letter from the Rector

5.14. Academic Sanctions

1. Any University student who commits defamation against university leadership in public, destroys campus facilities and commits acts that defame the university's reputation can be subject to sanctions ranging from warnings, suspension to dismissal as an UNRAM student.
2. Other forms of sanctions that can be imposed on students related to academic obligations are as follows:
   a. Students who cannot completeneed help totudy program in accordance with the provisions in point 4.3. above, declared DO with the Rector's Decree and not allowed to re-register as a University of Mataram student.

b. Students who leave the study without permission, are counted as a study period in evaluation activities.

c. New students who do not take part in academic activities in the year concerned (2 semesters) without permission, are declared to have resigned and forfeited their rights as students at the University of Mataram.

d. Types of violations in the form of depositing signatures (attendance list), cooperation in examinations, jockeying, plagiarism, forgery, and bribery of officers, the sanctions imposed are regulated in the faculty regulations.

3. The implementation of sanctions in accordance with the form as in points 1 and 2 can be given by the Rector or the Dean.
4. Sanctions for lecturers and educational stafacademict violations are regulated in the lecturer code of ethics and applicable laws and regulations.

VI. LEARNING PROCESS

The learning process is all activities that involve interaction between lecturers and students that aim to facilitate the ongoing process of knowledge transfer both cognitive, affective and psychomotor which are carried out in a structured or unstructured manner within a period of time determined based on the University's academic calendar.

6.1. Provisions in the implementation of learning

The provisions in the implementation of the learning process are as follows:

1. The learning process for each subject is carried out by lecturers who meet academic requirements.
2. The assignment of lecturers with lower academic positions in the implementation of learning is possible as long as there are no lecturers available in certain subject competencies. In this case, the implementation of learning for these courses must be supervised by lecturers who have the closest scientific field and meet academic requirements.
3. Learning can be carried out through face-to-face in class, practicum, and or other mechanisms that can be accounted for.
4. Arrangements for lecture material to be delivered to students at each face-to-face event in class are carried out by one or more lecturers who are coordinated by the person in charge of the course.
5. Students who take courses in other study programs or at other tertiary institutions, the terms of lectures and exams follow the provisions of the host study program/university.
6. Students who choose the independent learning program study in the form of internships, teaching assistants in education units, research, humanitarian projects, entrepreneurial activities, independent studies/projects, and building villages/Thematic Real Work Classes (KKNT) according to the provisions of the study program /colleges /organizing partners.

6.2. Implementation of Lectures

The provisions regarding the implementation of lectures at Fatepa UNRAM, are as follows:

1. The beginning and end of the lecture period is regulated by the faculty according to the university's academic calendar.
2. Students who are entitled to attend lectures are those who have registered as active students (have completed all university/faculty administrative requirements, namely

through tuition fee and registration for the current semester program).

3. Courses that students may take are courses that have been programmed in the SCU with the approval of the academic advisor.
4. For students who are repeating a course that has a practicum, the student must consult the lecturer in charge of the subject concerned so that the problems related to the practicum are clear. In this case students are only allowed to repeat the course if the student obtains at least a score of 60 in the practicum component, and this score must be reported to the lecturer caring for the course in the current semester.
5. In each course, the lecturer (especially the course coordinator) must make a learning contract with students at the beginning of the lecture period and students are expected to control the suitability of the contract.
6. The learning contract contains a description of: the topics that will be delivered during the lecture period, the delivery schedule for each subject according to the semester lesson plan (RPS) during the lecture period, the delivery procedure for each subject and the evaluation procedure that will be applied to the relevant courses.
7. In each face-to-face meeting in class, the lecturer must sign the attendance list in the column corresponding to the date of delivery of the subject matter and write down the subject matter presented on the schedule on the control sheet provided along with the attendance list. When lectures are conducted online, the lecturer fills out the minutes online and also uses the facilities that have been prepared by the faculty.
8. Students are required to attend at least 75% of all face-to-face activities in class (offline) and/or online lectandtivities that are carried out during the academic semester.
9. For students who cannot attend lecture activities due to obstacles that can be accounted for, the minimum attendance calculation must take into account the student's obstacles.
10. The obstacles referred to in point 9 above are:
    a. Obstacle due to illness, as evidenced by a valid sick certificate.
    b. Obstacles due to family misfortune (death) or other calamities, certified by subdistrict head.
    c. Obstacles due to obtaining dispensation from the Dean or Rector for representing the faculty or university in academic or student activities.
11. The obstacle referred to in point 9 must be notified to the course supervisor no later than two days after the face-to-face meeting took place, and then submit evidence of the obstacle to the education sub-division to be used as a reference in determining whether or not a student is allowed to take the final exam. In this situation the student must ask for directions from the caretaker lecturer about the lecture material delivered

in face-to-face meetings that he does not attend to be studied independently.

12. The number of face-to-face meetings (meetings) for each subject in one semester is 16 to 18 weeks of lectures or other scheduled activities, consisting of 14-16 weeks of face-to-face activities and 2 weeks of learning evaluation and assessment activities.
13. During the quiet week are not allowed to conduct lecture activities.
14. To avoid room and time confusion, substitute lectures due to holidays will be arranged by the faculty.

6.3. Practicum Implementation

Practicum is a very important part of strengthening the learning material for certain subjects, therefore every course that has a practicum credit load must be equipped with a practicum manual. For the smooth implementation of practicum activities and the like, it can be regulated by making separate rules that apply to these activities as long as they do not conflict with other provisions. During the quiet week it is expected that there will be no practicum activities.

6.4. Learning Evaluation

The provisions concerning the evaluation of the implementation of learning are as follows:

1. Evaluation of success in learning activities can be carried out in the form of exams, quizzes, assignments and/or case study ands or project based reports.
2. The exam is conducted in at least two stages, namely the midterm exam (UTS) and the final semester exam (UAS). The determination of the midterm exam and the final semester exam schedules is adjusted to the academic calendar set by the university.
3. The midterm exam is held at the end of the mid-semester, after approximately half of the learning material has been completed, that is, approximately after face-to-face lectures have taken place at least 7 times.
4. The final semester exam is held at the end of the semester, after all learning materials have been completed (after face-to-face lectures have taken place at least 14 times).
5. Incidental evaluation can be carried out by a lecturer to get feedback on the learning process of the course he cares for.
6. Students are only entitled to take the end of semester exams if they have taken the midterm exams and meet the minimum requirement of 75% face-to-face attendance, as evidenced by the attendance list.
7. Implementation of learning evaluation is part of the responsibility of the subject caretaker lecturer. Therefore, supervision of the implementation of the exam must be

carried out by the caregiver/team of caregivers for the course concerned. The Faculty provides the facilities and logistics for administering the exams, and can help provide additional proctors if needed. Evaluation of student attendance is the responsibility of the Faculty and subject lecturers.

8. Examination questions should be submitted to the Academic Subdivision of the faculty no later than threbyto the exam schedule for the course to be duplicated. Subject care lecturers can duplicate the exam questions for the courses they care for themselves, but for cost efficiency and security, it is hoped that the duplication will be carried out by the Academic Sub-Division of the Faculty.
9. Corrections to exam questions during the exam may only be made by the tutoring teacher or a member of the tutoring team for the subject being tested. Additional supervisors do not have the rineed to make changes to the text of the exam questions.
10. The exam supervisor has the right to reprimand students who are considered dishonest (cheating) in carrying out the exam and to record all events that took place during the exam implementation in the Minutes of Examination.
11. Archives of exam questions are carried out by tutors and/or study programs.
12. To expedite the exam implementation process, a separate Exam Rules can be made (Appendix 1

6.4.1. Assessment of Exam Results

The final calculation of the test scores depends on the structure of the course credits, namely whether there is a practicum or not and the proportion of material tested in the midterm exam (UTS) and the final semester exam (UAS). The following are formulas that can be used in calculating test scores, adjusted according to the characteristics of the course and the proportion of course material tested in the midterm exam and the final semester exam.

1. For courses that do not have practicum or assignment scores, the proportion of material tested at the midterm exam is comparable to that tested at the final exam:

$$NA = \frac{UTS + UAS}{2} \quad \text{.....(2)}$$

2. For courses that have practicum value and assignment value; the proportion of material tested at the midterm exam is comparable to that tested at the final exam

$$NA = \left[Sp\mathrm{P} + Sk\left(\frac{2T + 3UTS + 5UAS}{10} \right) \right] \mathrm{x} \frac{1}{Sp + Sk} \quad \text{..... (3)}$$

Description :

Sp = SCU of Practicum
Sk = SCU of Lectures
P = Score of Practicum
T = Score of Assignment

3. For courses that have practicum values but no assignment scores, the proportion of material tested at UTS is comparable to that tested at UAS

$$NA = \left[Sp\mathrm{P} + Sk\left(\frac{\mathrm{UTS} + \mathrm{UAS}}{2} \right) \right] \mathrm{x} \frac{1}{Sp + Sk} \quad \text{.....(4)}$$

Description :
Sp = SCU of Practicum
Sk = SCU of Lectures
P = Score of Practicum

4. For courses where there is no practicum but there is an assignment value, the proportion of material tested at UTS is comparable to that tested at UAS

$$NA = \frac{2\mathrm{T} + 4\mathrm{UTS} + 4\mathrm{UAS}}{10} \quad \text{.....(5)}$$

Description :

T = Score of Assignment

5. For courses that do not have a practicum value or assignment value; the material tested at UAS also includes material covered in the period before UTS

$$NA = \frac{2UTS + 3UAS}{5} \quad \text{.....(6)}$$

6. For courses that have practicum value and/or assignment value; the material tested at UAS also includes material covered in the period before UTS

$$NA = \left[Sp\mathrm{P} + Sk\left(\frac{2\mathrm{T} + 3\mathrm{UTS} + 5\mathrm{UAS}}{10} \right) \right] \mathrm{x} \frac{1}{Sp + Sk} \quad \text{..... (7)}$$

Description :
Sp = SCU of Practicum
Sk = SCU of Lectures
P = Score of Practicum
T = Score of Assignment

7. For courses that have practicum value but no assignment value, the material tested at UAS also includes material covered in the period before UTS:

$$NA = \left[Sp\mathrm{P} + Sk\left(\frac{2\mathrm{UTS} + 3\mathrm{UAS}}{5} \right) \right] \mathrm{x} \frac{1}{Sp + Sk} \quad \text{.....(8)}$$

Description :
Sp = SCU of Practicum
Sk = SCU of Lectures
P = Score of Practicum

8. For courses where there is no practicum but there is an assignment value, the material tested at UAS also includes material covered in the period before UTS:

$$NA = \frac{2T + 3UTS + 5UAS}{10} \quad \text{.....(9)}$$

Description: T = Score of Assignment

9. Courses that do not have score of practicum

$$NA = \frac{D_1 + D_2 + D_3 + \cdots + D_n}{n}$$

Information:

D1 : the total score of the 1st supervisor, which consists of a minimum assignment score of 20% and a maximum test score of 80%

D2 : the total number of marks from the 2nd supervisor, which consists of the minimum assignment scores 20% and a maximum test score of 80%

D3 : amount ttotal score from the 3rd supervisor, consisting of a minimum assignment score of 20% and a maximum test score of 80%

Dn : the total score of the nth teacher, which consists of a minimum assignment score of 20% and a maximum test score of 80%

n : number of supporting lecturers

10. Courses that have practical value

$$NA = \left[\frac{(2x nilaipraktikum) + \left(8x\frac{D_1 + D_2 + D_3 + \cdots + D_n}{n}\right)}{10}\right]$$

Information:

D1 : the total number of grades from the 1st supervisor, which consists of assignment grades a minimum of 20% and a maximum test score of 80%

D2 : the total score of the 2nd supervisor, which consists of a minimum assignment score of 20% and a maximum test score of 80%

D3 : the total number of marks from the 3rd tutor, which consists of the minimum assignment scores 20% and a maximum test score of 80%

Dn : the total score of the nth teacher, which consists of a minimum assignment score of 20% and a maximum test score of 80%

n : number of supporting lecturers

11. Practicum Courses

Student practicum scores consist of 5 components with the weight of each component as follows:

1. Assistance Score : 5%
2. Initial response Score : 15%
3. Assess activity during practicum : 5 %
4. Report Score
   a. Weekly report : 30%
   b. Fixed reports : 15%
5. Final response score : 30%

WEEKLY REPORT ASSESSMENT STANDARDS (100 points)

1. Introduction : 5 points
2. Literature review : 10 point
3. Method/Implementation : 10 points
4. Observation result : 20 points
5. Discussion : 30 points
6. Conclusion : 10 points
7. Bibliography : 5 points
8. Attachment : 10 points

Determination of the method for calculating test scores must have been notified to students in the Study Contract.

6.4.2. Submission of Exam Scores

Provisions regarding the submission of test scores, are regulated as follows:

1. The test scores must have been submitted by the person in charge of the course to the Academic Subdivision of the faculty no later than 10 (ten) days after the exam for the course in question was tested in the form of soft copy (Excel file) and hardcopy which has been approved by the supervisor.

   Matters related to late delivery of grades:

   (a) For lecturers who do not submit grades at the specified time, the course coordinator has the right to give a minimum score of 65 for lecturers who have not entered grades.

   (b) If the course team does not submit scores by the specified time limit, the academic section will give a B grade to the course. Value submitted after the deadline is declared invalid.

   (c) For lecturers who do not meet the requirements for submitting grades, they will be

given a sanction, namely not being proposed for their teaching decree for that semester.

2. The assessment principles include educative, authentic, objective, accountable and transparent principles that are carried out in an integrated manner.
3. Assessment techniques consist of observation, participation, performance, written tests, oral tests, and questionnaires.
4. All assessment components (UTS, UAS scores, assignments and/or practicum) must be submitted to the faculty education sub-section in the form of a final score (A, B+, B, C+, C, D+, D, or E).
5. Test scores are given the following values: A = 4.0 : B+ = 3.5 : B = 3.0 : C+ = 2.5 : C = 2.0 : D+ = 1.5 : D = 1 : and E = 0.
6. Students who do not take one of the exams (UTS or UAS) are given an E grade, regardless of the student's final grade for the course concerned.
7. Determination of the value weight as referred to in point 2 must refer to the provisions of the benchmark reference assessment (PAP) based on individual student scores with the distribution as Table 6.1.

Table 6.1 The weight of scores according to the level of mastery of learning materials calculated based on the PAP

Mastery Level	**Score**
85 - 100	A
80 - <85	B+
75 - < 80	B
70 - <75	C+
65 - < 70	C
55 - <65	D+
45 - < 55	D
0 - < 45	E

Table 6.2. The weight of the score according to the level of mastery of the learning material is calculated based on PAN

Boundary area in the normal curve	**Score**	**Amount (%)**
($\bar{X}$ + 1.5S) or more	A	6,680
($\bar{X}$ + 1.0S) to < ($\bar{X}$ + 1.5S)	B+	12,085
($\bar{X}$ + 0.5S) to < ($\bar{X}$ + 1.0S)	B	12,085
$\bar{X}$sd < ($\bar{X}$ + 0.5S)	C+	19,150
($\bar{X}$ - 0.5S) to < $\bar{X}$	C	19,150
($\bar{X}$ - 1.0S) sd < ($\bar{X}$ - 0.5S)	D+	12,085
($\bar{X}$ - 1.5S) sd < ($\bar{X}$ - 1.0S)	D	12,085
< ($\bar{X}$ - 1.5S)	E	6,68

Information : $\bar{X}$ = average score in the group
S = Standard deviation of values within groups

8. Students who take courses in other study programs or at other tertiary institutions, the course assessment follows the provisions of the host study program/university.
9. Assessment for students who choose the independent learning program learn in the form of apprenticeships, teaching assistance in education units, research/research, humanitarian projects, entrepreneurial activities, independent studies/projects, and building villages/Thematic Real Work Classes (KKNT) carried out by co-supervising lecturers study program/university/organizing partner.

6.4.3. Announcement of Exam Scores

1. The faculty announces the grades submitted by the course caretaker lecturer on the bulletin board and records these grades on the student academic achievement (KHS).
2. Student academic achievement (KHS) must have been published and distributed no later than 10 (ten) days after the submission of the last grade to thfinalucation sub-division. Student academic achievement was made in 4 copies with distribution to: students, academic advisor, study program, and archives in the academic sub-section of the faculty.

6.4.4. Make-up exams

1. Follow-up exams are exams given to students whose implementation is after the official schedule set by the faculty (UTS or UAS).
2. The follow-up exam is only given to students who do not take the official exam that has been determined by the faculty due to certain obstacles that are justified according to the provisions in the faculty manual accompanied by a valid and accountable certificate, and these students have met the minimum attendance requirement during lectures of 75%.

   The obstacles referred to in point 2 above are:

   a. Obstacle due to illness, as evidenced by a valid certificate from a doctor.
   b. The obstruction was due to a family accident (death), proved by letter from head of community.
   c. Obstacles to religious events are proven by a permit.
   d. Obstruction of childbirth, as evidenced by a valid certificate from a doctor.
   e. Obstacles due to obtaining dispensation from the Dean or Rector for representing the faculty or university in academic or student activities.
3. Proof of obstruction as referred to in point 2 above must be submitted to the faculty

education sub-section no later than 2 x 24 hours after the course exam was held.

4. An application for a follow-up examination must be submitted to the faculty no later than one week after the course is tested, by attaching proof of obstruction as referred to in point 2 above.

6.5. Remedial Exam

Remedial exams are exams given specifically to students who have attended lectures for the entire curriculum that has been determined to apply to the study program they are participating in, but have not received grades that meet the minimum requirements to pass and no longer have time to take exams. through normal procedures because it has reached the deadline of study (at the end of semester 13).

6.5.1. Provisions and procedures for implementing the Corrective Examination

1. Remedial exams are only given to students who are at the end of the study period (13th Semester) and are currently completing their thesis but still have an E and/or D grade with a total number of credits of 16-25 credits.
2. A student is only entitled to submit a remedial exam for a maximum of 9 credits of courses, so that passing the remedial exam allows the student concerned to complete studies at the Faculty of Food Technology and Agroindustry.
3. Remedial examinations are only given when students no longer have the opportunity to improve course grades through normal course planning and examination procedures.
4. Remedial exam requests must be submitted in writing by including the name and grade of the course being requested for the exam.
5. Requests for remedial exams are addressed to the Dean of the Faculty with the approval of the Academic Advisor and study program head, accompanied by a draft thesis script approved by the supervisor, and a photocopy of the academic development card that has been approved by the Academic Advisor and study program head.
6. Furthermore, on behalf of the Dean, WD-1 forwards the request for a remedial exam that meets the requirements to the tutor for the proposed course through the person in charge of the course.
7. The remedial exam is carried out by the lecturer concerned and its implementation is reported in the minutes of the implementation of the remedial exam.

   The value of the remedial exam results is submitted to the academic sub-section by

the lecturer concerned together with the submission of the minutes of the implementation of the remedial exam.

VII. COMPETENCE AND CURRICULUM

7.1. Base

The curriculum at the Faculty of Food Technology and Agroindustry is structured based on laws/regulations stipulated by the government of the Republic of Indonesia, as follows:

1. UU no. 20 of 2003 concerning the National Education System.
2. Decree of the Minister of National Education Number 232/U/2000 concerning Guidelines for Developing Higher Education Curriculum and Assessment of Student Learning Outcomes.
3. Decree of the Minister of National Education Number 045/U/2002 concerning the Core Curriculum of Higher Education.
4. Decree of the Minister of Education and Culture of the Republic of Indonesia, Number: 0452/0/1995 concerning the Statutes of the University of Mataram.
5. Decree of the Director General of Higher Education, Ministry of National Education No. 163/DIKTI/KEP/2007 dated 29 November 2007 concerning Organization and Codification of Higher Education Study Programs.
6. DIKTI Decree, DEPDIKNAS No 27/Dikti/kep/2005, for Bachelor of Agricultural Engineering.
7. RECTOR Decree No. 1787/H18/HK.00.01/2011, for the Food Science and Technology study program.
8. Republic of Indonesia Presidential Decree, no: 8 2012, concerning the IQF Framework, January 17, 2012.
9. Results of the Indonesian Agricultural Technology Higher Education Communication Forum workshop in Riau, 3 – 5 June 2014.

7.2. Competence

Based on the IQF in the agricultural sector, the sub-sector of food technology and Agroindustry at the strata-1 (S-1) education level for each study program: Food Science and Technology, and Bachelor of Agricultural Engineering at level 6.

The elements of competency description at that level are:

1. Able to apply his field of expertise and utilize science and technology in his field in solving problems and being able to adapt to the situation at hand.
2. Mastering the theoretical concepts of a particular field of knowledge in general and the theoretical concepts of specific sections in that field of knowledge in depth, and being able to formulate procedural problem-solving. Able to make the right decisions based

on information and data analysis, and able to provide guidance in choosing various alternative solutions independently and in groups.

3. Responsible for own work and can be given responsibility for the achievement of organizational work.

7.2.1. General Formulation of Learning Achievement Competency in the study program

The Faculty of Food Technology and Agroindustry, University of Mataram has two study programs, while the description of the general formulation of learning achievement in each study program is related to professional institutions. The Food Science and Technology study program or its family (for example food technology, livestock product technology, fishery product technology, agricultural product processing technology, agricultural product technology and so on) has a professional institution as a reference, namely the Association of Indonesian Food Technology Experts (PATPI), while the study program Bachelor of Agricultural Engineering or cognate will refer to the Association of Indonesian Bachelor of Agricultural Engineering (PERTETA).

The elements of the description of each study program are as follows:

1. Food Science and Technology study program

The general formulation of the achievement of the learning process is:

a. Domain of Food Chemistry and Analysis: properties and reactions of various food components; controlling chemical reactions that occur in foodstuffs; relation of chemical reaction with damage mechanism and shelf life of foodstuffs; technical principles and methods of food analysis; Have food analysis technique skills that are in accordance with the characteristics of ingredients and needs.

b. Domain of Microbiology and Food Safety: pathogenic microbes and causes of food spoilage and their growth conditions; environmental factors affecting microbial growth; conditions to inactivate and kill spoilage and pathogenic microbes; principles of food preservation and processing by fermentation process; skills in performing microbiological analysis techniques in foodstuffs.

c. Engineering field and Food Processing Process: characteristics of raw materials, ingredients and food additives and their influence on the characteristics of the food products produced; Mechanism of damage to Food materials and how to control them; mass and energy balance in food processing; principles of heat and mass transfer processes in food processing; principles of unit operations and process units in the food industry; operating units and process equipment that are suitable for food processing; principles and food handling and processing techniques, as

well as the effect of process parameters on the quality, safety and shelf life of food products; characteristics and use of packaging materials; water requirements for Food processing and ways of managing waste from food processing.

d. The Domain of Food Biochemistry, Nutrition and Health: biochemical processes, basic concepts of nutrition science and the relationship between food consumption and nutritional and health status; digestion and metabolism of nutrients; differences in nutrition and functional food in relation to health and fitness; changes in nutrients during processing and storage; laboratory techniques commonly applied in biochemistry and the evaluation of the biological value of food.
e. Domain of Applied Food Science: principles of food science in practice and actual conditions in the food industry; basic principles of sensory evaluation/sensory assessment of food ingredients; food packaging and storage techniques in extending the shelf life of food products; principles of statistics and computers in the field of food; develop food products based on the principles of food science; quality assurance system in the food processing process chain; principles of cleaning and sanitation in food processing; food safety regulations and management; current issues in the food sector.
f. Life Skills Domain: Oral and written communication skills related to technical and non-technical aspects; Think critically, identify the root of the problem and solve it comprehensively, and make the right decisions based on information and data analysis; professional integrity and commitment to ethical values; attitude to life-long learning; Lead and work in a team, be independent and responsible for their work; Cooperate with individuals who have diverse social and cultural backgrounds; Seeking, tracing, dissecting scientific and non-scientific information independently and critically; Adapt to the situation at hand and handle various activities simultaneously in various conditions.

2. Bachelor of Agricultural Engineering

Profile of Graduates, Learning Outcomes, Key Competencies and Study Materials of the Bachelor of Agricultural Engineering:

No	Profile Study program	Learning Outcomes	Study Courses

1.	Manager	- able to manage (manage) and exploit (utilize) natural resources (agriculture and environment) and supporting resources (HR, capital, infrastructure, etc.) optimal and sustainable in public and private institutions. - Have a professional attitude and behavior and haveleadership strong and effective scientific communication skills.	a. Agricultural Production Machinery b. Agricultural Industry Machinery c. Management Tool and MachineAgriculture d. Processing of Agricultural and Food Products e. System Analysis and Design f. Engineering Economics and Operations Research
2.	Researcher / Analyst in Bachelor of Agricultural Engineering and Biosystems	a. Able to develop science and technology and innovate through research and publications. b. Have a professional attitude planning and preparation of research and scientific publications	a. Research methodology b. Measurement and Instrumentation c. Computer programming d. Energy and electrification e. Power in Agriculture
3.	Designer	a. Able to use engineering principles to carry out the design (design) of technological products related to the field of Bachelor of Agricultural Engineering. b. Applying logical, critical, systematic and innovative thinking in the field of science and/or technology in their field of expertise; c. Having innovative and creative attitudes and thoughts in work while still holding firmly to the ethics of the engineering profession.	a. Design of Agricultural Equipment and Machinery b. Machinery and Equipment Production Technology c. System analysis and design d. Machine Element Planning e. Engineering drawings f. workshop
4.	Entrepreneur	a. Capable of developing the field of entrepreneurship as well as being the main actor oriented towards agribusiness and Agroindustry. b. Able to develop business and create jobs.	a. Operations Research and Engineering Economics b. Entrepreneurship c. Engineering Professional Ethics d. Agricultural and Biosystem Sciences e. Introduction to Economics f. Digital Farming

7.3. Curriculum

The basis for compiling the curriculum in each study program at FATEPA UNRAM refers to the competency description above for each study program, so that graduates of each study program can compete at the regional, national and ASEAN levels.

Kepmendiknas 045/U/2002 concerning the Core Curriculum of Higher Education, consists of several groups, namely:

1. Personality Development Subject Group (MPK) is a group of study materials and lessons to develop Indonesian people who have faith and are devoted to God Almighty and have noble character, have strong and independent personalities and

have social and national responsibilities.

2. The Science and Skills Subject Group (MKK) is a group of study materials and lessons that are primarily intended to provide a basis for mastering certain knowledge and skills.
3. The Work Skills Subject Group (MKB) is a group of study materials and lessons aiming to produce experts with work based on basic knowledge and skills.
4. The Work Behavior Course Group (MPB) is a group of study materials and lessons that aim to shape the attitude and behaviour needed by a person to work according to the level of expertise based on the basic knowledge and skills mastered.
5. The Community Living Course Group (MBB) is a group of study materials and lessons that are needed by someone to be able to understand the principles of living in a society according to the choice of expertise in work.

7.3.1. Application of the Curriculum

One of the activities in curriculum management is the implementation and supervision of curriculum implementation. Curriculum implementation is the most critical stage in a series of activities leading to the attainment of quality graduates in aby minimum standards of professional competence.

The curriculum must be implemented following curriculum quality standards, curriculum management quality, student quality, and learning process quality so that graduates of study programs using the curriculum can achieve the competencies expected by the faculty (VISI/MISSION//OBJECTIVES/STRATEGY), for that Fatepa UNRAM provides curriculum implementing tools which are divided into 2 study programs as follows:

1. **Food Science and Technology Study Program** aims to produce Food Technology graduates who are proficient and skilled in processing food products, creative, dynamic, noble, confident, entrepreneurial, with a high work ethic and responsible so that they can play an important role in sustainable national development and in harmony with the needs of society. The courses of interest that must be taken for the three interests in PS ITP are student graduation in certain interests or those who become electives must fulfill a minimum of 144 credits from compulsory courses: faculties, study programs and interests as well as elective courses in the chosen interest . If desired, students are allowed to program a number of credits exceeding the minimum and are allowed to take cross-interest elective courses.
2. **Bachelor of Agricultural Engineering**, aims to produce Bachelors of Agricultural Technology who are qualified and able to be independent in mastering, applying and developing the basics of engineering in the fields of agriculture, biosystems and

Agroindustry with an environmental perspective.

The legal basis for the curriculum that applies to each of these study programs is shown in Table 7.1.

Table 7.1. The curriculum that applies to each study program in the Fatepa UNRAM environment at this time.

Previous Study Program		
Program name	**Applicable curriculum**	**Information**
Agricultural Product Technology	RECTOR Decree No. 9310/H.18/HK/2009	Start batch 2004 to 2009
Bachelor of Agricultural Engineering	SK DIKTI DEPDIKNAS No. 27/Dikti/kep/2005	Start batch 2005 to 2014

New Study Program		
Program name	**Applicable curriculum**	**Information**
Food Science And Technology	RECTOR Decree No. 1787/H18/HK.00.01/2011	Start batch 2010/2012
Bachelor of Agricultural Engineering	SK DIKTI DEPDIKNAS No. 27/Dikti/kep/2005	Start batch 2005 to 2014

New Study Program		
Program name	**Applicable curriculum**	**Information**
Science And Technology Food	RECTOR Decree No. 9938/UN18/HK.00.01/2015	Starting class of 2015 to now
Bachelor of Agricultural Engineering	RECTOR Decree No. 9490/UN18/HK.00.01/2015	Start batch 2015 to now

New Study Program		
Program name	**Applicable curriculum**	**Information**
Science And Technology Food	RECTOR Decree No. 3489/UN18/HK.00.01/2016	Starting class of 2015 to now
Bachelor of Agricultural Engineering	RECTOR Decree No. 3489/UN18/HK.00.01/2016	Start batch 2015 to now

New Study Program		
Program name	**Applicable curriculum**	**Information**
Food Science and Technology	Dean's Decree No. 0218/UN18.F10/HK/2022	All Forces
Bachelor of Agricultural Engineering	Dean's Decree No. 0218/UN18.F10/HK/2022	All Forces

Note: Change of name of Agricultural Product Technology to Food Science and Technology based on UNRAM Rector's Decree No. 2457/UN18/HK.00.01/2013.

7.3.2. Subject

The distribution of courses for each current curriculum is in accordance with the Decree of the Rector of the University of Mataram.

7.3.2.1. Course Coding

The course code consists of 7 (seven) characters; starting with three capital letters and followed by 5 (five) digits (numbers). In this guidebook there are various course codes, the differences are due to: joint courses or under the coordination of the Faculty, courses under the coordination of each PS, courses under the coordination of interest in study, as well as the position of the courses in the semester and credit load. An example of the code in the course can be seen in the example of the Field Work Practice course with code FTP27026, the code characterizes:

1. Capital letter = FTP is a subject under the coordination of the Faculty
2. The first and second digits = 27 are the serial numbers of the courses under the coordination of the faculty
3. The third digit = 0 is the load of face-to-face credits
4. The fourth digit = 2 is the practice load
5. The fifth digit = 6 is the semester position for each course

7.3.2.2. Course Distribution

Food Science and Technology Study Program Subjects (Applicable to students of all ages)

Semester I

No	Code	Subject	SCU	Prerequisite Course
1	TPBU01201	Religious education	2 (2-0)	
2	TPBU02201	Pancasila	2 (2-0)	
3	TPBU04201	Indonesian	2 (2-0)	
4	TPBU05201	English Language I	2 (2-0)	
5	TPB101301	Mathematics	3 (3-0)	
6	TPB102211	Physics	3 (2-1)	
7	TPB103211	Chemical	3 (2-1)	
8	TPB104211	Biology	3 (2-1)	
9	TPBU06201	Basic Socio-Cultural Science	2 (2-0)	
		Amount	**22**	

Semester II

No	Code	Subject	SKS	Prerequisite Course
1	TPBU03202	Citizenship	2(2-0)	
2	TPBU07202	Entrepreneurship	2(2-0)	
3	FTP01202	Introduction to Agricultural Technology	2(2-0)	
4	ITP01202	Communication Basics	2(2-0)	
5	FTP02202	Introduction to Economics	2(2-0)	
6	ITP02302	Material Knowledge	3(3-0)	
7	ITP03212	Organic Chemistry	3(2-1)	TPB103211
8	TPBU06202	English II	2(2-0)	
9	ITP04202	Calculus	2(2-0)	TPB101301
		Amount	**20**	

Semester III

No	Code	Subject	SKS	Prerequisite Course
1	ITP05213	Computer application	3(2-1)	-
2	ITP06203	Food Physical Chemistry	2(2-0)	TPB103211
3	ITP07303	Food Biochemistry	3(3-0)	ITP03212
4	ITP08313	Food Chemistry	4(3-1)	ITP03212
5	ITP09213	Statistical Method (Parametric/Nonparametric)	3(2-1)	TPB101301
6	ITP10303	Food Industry Operations Unit	3(3-0)	TPB102211
7	ITP11213	General Microbiology	3(2-1)	TPB104211
8	FTP03203	Operations Research	2(2-0)	TPB101301
		Amount	**23**	

Semester IV

No	Code	Subject	SKS	Prerequisite Course
1	ITP12214	Food Analysis	3(2-1)	ITP03212, ITP06203
2	ITP13204	Food Additives and Toxicology	2(2-0)	
3	ITP14214	Research Design and Scientific Presentation	3(2-1)	ITP09213
4	ITP15214	Food Industry Sanitation	3(2-1)	ITP11213
5	ITP16314	Food Processing Technology	4(3-1)	ITP10303
6	ITP17214	Physical and Sensory Properties	3(2-1)	ITP14214
7	ITP18204	Food Nutrition	2(2-0)	
8	ITP19214	Food Microbiology	3(2-1)	ITP11213
		Amount	**23**	

REGULAR/NON MBKM PROGRAMS

Semester V

No	Code	Subject	SKS	Prerequisite Course
1	FTP04215	Postharvest Physiology and Technology	3(2-1)	ITP07303
2	ITP20215	Food Fermentation Technology	3(2-1)	ITP19214
3	ITP21205	Machinery and Equipment	2(2-0)	
4	ITP22205	Food Safety and HACCP	2(2-0)	ITP13204
5	ITP23205	Industrial Management	2(2-0)	
6	ITP24205	Quality Control	2(2-0)	
7	ITP25215	Microbial Inactivation	2(2-1)	ITP16314
8	ITP26205	New Product Development	2(2-0)	
9		Choice MK	2-4	
		Amount	**21-23**	

Semester VI

No	Code	Subject	SCU	Prerequisite Course
1	ITP27216	Evaluation of Nutrition in Food Processing	3(2-1)	ITP16314
2	ITP28206	Packaging Technology and Storage	2(2-0)	
3	ITP29206	Processing Unit Design	2(2-0)	
4	FTP07018	Seminar	1(0-1)	Minimum 112 credits, GPA = 2.0 and TPBU04201 ITP14214 minimum C

5	FTP05028	PKL	2(0-2)	Minimum 100 credits, GPA = 2.0 ITP23205, ITP15214, ITP21205, ITP22205, ITP29206
6		Choice MK	6-12	
		Amount	**16-22**	

Semester VII

No	Code	Subject	SCU	Prerequisite Course
1	ITP30207	Functional Food	2(2-0)	ITP07303
2	ITP31207	Nutritional Biochemistry	2(2-0)	ITP07303
3	ITP32027	Business/Business Practicum	2(0-2)	ITP29206
4		MK Electives/Alternative Activities of Independent Curriculum* / Students no MBKM program	4-12	
5	FTP06137	KKN	4(1-3)	Minimum 110 Credits, GPA = 2.0
6	FTP07018	Seminar	1(0-1)	Minimum 112 credits, GPA = 2.0 and TPBU04201 ITP14214 minimum C
7	FTP08058	Essay	5(0-5)	Minimum 116 credits, GPA = 2.0 and ITP14214 TPBU04201 (minimum C)
		Amount	**19-22**	

Semester VIII

No	Code	Subject	SCU	Prerequisite Course
1	FTP08058	Essay	5(0-5)	Minimum 116 credits, GPA = 2.0 ITP14214 and TPBU04201 (minimum C)
Amount			**5**	

ITP Study Program Elective Courses

No.	Course Code	Elective courses	SCU	Prerequisite Course
1.	ITP33205	Food Enzymes	2(2-0)	ITP07303
2.	ITP34215	Fermentation Product Technology	3(2-1)	ITP20215
3.	ITP35205	Food Industry Waste Treatment Technology	2(2-0)	ITP15214
4.	ITP36205	Introduction to Food Biotechnology	2(2-0)	ITP07303
5.	ITP37205	Food Fortification and Formulation	2(2-0)	ITP08303
6.	ITP38216	Sugar Technology	3(2-1)	ITP16314

7.	ITP39216	Fats and Oils Technology	3(2-1)	ITP16314
8.	ITP40206	Flavor Technology	2(2-0)	ITP16314
9.	ITP41216	Bakery Technology	3(2-1)	ITP16314
10.	ITP42206	Food Microbiological Test	2(2-0)	ITP19214
11.	ITP43216	Food Forensics	3(2-1)	ITP12214I TP13204
12.	ITP44206	Catering Service Industry	2(2-0)	
13.	ITP45217	Noodle and Pasta Technology	3(2-1)	ITP16314
14.	ITP46207	Milk Processing Technology	2(2-0)	ITP16314
15.	ITP47216	Yield Processing Technology Fishery	3(2-1)	ITP16314
16.	ITP48217	Lactic Acid Bacteria Technology	3(2-1)	ITP20215
17.	ITP49207	Food and Nutrition Planning	2(2-0)	ITP18204
18.	ITP50207	Experimental Nutrition	2(2-0)	ITP31207 ITP18204
19.	ITP51216	Natural Antimicrobial	3(2-1)	ITP19214
20.	ITP52207	Freshener Product Technology	2(2-0)	ITP16314

MBKM PROGRAM

SEMESTER V

(Conducted in Other Study Programs within the University of Mataram)

No.	Code	Subject	SCU
1.	3006PL	Business Feasibility Study (Accounting)	
2.	323549	Public Speaking (English Study)	
3.	25321H50	Lobbying and Negotiation Techniques (Communication Study)	
4.	323539	English for Young Learnes	
5.	BK5.EHT71.66	Meat Technology and Industry (Faculty of Animal Husbandry)	
		*Subjects offered by other Study Programs within the University Mataram	
	Amount		20

SEMESTER VI

(Conducted at Universities or Other Institutions)

No.	Code	Subject	SCU	Prerequisite Course
1.	FTP05028	PKL	*20	
2.	FTP07018	Seminar	1(0-1)	Minimum 112 credits, GPA = 2.0 TPBU04201 and ITP14214 minimum C
3.		Other Merdeka Campus activities+)	*20	

Notes: *) To complete the 20 credits, students can carry out MBKM activities at universities or

other agencies
Elective Courses of Similar Study Programs across PT/University (Website**http://permatapangan.id.**)

MBKM FIELD INTERNSHIP PROGRAMME (PKL).

No.	THEME of PKL	COURSES RELATED TO THE THEME OF PKL	SCU
1.	Processing of Tea, Coffee, Cocoa and Other Freshening Ingredients	1. Functional Food 2. Freshener Product Technology 3. Fermentation Product Technology 4. Food Industry Waste Treatment Technology 5. Packaging and Storage Technology 6. Processing Unit Design 7. *)	2 2 3 2 2 2
2.	Sugar Processing	1. Sugar Technology 2. Food Industry Waste Treatment Technology 3. Packaging and Storage Technology 4. Processing Unit Design 5.*)	3 2 2 2
3.	Processing Results Fishery	1. Fishery Product Processing Technology 2. Food Industry Waste Treatment Technology 3. Packaging and Storage Technology 4. Processing Unit Design 5. Catering Service Industry 6. Food Microbiological Test 7. *)	3 2 2 2 2 2
4.	Processing Results Cattle	1. Milk Processing Technology 2. Food Industry Waste Treatment Technology 3. Packaging and Storage Technology 4. Processing Unit Design 5. Fermentation Product Technology 6. Lactic Acid Bacteria Technology 7. Meat Technology and Industry 8. Egg Technology and Industry 9. *)	2 2 2 2 2 3
5.	Culinary Services (Culinology)	1. Packaging and Storage Technology 2. Processing Unit Design 3. Business Practicum 4. Catering Service Industry 5. Noodle and Pasta Technology 6. Bakery Technology 7. *)	2 2 2 2 3 3

Notes: *) To complete the 20 credits, students can carry out MBKM activities at universities or other agencies

SEMESTER VII

(Conducted at Universities or Other Institutions)

No.	Code	Subject	SCU	Prerequisite Course
1.	FTP06137	KKN	*20	
2.	FTP07018	Seminar	1(0-1)	Minimum 112 credits, GPA = 2.0 TPBU04201 and ITP14214 minimum C
3.	FTP08058	Essay	5(0-5)	Minimum 116 credits, GPA = 2.0 ITP14214 and TPBU04201 (minimum C)
		Other Merdeka Campus activities+)	*20	

Notes: *) To complete the 20 credits, students can carry out MBKM activities at universities or other agencies

Merdeka Curriculum Activities+)

No.	Activity Name	Code	SCU	Notes
1.	Student Exchange (Credit Transfer)		20	Equivalent to PS Choice MK
2.	Apprenticeship		20	The data of this activity can be used as materials/documents for thesis preparation
3.	Independent Cross Study Program Project		20	The data of this activity can be used as materials/documents for thesis preparation
4.	Research Outside PT		20	The data of this activity can be used as materials/documents for thesis preparation
5.	Entrepreneurship		20	The data of this activity can be used as materials/documents for thesis preparation
6.	Teaching Assistant		20	Equivalent to KKN
7.	Humanity Project		20	Equivalent to KKN
8.	Thematic KKN in the Village		20	The equivalent of KKN or activity data can be used as materials/documents for thesis preparation

No.	KKN THEMES	SUBJECTS RELATED TO THE THEME OF KKN	SCU
1.	Food security	Food Planning and Functional Food Nutrition Courses related to the theme of KKN Other Study Programs in PT	2 2

2.	Tourism and Environment	Noodle Technology Processing Unit Design and Flavor Technology Pasta Courses related to the theme of KKN Other Study Programs in PT	2 3 2
3.	Zero Waste	Industrial Waste Treatment Technology Food Packaging and Storage Technology Fermentation Product Technology Subjects related to the theme of KKN Other Study Programs in PT	2 2 3
4.	Entrepreneurship	Practicum Business/Business Service Industry Bakery Technology Courses related to the theme of KKN Other Study Programs in PT	2 2 3

Notes: *) To complete the 20 credits, students can carry out MBKM activities at universities or other institutions

SEMESTER VIII

(Implemented in Higher Education)

Code	Subject	SCU	Prerequisite Course
FTP08058	Essay	5(0-5)	Minimum 116 credits, GPA = 2.0 ITP14214 and TPBU04201 (minimum C)
Amount		**5**	

Bachelor of Agricultural Engineering Courses (Applicable to students of all generations)

Semester I

Course Code	Subject	SCU	Prerequisite Course
TPBU01201	Religious education	2 (2–0)	-
TPBU02201	Pancasila	2 (2–0)	-
TPBU04201	Indonesian	2 (2–0)	-
TPBU05201	English Language	2 (2–0)	-
TPBU06201	Basic Socio-Cultural Science	2 (2–0)	-
TPB101301	Mathematics	3 (3–0)	-
TPB102211	Physics	3 (2–1)	-
TPB103211	Chemical	3 (2–1)	-
TPB104211	Biology	3 (2–1)	-
Amount		**22 (19–3)**	

Semester II

Course Code	Subject	SCU	Prerequisite Course
TPBU03202	Citizenship	2 (2-0)	-
TPBU07202	Entrepreneurship	2 (2-0)	-

FTP01202	Introduction to Agricultural Technology	2 (2-0)	-
FTP02202	Introduction to Economics	2 (2-0)	-
TEP01212	Introduction to Soil Science	3 (2-1)	-
TEP02212	Agricultural and Biosystem Sciences	3 (2-1)	-
TEP03202	Engineering Mathematics	2 (2-0)	-
TEP04212	Computer programming	3 (2-1)	-
TEP05202	Engineering Materials Knowledge	2 (2-0)	-
TEP06202	Calculus	2 (2-0)	-
Amount		**23 (20-3)**	

Semester III

Course Code	Subject	SCU	Prerequisite Course
FTP03203	Operations Research	2 (2-0)	TEP04212
TEP07213	operation unit	3 (2-1)	TEP03202
TEP08213	Measurement and Instrumentation	3 (2-1)	-
TEP09203	Engineering Mechanics	2 (2-0)	TEP03202
TEP10203	Biosystem Engineering	2 (2-0)	FTP01202
TEP11203	Statistics	2 (2-0)	TEP06202
TEP12213	Agricultural Production Machinery	3 (2-1)	-
TEP13203	Thermodynamics and Heat Transfer	2 (2-0)	-
TEP14213	System Analysis and Design	3 (2-1)	TEP04212
Amount		**22 (18–4)**	

Semester IV

Course Code	Subject	SCU	Prerequisite Course
TEP16214	Power in Agriculture	3 (2-1)	TEP08213
TEP17214	Engineering Hydrology & Agroclimatology	3 (2-1)	-
TEP18204	Engineering Economics	2 (2-0)	FTP02202
TEP19214	Fluid Mechanics	3 (2-1)	TEP07213
TEP20114	Engineering drawings	2 (1-1)	-
TEP21204	Agricultural Industry Machinery	2 (2-0)	TEP07213
TEP22204	Management of Agricultural Equipment and Machinery	2 (2-0)	-
TEP23204	Numerical Analysis	2 (2-0)	TEP06202
TEP24214	Farm Building and Environment	3 (2-1)	-
Amount		**22 (17-5)**	

Independent Learning-Independent Campus (KAK MOE)

The MBKM route can be taken by students in semesters V - VII

Activity	Non MBKM	MBKM		
		LineA	LineB	LineC
Studying at the University of Mataram's Bachelor of Agricultural Engineering	•	•	•	•
Studying at the University of Mataram outside the Bachelor of Agricultural Engineering		•		•
Lectures at universities outside the University of Mataram			•	•

Internship (work practice)/Teaching Assistant in Education/Research (Research) unit/Humanity Project/Entrepreneurial Activity/Study (Independent Project)/Village Building (Thematic Real Work Lecture)/Student exchange, equivalent to 20 credits				•

Semester V

Independent Learning Choices

Choice1	Credits Taken (maximum)	Converted Credits (maximum)
Non MBKM	24	-
Line A	24	20
B line	24	20
C line	24	20

[1)]Choose a package

Compulsory Courses for all scheme

Course Code	Subject	SCU	Prerequisite Course
FTP04215	Postharvest Physiology and Technology	3 (2-1)	-
TEP15205	Agroindustry Management	2 (2-0)	-
TEP25215	Irrigation and Drainage Engineering	3 (2-1)	TEP01212
TEP26205	Research methodology	2 (2-0)	-
TEP27205	Bioprocess Engineering I	2 (2-0)	-
TEP28215	Territorial Measurement & Information SystemsGeographical	3 (2-1)	-
TEP29205	Machine Element Planning	2 (2-0)	TEP16214
TEP30215	Machinery and Equipment Design	3 (2-1)	TEP12213
TEP31105	Engineering Professional Ethics	1 (1-0)	-
Amount		**21 (17-4)**	

Packages of elective courses for all pathways

It is an elective course that can be taken

Course Code	Subject	SCU	M/E	Prerequisite Course
Interests: Power and Agricultural Machinery				
DMP01215	Ergonomics & Work Safety	3 (2-1)	E	TEP12213
DMP02205	Strength of Construction Materials	2 (2-0)	E	TEP05202
DMP03205	Energy convertion	2 (2-0)	E	-
DMP04205	Mechatronics and Robotics	2 (2-0)	E	TEP08213
Interests: Bioprocess Engineering				
TBP02205	General Microbiology	2 (2-0)	E	-
TBP03205	General Biochemistry	2 (2-0)	E	-
TBP04215	Technical Characteristics of Agricultural Products	3 (2-1)	E	-

TBP05215	Drying and Cooling Techniques	3 (2-1)	E	TEP07213
Interests: Bachelor of Agricultural Engineering and Environmental Conservation				
SLP01205	Irrigation Design on Dry Land	2 (2-0)	E	TEP01212
SLP02205	Agricultural Environmental Analysis and Engineering	2 (2-0)	E	TEP24214
SLP03205	Land Conservation Engineering	2 (2-0)	E	TEP17214
SLP04205	Watershed Management	2 (2-0)	E	TEP17214

Packages of courses outside the Study Program for Pathway A Semester V

Courses outside the Bachelor or Agricultural Engineering (within University of Mataram) that can be taken include:

Course Code	Subject	Study program	Faculty
PIM16145	Artificial Neural Networks	Mathematics	MIPA
HTW27215	Agroforestry	Forestry	Agriculture
D18KB302	Artificial intelligence	Technical Information	Technique
EC4006	Digital Image Processing	Electrical Engineering	Technique
ITP35205	Introduction to Food Biotechnology	Food Science and Technology	Fatepa

Semester VI

Independent Learning Elective

Elective 1	Credits Taken (maximum)	Converted Credits (maximum)
Non MBKM	24	-
Line A	24	20
B line	24	20
C line	24	20

[1)]Choose a package

Compulsory Courses for all pathways

Course Code	Subject	SCU	Prerequisite Course
TEP32216	Agricultural Energy and Electricity	3 (2-1)	TEP16214
TEP33216	workshop	3 (2-1)	-
TEP34216	Agricultural Product Processing Techniques	3 (2-1)	TEP27205
FTP05026	Field Work Practice	2 (0-2)	-
Amount		**11 (6-5)**	

Packages of elective courses for all pathways

Course Code	Subject	SCU	M/E	Prerequisite Course
Interests: Agricultural Power and Machinery				
DMP05206	Pumps & Compressors	2 (2-0)	E	TEP16214

DMP06206	Digital Farming	2 (2-0)	E	TEP28215
DMP07206	Machinery and Equipment Production Technology	2 (2-0)	E	TEP29205
DMP08206	New and Renewable Energy Technology	2 (2-0)	E	TEP16214
Interests: Bioprocess Engineering				
TBP01216	Bioprocess Engineering II	3 (2-1)	E	TEP27205
TBP06206	Packaging and Storage Techniques	2 (2-0)	E	-
TBP07206	Processing Unit Planning	2 (2-0)	E	-
TBP08206	Bioreactor Engineering	2 (2-0)	E	TEP27205
TBP09206	Bioseparation Engineering	2 (2-0)	E	TEP27205
TBP10206	Agricultural Nanotechnology	2 (2-0)	E	-
Interests: Bachelor of Agricultural Engineering and Environmental Conservation				
SLP05206	Digital Irrigation System	2 (2-0)	E	TEP25215
SLP06206	Evaluation and Land Suitability	2 (2-0)	E	TEP28215
SLP07216	Waste Management	3 (2-1)	E	-

Packages of courses outside the Study Program for Pathway A Semester VI

Courses outside the Bachelor of Agricultural Engineering (within University of Mataram) that can be taken include:

Course Code	Subject	Study program	Faculty
EC4006	Digital Image Processing	Electrical Engineering	Engineering
D18KB309	Internet of Things (IoT)	Technical Information	Engineering

Semester VII

Independent Learning Choices

Choice1	Credits Taken (maximum)	Converted Credits (maximum)
Non MBKM	24	-
Line A	24	20
B line	24	20
C line	24	20

[1)]Choose a package

Compulsory Courses for all pathways

Course Code	Subject	SCU	Prerequisite Course
FTP06137	Community Service Program	4 (1-3)	-
TEP35207	Capita Selecta	2 (2-0)	-

Amount	**6 (3-3)**	

The package of elective courses for all Semester VII pathways is the same as the elective courses for all Semester V pathways

Semester VIII

Course Code	Subject	SCU	Prerequisite Course
FTP07106	Seminar	1 (1-0)	-
FTP08508	Essay	5 (5-0)	-
Amount		**6 (6–0)**	

Courses Offered for Independent Learning-Independent Campus

Courses in the Bachelor of Agricultural Engineering that can be taken by other Study Programs in the MBKM program between Study Programs.

Course Code	Subject	SCU	Semester
DMP01215	Ergonomics & Work Safety	3 (2-1)	Odd
DMP04205	Mechatronics and Robotics	2 (2-0)	Odd
SLP01205	Irrigation Design on Dry Land	2 (2-0)	Odd
SLP02205	Agricultural Environmental Analysis and Engineering	2 (2-0)	Odd
SLP03205	Land Conservation Engineering	2 (2-0)	Odd
SLP04205	Watershed Management	2 (2-0)	Odd
DMP06206	Digital Farming	2 (2-0)	Even
DMP08206	New and Renewable Energy Technology	2 (2-0)	Even
TBP06206	Packaging and Storage Techniques	2 (2-0)	Even
TBP08206	Bioreactor Engineering	2 (2-0)	Even
TBP09206	Bioseparation Engineering	2 (2-0)	Even
TBP10206	Agricultural Nanotechnology	2 (2-0)	Even
SLP05206	Digital Irrigation System	2 (2-0)	Even
SLP07216	Waste Management	3 (2-1)	Even

Prerequisite courses for courses offered for independent learning do not apply to students outside the Bachelor of Agricultural Engineering.

GENERAL REQUIREMENTS TO TAKE THE MBKM PROGRAM

1. Students who take MBKM activities have active status.
2. Students have GPA ≥ 3.00.
3. Partner Study Programs must have a minimum accreditation value of BAN PT/LAM B or other designations.
4. Students have taken a minimum of 80 credits of compulsory courses.
5. Activities that involve partners, the scoring system and weighting of credits are determined by the FATEPA UNRAM Agricultural and Biosystem Engineering Study Program for all activities offered.
6. Students have studied for at least four semesters.
7. Program registration is carried out through the procedures required by each MBKM

activity.

8. Students must be in good health as evidenced by a certificate from the hospital *)
9. Students sign a statement of willingness to bear costs while participating in MBKM activities*)

*) if the MBKM partner requires this.

FIELD STUDY PROGRAM (KKN) FIELD INTERNSHIP PROGRAM (PKL) MBKM

Field Study Programme (KKN) MBKM.

No.	THEMEKKN (4 credits)	TOPIC	INVOLVED PROGRAMS AND COURSES (8-12 Credits)
			Bachelor of Agricultural Engineering
1.	Digital Village	1. Village Geographic Information System	1. Territorial Measurement & Geographic Information Systems (3 Credits) 2. Digital Agriculture (2 Credits) 3. *
		2. Digital Farming System	1. Digital Agriculture (2 Credits) 2. Digital Irrigation (2 Credits) 3. Mechatronics and Robotics (2 Credits) 4. *
2	Independent Energy Village	1. New and Renewable Energy	1. New and Renewable Energy Technology (2 Credits) 2. Energy Conversion (2 Credits) 3. Machinery and Equipment Design (2 Credits) 4. *
3.	Green Village (Zero Waste)	1. Waste treatment 2. Waste Treatment	1. Waste Management (2 Credits) 2. Machinery and Equipment Design (2 Credits) 3. Machinery and Equipment Production Technology (2 Credits) 4. *
4.	Food Independent Village	1. Management of Agricultural Products (Post-Harvest Handling)	1. Characteristics of Agricultural Product Engineering (2 Credits) 2. Drying and Cooling Engineering (3 Credits) 3. Packaging and Storage Engineering (2 Credits) 4. *
5	Creative Industry Village	1. Environment-based Ecotechnopreneurship	1. Agricultural Energy and Electricity (3 Credits) 2. Machinery and Equipment Production Technology (2 Credits) 3. Agricultural Product Processing Engineering (3 Credits) 4. *

NOTE: The requirements for participating in the KKN MBKM Program follow the guidelines issued by LPPM UNRAM.

*Additional courses for other study programs with the same theme (up to a maximum total of 20 credits)

Field Internship Program (PKL) MBKM.

No.	PKL THEME(4 Credits)	TOPIC	INVOLVED PROGRAMS AND COURSES (20 credits)
			Bachelor of Agricultural Engineering
1	Energy Management in SMEs/Industry	New and Renewable Energy	1. New and Renewable Energy Technology (2 Credits) 2. Energy Conversion (2 Credits) 3. Machinery and Equipment Design (2 Credits) 4. Bioseparation Engineering (2 Credits) 5. Bioreactor Engineering (2 Credits) 6. Digital Agriculture (2 Credits) 7. Agricultural Energy and Electricity (3 Credits) 8. Waste Management (3 Credits)
2.	Zero Waste in UKM/Industry	1. Waste treatment 2. ProcessingRubbish	1. Waste Management (2 Credits) 2. Machinery and Equipment Design (2 Credits) 3. Machinery and Equipment Production Technology (2 Credits) 4. Energy Conversion (2 Credits) 5. New and Renewable Energy Technology (2 Credits)
3.	Post Harvest in UKM/Industry	Postharvest Managemen t	1. Characteristics of Agricultural Product Engineering (2 Credits) 2. Drying and Cooling Engineering (3 Credits) 3. Packaging and Storage Engineering (2 Credits) 4. Bioprocess Engineering I (3 Credits) 5. Bioprocess Engineering II (3 Credits)
4.	Territory Mapping in Agencies	Information SystemsVillage geography	1. Territorial Measurement & Geographic Information Systems (3 Credits) 2. Digital Agriculture (2 Credits) 3. Evaluation and Land Suitability (2 Credits) 4. Watershed Management (2 Credits)
5.	Land Conservation in Institutions	Land and Water Conservation Management	1. Land Conservation Engineering (2 Credits) 2. Territorial Measurement & Geographic Information Systems (3 Credits) 3. Design and Build Irrigation in Dry Land (2 Credits) 4. Watershed Management (2 Credits) 5. Evaluation and Land Suitability (2 Credits)

6.	Agricultural Equipment and Machinery in Agencies/Industry	Design of Agricultural Machinery and Tools	1. Workshop (3 credits) 2. Machinery and Equipment Design (2 Credits) 3. Machinery and Equipment Production Technology (2 Credits) 4. Ergonomics & Work Safety (3 Credits) 5. Strength of Construction Materials (2 Credits)

No.	**PKL' THEME(4 Credits)**	**TOPIC**	**INVOLVED PROGRAMS AND COURSES (20 credits)** **Agricultural and Engineering Study Program Biosystem**
			6. Energy Conversion (2 Credits) 7. Mechatronics and Robotics (2 Credits) 8. Machine Element Planning (2 Credits)

NOTE: The PKL MBKM program can be programmed starting in semester V.

VIII. COURSE SYLLABUS

Food Analysis
Understanding of analytical techniques, both qualitative and quantitativ,e on agricultural products in a broad senseThe generalal method of taking samples for chemical and physical analysis. Various methods for determining protein content and its properties, carbohydrates, fats/oils and their properties, water, vitamins, minerals, anti-nutritional substances and additives.

Natural Antimicrobial
Definition and benefits, natural antimicrobial sources of food and waste, inhibition mechanisms (bacteriostatic and bactericidal), testing of natural antimicrobial activity of plant, microorganism and animal origin, and application in food systems as food preservatives.

Computer application
Word processing (making practicum reports**,** making papers, writing theses, application letters: using labs, seminars, theses). Number processing (graphing, calculation) basic programming language, data processing (statistical analysis, optimization analysis).

Agricultural Environmental Analysis and Engineering
This course discusses the definition of environmental management, environmental balance, environmental carrying capacity; Environmental problems and pollution in agriculture and industry; Application of environmental impact analysis in agriculture and Agroindustry issues; Environmental Monitoring includes evaluation of water quality, soil quality evaluation, air quality evaluation; Environmental law enforcement; Development of environmentally sound agriculture and agricultural industry.

Numerical Analysis
Mathematical models and problem-solving in the field of engineering. Approximation and error. Equation roots: bracketing method, open method, systems of linear algebraic equations, LU decomposition method. Numerical integration and differential. Finite differentiation: elliptic equation (Laplace Equation); parabolic equation (heat conduction equation: explicit method, simple implicit method, Crank-Nicolson method, spatial two-dimensional parabolic equation). Finite element method (one-dimensional, two-dimensional finite elements). Application in the field of Bachelor of Agricultural Engineering.

System Analysis and Design
The material provided in the System Analysis course includes the definition and scope of system analysis, system development and development, system analysis models, black box diagrams, system modelling, model development, verification and validation. Methods of system analysis and design, construction, development,and system management.

Food Additives and Toxicology
Functions and working methods of food additives (preservatives, colourings, thickeners,flavours, and organic acid compounds), the influence of the use of food additives, regulations and laws and ethics in the use of food additives based on national, regional and international standards. Principles of toxicology, determination of toxic in food (quality, quantity), biotransformation. Subst.ces as carcinogenic, naturally toxic to food ingredients: animal/toxic phytochemical/toxic from fungi (mycotoxin, mushrooms); Food contamination from: industrial waste/pesticide residue on food/food additives;

Toxic formation during the food production process, a ftoxic foodfactor on health.

Indonesian Language
Understanding basic writing knowledge: spelling and punctuation, reasoning in essays, choice of words and definitions, effective sentences, paragraph development and essay planning.

English Language I
Use of English Language at the Pre-Intermediate – Intermediate level:Understanding of grammar (sentence structure) based on scientific reading, Use of English at the Intermediate – Pre-Advanced level: Characteristics of English in Scientific Writing; Understanding the structure of scientific writing in English; Lexical understanding of grammar vs. contextual understanding, Mastery of language vocabulary 4000 – 5000

English Language II
Students are provided with a variety of academic readings, academic vocabulary and content related to the text in question. Students will also learn various reading strategies to help them understand English texts. Students are also guided to carry out practical activities using English independently/in groups related to the topic of their reading in class, in the form of writing reports/essays and oral presentations.

Farm Building and Environment
Definition and scope of agricultural buildings. Environment and construction. Measurement application in buildings. Functional design of the building. Structural design of the building.

Biology
History of biology, chemical-biological evolution, metabolism, organization of life, structure and function of prokaryotic and eukaryotic cells, organization of genetic information, systems of plant and animal tissues, circulatory systems in plant and animal bodies, reproductive systems of animals and plants, interactions of living things with the environment, classification of life.

Nutritional Biochemistry
Nutrition in humans, digestive system, absorption and distribution in the human body. Nutrition and Metabolites (function, nutrition, and metabolism, distribution and metabolism, influence on health in components: carbohydrates, proteins, fats, vitamins, macromineral, micromineral components, Metabolism: energy, consumption use: Quality of food ingredients and influencing factors, nutrition at the beginning of growth, growth, nursing mothers and adults.

Food Biochemistry
The role of food biochemistry in food technology systems, Enzymes, Inhibitors, Metabolic relationships between food components, Metabolism (Catabolism) and inhibition processes in components: carbohydrates, proteins, lipids and vitamin. Browning (enzymatic) reactions and biodeterioration of food, application of food biochemistry in the food industry and biodeterioration of food.

General Biochemistry

Introduction, bioenergetics, water, enzymes, carbohydrates, fats, proteins, nucleic acids and their metabolism.

Communication Basics
Understanding of communication. Communication process. Communication scope. Communication media. Process communication in the food industry. Communication strategy. Communication within the organization. Information sources. Information society. Communication technology. Information service communication.

Power in Agriculture
Classification of resources (power of motion) in agriculture, including the history of the development of motor fuels. Application of thermodynamic principles to internal combustion engines. Design and construction and working systems of functional parts of internal combustion engines, both diesel and gasoline. Evaluation of combustion engine performance.

Evaluation of Nutrition in Food Processing
Measuring nutritional intake and its effects, stability of vitamins during food processing, nutritional quality during processing with: traditional heating, frying, extrusion, freezing, modified packaging, drying chlorination, ozonation, radiation, microwave, ohmic, infrared, high pressure and continuous heating. Decrease or change in nutritional value (bioavailability) during the handling and processing of: grains, fruit/vegetables, meat and fish

Food Enzymes
Introduction to enzymes, number and units of enzymes, catalyst mechanisms, determining Vmax and Km values, enzymes and their environment, enzymes that hydrolyze carbohydrates, enzymes that work on fats and oils, protein-degrading enzymes, utilization of enzymes in the food industry and the safety of using enzymes in food.

Engineering Economics
Able to explain theories related to the economic analysis of an investment. Able to apply engineering economic calculations in the operation or design of a factory.

Energy and Electrification
Description of alternative energy sources, biomass energy, wind energy, water energy, solar energy, energy conversion processes, conversion machines, transformers, circuit systems, utilization of electrical energy sources and technology for the use of electrical energy in agriculture and for rural areas.

Ergonomics & Work Safety
Ergonomic principles used in design and Occupational Safety and Security (K3), namely anthropometry, biomechanics, and other factors such as workload, noise, mechanical vibration, lighting, and other environmental conditions. Engineering Professional Ethics
Providing the ability and willingness to develop skills, attitudes and knowledge from a person who is independent, positive and willing to always teach himself throughout life. Broaden knowledge insights and attitudes towards new developments in the field of agricultural science and technology as well as other general matters concerning the life behaviour and ethics of a bachelor of engineering (engineering), Professional Associations both nationally and internationally.

Evaluation and Land Suitability

Understanding the evaluation and suitability of land, classification approaches in land evaluation, and being able to know the quality and characteristics of the land to determine the level of land suitability for cultivation purposes.

Physics
Basic units and vectors, equations of motion, Newton's I, II and III laws, work, energy, power, momentum, and impulse, centripetal/centrifugal motion and gaseous quantities, fluid mechanics, statistics, dynamics, calorimetry, expansion, latent heat, heat transfer, laws of thermodynamics, electrostatics, field strength, potential and resistance capacity and Ohm's law, electrical circuits, heat and power, alternating current, RMS value, intensity, photon theory, interference and diffraction, kinetics and particle dynamics, linear momentum, centre of mass concept, rotational motion concept, rigid body, inertial momentum, angular momentum and force momentum, entropy concept. The application of physics in the field of agricultural technology, discussing fluid mechanics and thermodynamics. Application of reversible processes, Carnot cycle, Stirling cycle, heat engines and steam turbines, waves,

Postharvest Physiology and Technology
General introduction about the notion of post-harvest. Physiological age (shelf life) of food commodities, processes of biochemical changes in foodstuffs (climacteric/non-climacteric, muscled foods, as well as in milk and eggs). Factors affecting biochemical changes in foodstuffs, post-harvest handling of fruits/vegetables/grains/meat/milk/eggs. Post-harvest pests and pathology. Standard on post-harvest commodities. Packaging of fresh commodity materials

Food Forensics
Introduction, understanding of food forensic science and the scope of food forensics; Food forensic toxicology: Compounds encountered in clinical and forensic toxicology; Drug test at work; Alternative specimens; Toxicology Postmortem; Alcohol, drugs and driving; Forensic Chemistry and Identification of dosage forms; and Quality Control and its assessment

Food Fortification and Formulation
Principles of fortification of food vitamins and minerals, fortification in addition to vitamins and minerals (polyphenols, carotenoids, fatty acids, and phytosterols), unsaturated fatty acids for food enrichment, stability of vitamins in food fortification. Technical aspects of micronutrient food additives, regulation and safety of vitamins in fortified foods and supplements. assessing nutraceutical bioavailability, standard codex alimentarius in food and supplement fortification, legislation on food and supplement fortification, and safety of vitamin and mineral food additives: safety of micronutrients during fortification and supplementation. Importance of formulations in food processing, Stability of foam emulsions and suspensions, Surface tension of emulsions foams and suspensions, Emulsifiers and stabilizers (chemical and physical properties), factors affecting the work of emulsifiers and stabilizers, Choice of emulsifiers and stabilizers in food processing, Chemical and physical properties of lipids in emulsion systems, Interaction between polar lipids and proteins, Structure and properties of interfaces in food proteins, examples of the application of food formulations in Food Processing Technology (dressings, sauces, ice cream, drinks, bread and cakes)

Food Nutrition
Understanding of the meaning of nutrition in food and the function of nutrients in the body, the function of compounds: carbohydrates, proteins, fats, vitamins, fibre, minerals, and water. An overview of eating habits (food habits). The influence of the development of agricultural and industrial businesses on the provision of nutritional sources, nutrition improvement programs and nutrition fulfillment behavior. Assessment of nutritional

adequacy and nutritional status.

Experimental Nutrition
Introduction to experimental nutrition; Parameters in nutritional evaluation, Methods used in experimental nutrition (in vitro/in vivo, surveys and experimental animals); Mathematical modeling (vitamin metabolism, protein and amino acid metabolism, and energy metabolism); Methods for Kinetic Data; Complex Simulation of Process Metabolism and Computer Aspects of Modeling

Engineering Design
The history, purpose and tools of technical drawing. Normalize drawing paper size, Normalize letters and numbers. Types of lines, engineering geometry, size designation, projection drawing systems and sketches. Cross-sectional images and different hatching. Threads, springs and gears.

Engineering Hydrology and Agroclimatology
The concept of hydrology in relation to the field of Bachelor of Agricultural Engineering. The lecture discussion covers the basic understanding of hydrology, which consists of the constituent components of the hydrological cycle (rain, surface runoff, subsurface flow, etc.), hydrometry, and the relationship between hydrology and agricultural techniques. While agroclimatology studies the composition and layers of the earth's atmosphere, weather, climate classification and parameters (solar radiation, intensity and duration of irradiation, light quality and day length; air pressure and wind, air and soil temperature; water circulation, evaporation, clouds, rain, and air humidity), water balance in relation to the hydrological cycle; as well as the climatic conditions in Indonesia briefly related to the field of Bachelor of Agricultural Engineering.

Agricultural and Biosystem Sciences
The definition of agricultural cultivation, the principles of soil management, planting, plant maintenance, the elaboration of crop production, the interaction of plant-soil climate and its consequences for crop cultivation methods, the basic concepts of sustainable agriculture, and being able to carry out crop production processes. The role of plants and their relation to culture, economic progress, and nutritional adequacy to motivate efforts to increase crop production: The concept of energy flow, morphological structure, and plant functions; plant growth and its phases; balancing the use and accumulation of carbohydrates; reproduction and method of plant propagation; nursery and seed technology; Cultivation techniques, fundamentally discussing pancausaha; Double crop cultivation system.

Basic Socio-Cultural Science
Introduction to Basic Socio-Cultural Science or abbreviated as ISBD (The nature and scope of ISBD; ISBD as an alternative solution to socio-cultural problems); Humans as cultural beings; (The nature of humans as cultural beings; Appreciation of humanity and culture; Cultured ethics and aesthetics; Humanizing humans through understanding basic human concepts; cultural problems); humans as individuals and social beings (the nature of humans as individuals and social beings; function and role of humans as individuals and social beings; dynamics of social interaction; dilemma between individual interests and the interests of society); Humans and Civilization (The essence of civilization; Humans as civilized beings and civilized society; Cultural evolution and forms of civilization in socio-cultural life; dynamics of global civilization; civilizational problems in human life); Humans: Diversity and Equality (The essence of human diversity and equality; progress in social and cultural dynamics; diversity and equality as a nation's socio-cultural wealth; Problems of diversity and equality and their solutions in the life of society and the state); Humans: Values, Morals and Laws (The nature, functions and

embodiment of values, morals and laws in human life, society and the state; justice, order and welfare as a form of society that is moral and obeys the law; problematic values, morals and laws in society and country); Human: Science, Technology and Art (The nature and meaning of science, technology and art for humans; The impact of misuse of science and technology on social and cultural life; Problems of the use of science and technology in Indonesia);

Territorial Measurement & Geographic Information Systems
Definition, scope and use in agriculture, parts of measuring tools, use of simple measuring tools, clippers, btm, and theodolites, cutting measurements and determining height differences, profile measurements, making situation and topographic maps, map interpretation. Definition of geographic information system (sig); sig development history; recording system, type and interpretation of remote sensing data; source management and analysis of sig data; as well as the use of sig techniques in the field of agricultural technology.

Microbial Inactivation
Probability of microbial life, basic principles of microbial death by food processing systems (thermal and non-thermal), the concept of kinetics of microbial death rates by food processing systems (thermal and non-thermal), time of microbial death by food processing systems (thermal and non-thermal), and application of processing systems (thermal and nonthermal) on microbial death rate.

Catering Service Industry
Catering industry (introduction, food and social, influence of ethnic culture); food and catering (commodities, nutrition, food science, and preservation, menu planning, Food Purchasing, storage and control and Promotion and Seling; Catering Technology (Kitchen planning, Catering Equipment, Catering Service, Catering systems, and . Computers in catering); Legislation and catering (Health and safety, Hygiene, Industrial relations and Guide to study and employment)

Calculus
This course contains number systems, coordinate systems, matrices, determinants, limits of functions and their derivatives and analysis of their solutions. This course also discusses; Indefinite integral theory Integration techniques, definite integral theory, basic theory of calculus, improper integral theory, application of definite integrals of double integrals, triple integrals, line integrals and Green's theory.

Capita Selecta
Understanding the use of a foreign language (English) in studying science and technology in agriculture, components of scientific writing, methods of writing scientific papers and delivering scientific work orally (effective seminar technique).

Technical Characteristics of Agricultural Products
The principles of measuring the physical, mechanical, thermal, electrical and optical characteristics of agricultural materials; analysis, interpretation, application of experimental data related to harvesting, handling, processing, storage and quality evaluation.

Strength of Construction Materials
Tensile and compressive forces. Certain static force systems, cylinders and thin-walled environments. Shear stress, torque. Latitude and bending type, centroid and beam. Indeterminate static beam. Analysis of stress-strain and elastic deformation of machine, equipment and building construction members.

Food Safety and HACCP
The importance of food safety, food safety systems, potential food safety hazards (microbiological, chemical, physical), control of potential food safety hazards in: workers, product raw materials, food processing (preparation, cooking and cooling, packaging, shelf life and labeling) As well as the food recall mechanism for contaminated food products Introduction to HACCP, Principles and stages for determining critical points, implementation of HACCP in food processing, monitoring of CCPs in the HACCP system Examples 2 of HACCP application in product processing: meat, fish, food.

Kewarganegaraan
Examines the basics of Citizenship Education, the concept of archipelago insight, the basic conception of national security, the concept of defending the country, democracy and human rights and their foundations

Entrepreneurship
Introduction: The importance of entrepreneurship, the definition of entrepreneurship, the mental attitude of entrepreneurs; Aspects of Risk and Uncertainty in Business: Definition of risk and uncertainty, Risk identification, Risk measurement, Risk control; Decision Making Process in Doing Business: Decision making process, Factors influencing decision making, Factors hindering decision making, Investment decisions; Business Planning: Definition of business planning, Strategy to start a business, Development of business plans, Principles of making a profit; Business Management : Financial planning and control, Production management, Human Resource Management; Seeking and Exploiting Market Opportunities: Understanding markets and market opportunities, Searching for market opportunities, Analysis of market opportunities, Take advantage of market opportunities; Field practicum: Description of examples of successful entrepreneurs, Preparing business plans for several types of business processing agricultural production, Analyzing the company's ability to generate profits from the aspect of costs and revenues (financial aspects), Analyzing production and personnel management of several companies, Analysis of marketing patterns for several agricultural commodities and their processed products.

Chemical
Explanation of materials, compounds, elements and methods of measurement using significant numbers, atomic theory and the discovery process, chemical calculations with stoichiometry and substances in solution, ideal gas laws, real gases and their calculations, electrons in atoms, basic - basic chemical bonding, chemical balance, homogeneous and heterogeneous balance, acid concept and pH calculation, electrolytes and retaining mixtures.

Food Chemistry
Introduction to the constituents of food products in general, detailed discussion of the constituents and physicochemical changes in the constituents: water, carbohydrates, proteins, lipids, vitamins, pigments and minerals, changes in physicochemical properties: flavor, and interactions between constituents.

Food Physical Chemistry
The food physical chemistry course discusses particle size, state of matter (gas, liquid, solid), solutions and the properties of solutions (electrolytes and non-electrolytes) and the colloid system. This lecture also discusses the system of adsorption, absorption, surface tension, emulsion and foam, osmosis, diffusion, aggregates/precipitation, nucleation, crystallization and glass transition as well as the basic concepts of rheology along with its properties and applications.

Community Service Program
Implementation of KKN is intended to train students' abilities to identify problems in the community, organize and work in groups, develop activity plans, manage the provision of resource use, and create real work for the community.

Energy convertion
Studying changes in energy forms from one form to another, mechanisms for energy changes, classification and types of energy, conversion of electrical energy, installation of supply and distribution of electrical energy.

Industrial Management
Understanding of management, problems and theoretical concepts in management, management patterns, opinions and organizational forms of management, planning and organizing leadership, management supervision in industry and companies

Agroindustry Management
The agro-industrial chain from upstream (on-farm) to downstream (off-farm) which needs to be managed efficiently as an inseparable chain. The critical role of supply chain management (SCM). The concept of precision agriculture takes into account the heterogeneity of various parameters related to geographical area, climate, transportation conditions, quality standards and market preferences in each node of the agro-industrial chain. Reliable and high-performance information technology to support prime Agroindustry chain management.

Management of Agricultural Equipment and Machinery
Management of agricultural machinery and equipment maintenance, reliability, maintainability and availability, maintenance planning and scheduling, preventive maintenance, replacement and repair of machinery and equipment, effective spare parts management, maintenance management information systems.

Watershed Management
Contains scope, definition, objectives, watershed management principles, watershed as an ecosystem, geomorphological and socio-economic characteristics of watershed, watershed water balance models, and watershed management planning.

Mathematics
Discusses linear equations and inequalities, mathematical logic, sequences and series, two-dimensional geometry, probability theory, financial mathematics.

Engineering Mathematics
Know and understand the meaning of engineering mathematics related to the interests of Agricultural Technology, with a discussion of the mathematical formulation of the facts in: technical and applied theoretical approaches in the field of TP. Evaluate theoretical accuracy and precision with facts in the field. Methods for forming relevant mathematical models in the field of Agricultural Technology.

Fluid Mechanics
Knowledge of basic concepts and properties of compressible and non-compressible fluids, fluid statics, fluid dynamics and the basics of potential flow, Bernoulli's law, dimensional analysis, measurement of flow through holes, measurement of threshold flow, loss of energy through pipes, flow in pipes and flow through open channels, as well as examples of the implementation of fluid mechanics in the field of Bachelor of Agricultural Engineering.

Engineering Mechanics
Is the main science for the behavior of structures, or machines to the loads acting on them. The general behavior of the structure is:deflectionandstyle- style (reaction styleiandinternal stylel). Discusses the motion of bodies, force systems, force action, force resultants, moments and couples, particle balance, and rigid body balance.

Mechatronics and Robotics
This course discusses aspects of mechatronics and their application for machine/equipment control. The scope of courses includes, among others: the application of the basics of control, integration of sensors/transducers and control systems, control of mechanical systems with computers/microprocessors, data acquisition techniques, etc. Application of robotics in agriculture and industry.

Agricultural Industry Machinery
Introduction to the history of the development of machinery and equipment, machine and equipment requirements: work and power calculations. Forces transferred, auxiliary equipment (mechanical and installation aids): Power sources (humans, animals, water, wind, combustion engines, electricity, solar, atomic energy, gravity, biomass). Knowledge of tools and machines for postharvest and industrial purposes.

Agricultural Production Machinery
This course covers the subject matter of: 1) primary tillage tools and machines, 2) secondary tillage tools and machines, 3) planting tools and machines, 4) fertilizing tools and machines, 5) weed control tools and machines, 6) tools and machines for controlling pests and diseases, 7) tools and machines for harvesting grain, corn, cotton and tubers, 8) working capacity of tools and agricultural machines, and 9) selection of tools and agricultural machines.

Scientific Method
Learn ways to conduct scientific research including making research proposals, conducting research and preparing research reports. In addition, it also discusses the research process in general, starting from; problem determination, literature review, identification of experimental research variables, observation and data collection, interpretation of experimental analysis results, and procedures for writing scientific papers (thesis) and scientific publications as well as seminar procedures

Machinery and Equipment
Introduction to the history of the development of machinery and equipment, machine and equipment requirements: work and power calculations. Forces moved, auxiliary equipment (mechanical and installation aids): Sources of energy (humans, animals, water, wind, combustion engines, electricity, solar, atomic energy, gravity, biomass). Knowledge of preharvest and processing tools and machines

Food Microbiology
History of microorganisms in food, taxonomic habitat and growth parameters, microorganisms in food, prediction and measurement of microorganisms in food, microbial resistance due to processing, indicators of food safety and quality, principles of quality control and microbiological food safety and microbiological criteria

General Microbiology
Classification of microorganisms and microbial taxonomy, cell structure, cell growth, growth, metabolism, microbial ecology, microbial aspects in the food industry and food, and introduction to genetic engineering.

Pancasila
The foundation and objectives of the *Pancasila* course. *Pancasila* as a philosophical system; *Pancasila* as a value system; the history of the birth of the *Pancasila* formulation as the foundation of the state; *Pancasila* as the constitutional context of the Republic of Indonesia (the 1945 Constitution after amendments and laws and regulations in the political field); *Pancasila* as a paradigm of life in society, nation and state.

Functional Food
Discusses the health benefits of various foods and beverages, both fresh and processed. The aspects that will be covered include: the relationship between food, nutrition and health; efficacy of food components (nutrients and bioactive components) and how to prevent health problems; food and beverage products as functional food; principles of processing and analysis of functional food products; as well as functional food development technology including food fortification and supplementation technology.

Computer programming
Familiar with computer hardware and software. Algorithm Basics. Computer programming in Pascal and Basic languages. Application of computers for statistical analysis, graphing, tabulation and scientific writing using several packaged programs, for problems in the field of Bachelor of Agricultural Engineering

Islamic education
Understanding of God Almighty and divinity, nature and human dignity, human responsibility, faith and piety in daily life, the obligation to study and practice knowledge, responsibility to nature and the environment, inter-religious harmony, the role of religious communities in realizing civil society, the role of religion in realizing a work ethic, the contribution of religion in the life of the nation and state and the role of religion in the formulation and enforcement of just laws.

Hindu Religious Education
Strong religious appreciation for Sang Hyang Widhi God Almighty so that he can control himself in thinking, speaking, acting in service to the homeland, nation and state.

Buddhist Education
Understanding Buddhism and its practice in religious communities, Dharma and devotions for faith (Sadha) in maintaining the survival of religion, nation and state based on Pancasila and the 1945 Constitution.

Catholic Religious Education
Knowledge of human beings who have faith in God through Christ in the Church, church life and society to develop one's personal and mentality of life

Protestant Christian Religious Education
Understanding and appreciating the self-existence of believers as people who believe in God. Able to express faith in everyday life in concerningd, fellow human beings, the universe, nation and state.

Introduction to Economics
Definition and Scope of Economics, Methods of Analysis in Economics, Market Economics, Fundamentals of Theory of Demand, Supply and Market Prices, Elasticity of Demand and Elasticity of Supply, Theory of Consumer Behavior, Theory of Producer Behavior, Theory of Market Shapes, Forms of the Economy and Macro Markets, Monetary and Fiscal Policy, and International Trade.

Introduction to Soil Science
Definition, history of soil science for plant growth; Origin of land; Soil formation, processes and influencing factors; Land and food provision; Soil texture, structure, BV and BJ, porosity and permeability, consistency, color, and temperature; Organic colloids, anion- cation exchange, soil reactions; Soil organisms; organic matter; soil moisture; Nutrient; Fertilizer and fertilization; Land classification; Land survey and evaluation; Erosion, pollution and some control measures.

Introduction to Agricultural Technology
Introducing the basic concepts of agricultural technology and its elements in the professional field and their interrelationships in technology and other professions. Aspects of handling, food processing and Bachelor of Agricultural Engineering. The contribution of agricultural technology in national development and the prospects for agricultural technology graduates in the world of work.

Introduction to Food Biotechnology
Basic knowledge of the scope and development of applications and development of food products. Using organisms (enzymes) to produce a food product both conventionally and modernly, understanding DNA engineering techniques to produce new strains that are beneficial for the development of food products involving yeast, bacteria and other microorganisms.

Engineering Materials Knowledge
Introduction to the mechanical, physical and chemical properties of various solid materials or materials; introduction of ceramic, polymer and metal engineering materials used in building construction and machinery and equipment related to agriculture; and knowledge of testing and standardization of materials.

Measurement and Instrumentation
Current and voltage law, basic electrical components, ac/dc current sources, working principles of measurement systems, transducers, digital signal processing, calibration of measuring instruments, measurement of physical quantities, interfacing with computers, introduction to control systems, definition of control systems, principles of process control, automatic control, controller action, being able to use control instruments, and being able to read results.

workshop
Workshop courses cover subjects on: measuring instruments and tolerances, bench work, metal joining techniques, metal cutting operations, workshop machine tools and plate and screw work.

Machine Element Planning
Provides basic knowledge of planning machine elements including shafts, pins, bearings, transmission systems: plate-type belts, V-type and gears, control systems (brakes, clutches), threads and springs. Machinery and equipment design tasks.

Processing Unit Planning
Understanding plant design, issues regarding raw materials and products, process design, selection and determination of process equipment. Layout of process unit/equipment and its facilities. Building design that supports process/sanitation/safety requirements, selection of factory sites. Design and economic evaluation of plant design.

Digital Farming
Geographical information technology with spatial data base can be used to see the land

suitability of a plant by taking into account soil conditions, climate, water availability, and soil contours in a certain area. With these data, the best land for a particular plant can be determined. Agricultural approach by utilizing agro-climate data and spatial data (area, land topography and land contours, as well as soil type) that can be acquired from satellite or GPS can be used for planning the most appropriate land clearing and management from the aspect of resources (fleet, tools and machinery, as well as the operator required), time aspects (scheduling and completion targets), economic aspects, and environmental aspects (environmentally friendly scenarios). Based on this data, it is also used to calculate the correct dosage of fertilizers and herbicides/pesticides.

New Product Development
Introduction, keys to success and failure of new products, development and innovation strategies, product development processes, basic knowledge of product development, consumers in product development, management of product development processes, case studies of food product development and strategies to improve the process of developing new products. Application of new product development in various food products.

Quality Control
Regulations related to quality, Understanding the concept of quality and application of the concept of quality control including GMPS, GSPS, quality determinants. Linkages between quality control, quality assurance and management, Automation systems in quality control Sampling techniques, Formulation of quality standards, implementation and development of certification systems (ISO 9900/22000, SNI, FDA and halal etc.).

Material Knowledge
This material knowledge course aims to provide an introduction and understanding of natural food ingredients (vegetable, animal and fish), especially those produced domestically or with international trade meaning. The review covers the following aspects: sources, variables/breeds/races, morphology, histology, chemical composition and physical-chemical properties, microbiology, quality classification related to utilization for consumption materials/nutritional sources, industrial materials, and trade. The classification of foodstuffs is based on nature's, vegetables, fruits, refreshments, spices, meat, eggs, milk and fish.

Food and Nutrition Planning
Regional food and nutrition program planning includes situation analysis, analysis of causes and problem priorities, needs analysis, formulation of strategic plans, and implementation and advocacy plans. Regional food and nutrition programs within the framework of a food and nutrition security system as an integration of national and regional development.

Processing Unit Design
History from social and technical aspects, programs on plant design, plant design documentation, evaluation of synthetic alternatives, evaluation of alternative systems, mass/energy flow charts, location and layout, banking/interest systems, buildings and equipment and price estimation, sanitation and hygiene, pilot plant, cost system at the factory, maintenance costs, investment costs, operational costs, evaluation: sensitivity/feasibility/benefits, examples of scale factories: food handling, food-based processing, food-based industries and others.

Pumps and Compressors
This course contains knowledge about pumps, how they work, the main components,

basic pump installation calculations, pump classification and types of pump impellers centrifuges, how the compressor works and compressor classification, compressor use, selection, and design.

Field practice
Providing knowledge, understanding and understanding of the types of institutions, company activities, processing or trade in the field of food processing specifically and in detail in the medium to high-end food industry.

Business/Business Practicum
Micro-scale business planning, optimizing the management stages of business planning, followed b conducting business independently or in groups (from raw materials, processing systems, to marketing), economic evaluation.

Research Design and Scientific Presentation
Fundamentals of research design and scientific presentation, application of experimental designs such as RAL, RAK, factorial designs, respond surface methodology (RCM), Principle component analysis (PCA), data collection techniques through focus group discussions (FGD), in-depth interviews (IDI), and questionnaires including validity and plagiarism tests in conducting scientific research and writing, techniques for writing scientific papers down to good and correct Indonesian writing rules such as making research proposals, proposals for internships/field practice, scientific papers, popular scientific works, including techniques for making illustrations, citations and bibliography. The method of presenting scientific work which includes the preparation of presentation materials and oral and poster presentation techniques.

Design of Dry Land Irrigation
Technical knowledge of water use management, technology used, design analysis of irrigation machines and equipment for dry land.

Machinery and Equipment Design
Machinery and equipment design analysis is related to the technical properties of agricultural products. The concepts of using the equations needed for the design of tresher, separator, cleaning and sorting, handling of agricultural products, milling, drying and warehousing.

Operations Research
History of Linear Programming, Graphical Methods, Simplex Methods, Transportation Methods, Assignment Problems, Queuing Methods, Network Methods and QM/LINDO Program Demos)

Food Industry Sanitation
Sanitation and the food industry, the relationship between biosecurity and sanitation, the relationship between microorganisms and sanitation, the relationship between allergens and sanitation, sources of food contamination, personal hygiene and food handling sanitation, the role of HACCP in sanitation, quality assurance in sanitation, cleaning compounds, sanitizers, sanitation equipment, waste product handling, pest control, sanitary design and construction in food processing, low-moisture food production and storage sanitation, Sanitary application and management in dairy, seafood, fruit and vegetable, wine and food service processing plants, Food Industry Operations Unit
Engineering principles in quantitative analysis of food processing systems, including

processing sub-systems: units, dimensions, mass balance, thermodynamic principles, energy balance, transportation (rheology, and fluid flow, heat transfer and mass transfer). The application of engineering principles in the quantitative analysis of each processing unit is related to the basic principles of the process, process system, mass balance and energy balance in processing operations, such as: cleaning, sorting, size reduction, mixing, mechanical separation, dehydration, evaporation, sterilization, pasteurization, cooling, freezing, roasting, frying, extruding and non-thermal processing (radiation, ozonization, electric shock, high pressure etc.).

Operations Unit
Basic concept of unit operation in food, Unit and dimension system, mass and energy transfer phenomena, moment/mass/energy transfer, air and water mixture, rheology in food products, fluid transfer in piping, fluid circulation in porous materials, filtering, process preparation by membrane.

Seminar
Presentation of the results of a literature search in a problem study in field of food or food industry. Topics can be related to current conditions in the field of food science and technology, progress of research results. The results of writing can be evaluated through exams or seminars and can be used as material for thesis studies.

Digital Irrigation System
A precise approach to providing water at the right time and the right volume to plantation land is carried out by considering the specific conditions of the land, soil moisture, soil type, and planting period. Utilization of the latest irrigation technology and saving water and land is studied in this course. This course also studies hydroponic systems, aeroponics, vertical planting, utilization of house plants, use of artificial light, application of irrigation control systems, internet of things in irrigation monitoring and control, drip and bulk irrigation systems as well as monitored and controlled subsurface.

Physical and Sensory Properties
The use of the ability of the human senses to measure, observe the properties and acceptability of food and its application in quality control and research. The discussion includes an introduction to organoleptic properties, humans as panelists, organoleptic test laboratories, panelist retruetment, sample preparation and preparation, sensory test methods and measurements, sensory test strategies (psychological errors, replication, randomization, trial setup/rancob and difference test system/anova). . Basic principles of physical properties (e.g. color, texture, viscosity, fat, density, other physical parameters) and application of various physical test methods to food and physical test instruments

Essay
Carry out the preparation, implementation and completion of research in the laboratory or in the field as well as the preparation of scientific papers on the results of the research which are then accounted for in the thesis examination and comprehension before the team of examiners

Statistics
Scope and use of Statistics, Definition of data and types of data, Frequency distribution, Intermediate prices, Deviation prices, Probability theory, Probability distribution, Estimation, Hypothesis testing, regression and correlation (simple and multiple), ANOVA Test, Advanced Test .

Bioprocess Engineering I

Be able to identify production processes that involve biological agents, the components involved in the process, and study the interrelationships between components in a complete system.

Bioprocess Engineering II
Able to design components, systems, processes, and products that use bioprocess technology principles by considering economic, social, health, safety, and environmental engineering aspects. Able to apply the concept of biological engineering

Bioreactor Engineering
Complete knowledge of biotechnology processes that are safe, environmentally friendly, and renewable, starting from microbiology, kinetics, bioreactors to obtaining and purifying products as well as their application in agriculture and Agroindustry.

Bakery Technology
Discusses the characteristics of ingredients for bakery products including flour, shortening, leavening agents, sugar, eggs, and minor ingredients as well as their implications for formulas, process conditions, equipment and quality control. Development of local-based products.

Lactic Acid Bacteria Technology
Classification and physiology of Lactic Acid Bacteria; Process of production and use in industry; Stability in fermented products (milk); Lactic Acid Bacteria as probiotics and bifidobacteria, and probiotic action; Lactic Acid Bacteria product development.

Bioseparation Engineering
Knowledge of bioseparation techniques, able to design effective and efficient bioseparation processes from biological products, able to evaluate and assess products that have been purified/isolated.

Biosystem Engineering
Application of chemical engineering and biotechnology in biosystem processes that cover renewable energy conversion processes, biological processes with a systems approach, the relationship between organisms and the environment, and biotechnology processes.

Irrigation and Drainage Engineering
Definition, purpose and scope of irrigation and drainage. Water requirement for plants, irrigation water requirement for plants, irrigation efficiency concept. Water quality for irrigation. Systems and planning of various types/methods of irrigation: surface, subsurface, bulk and drip irrigation. Management of surface water and ground water for irrigation, industry, settlements. Water pumps for irrigation and industry: systems and planning, pump financial analysis. Operational management and maintenance of irrigation and drainage networks.

Food Fermentation Technology
Study the concepts, methods and techniques of industrial-scale fermentation and all its aspects covering the scope of the fermentation process, fermentation kinetics, medium and substrate preparation, inoculum, aeration and agitation, fermenters, fermentation process control and fermentation industrial products

Flavor Technology
Discusses the basic concept of flavor technology and the role of flavorings in food ingredients. The subject matter includes sources, classification and types of flavors,

flavor making, material handling and flavor production, flavor technology in the industry, flavorist and flavor creation, HVP and yeast extract technology, MSG technology, IMP/GMN, flavor applications, testing methods and quality control. , applications and the latest developments in flavor.

Sugar Technology
History of the development of the sugar industry, sources and potential roles and socio-economic development. Physicochemical properties of sugar, cane sugar technology, liquid sugar technology. Traditional sugar technology and confectionery technology.

Land Conservation Engineering
Contains the definition of conservation and the need for technological efforts, soil conservation techniques (conservation methods, land use policies and cropping patterns), water (surface water and groundwater) and air; Conservation technology includes technology to be applied to rivers, reservoirs, groundwater, soil and forests; An understanding of the process of solving in an integrated manner is given to an environment so that the whole conservation insight can be understood, as well as examples of the implementation of land conservation engineering science in the field of Bachelor of Agricultural Engineering.

Packaging and Storage Techniques
An introduction to the role and function of agricultural/food product packaging and its development since natural, traditional packaging to the latest packaging. Knowledge of types, characteristics, method of manufacture and identification of various packaging materials (glass, metal, wood, paper, cardboard, plastic, anti-vibration materials) and certain food packaging materials such as frozen food and dry products, poisoning problems, rusting. Storage and warehousing techniques for agricultural/food products and shelf life issues (expired).

Drying and Cooling Techniques
Cooling of meaning and purpose. Natural and artificial cooling, calculations and terms, Get to know the evaporator, various refrigeration machines, design and calculations. Refrigeration processes and their effects on agricultural yields. Damage due to cooling and ways to deal with it Parameters needed in the analysis of drying of agricultural products, models for simulation in drying. Single and thin layer drying approaches, theoretical drying equations, semi-theoretical drying equations, empirical drying equations. Drying pile approach, fixed pile model, crossflow model, concurrent-flow model, counter flow model, ergun equation, leva equation, fluidized bed model, spout bed model and performance analysis of drying machine and equipment

Agricultural Product Processing Techniques
Processing, mass and energy balance, conversion of physical and chemical properties and in/activation of microbes/enzymes which include: process preparation, sterilization, pasteurization, milling, drying, cooling/freezing.

Waste Management
This course discusses the definitions and limitations of industrial waste, especially in agriculture; Hierarchy of agricultural industrial waste management; Mechanism for managing agricultural industrial wastewater; Agricultural industrial solid waste management mechanism; Air pollution control mechanism; Definition of waste, characteristics of waste, landfill; Waste processing technology.

New and Renewable Energy Technology
Knowledge of new and renewable energy which includes solar energy, wind energy,

water energy (micro hydro), biomass energy, ocean wave energy, geothermal energy, thermionic converters, thermoelectric converters, battery energy, fuel cells, magneto hydro dynamic and fusion energy . Application of new and renewable energy in agriculture and the agricultural industry.

Noodle and Pasta Technology
Basic knowledge of noodles, macaroni, spaghetti and vermicelli.

Agricultural Nanotechnology
This course discusses the concept of science and nanotechnology, developments in the use of nanotechnology in the agricultural industry, nanoproduct characterization techniques, nanomaterial synthesis techniques carried out physically and chemically. The exploration and application of nanotechnology is especially given in the field of Agroindustry and other fields such as biotechnology, environment and engineering.

Machinery And Equipment Production Technology
Fundamentals of casting, forming, heat treatment, non-traditional methods for machining, welding, soldering and coating, control of machine production equipment, basic planning and design of machinery and equipment, robotic technology, application of robots, computer production systems integrated with application of agricultural machinery and equipment, standardization, company production models for agricultural machinery and equipment, field testing of machinery and tractors.

Packaging and Storage Technology
An introduction to the role and function of food packaging and its development since natural, traditional to modern packaging. Knowledge of types, characteristics, methods of manufacture and identification of various packaging materials (glass, metal, wood, paper, cardboard, plastic, anti-vibration materials, traditional packaging materials, edible films). Packaging standards, Labeling systems, Various storage methods and techniques food product and shelf life determination model. Evaluation techniques and quality control of packaging and packaging materials in the food processing industry and economic analysis

Packaging and Storage Techniques
An introduction to the role and function of agricultural/food product packaging and its development since natural, traditional packaging to the latest packaging. Knowledge of types, characteristics, how to manufacture and identification of various packaging materials (glass, metal, wood, paper, cardboard, plastic, anti-vibration materials) and certain food packaging materials such as frozen food and dry products, poisoning problems, rusting. Storage and warehousing techniques for agricultural/food products and shelf life issues (expired).

Fishery Product Processing Technology
Characteristics and physiological properties of fish food ingredients. Post-harvest handling techniques for fishery products for consumption and processed raw materials for fishery products. Processing techniques for fishery products into processed products that have economic value. Waste handling and processing techniques and fishery products processing industry

Food Industry Waste Treatment Technology
Introduction to types of food industry waste, HACCP applications related to food industry waste, systems for handling and processing food industry waste, utilization of waste into safe and useful products

Fat and Oil Processing Technology
Sources of vegetable and animal fats and oils, properties and ways of handling to obtain quality fats. Classification of oils and fats according to their use for industry. Process stages, equipment, specifications for refined oil and fat products such as: cooking oil, margarine, soap, coating materials and pure fatty acids. Also discusses various kinds of processes such as; clarification, refining and modification which includes plastization, emulsion, hydrogenation, trans-esterification

Food Processing Technology
Application of chemical, microbiological and engineering principles in food processing and preservation by considering quality factors (physical, chemical, nutritional, sensory and microbiological), microbial mortality calculation models. Product acceptability is related to the processing of cleaning, sorting, size reduction, mixing, mechanical separation, dehydration, evaporation, sterilization, pasteurization, cooling, freezing, roasting, frying, extruding, and non-thermal processing (radiation, ozonization, electric shock, high pressure). , ultrasonic), microwave and ohmic.

Fermentation Product Technology
Basic knowledge of processed products whose processing uses the fermentation stage. Processing and development of processed products including tempeh, soy sauce, salted vegetables, shrimp paste, lactic acid, yogurt and yakult and similar products. Determination of final products, methods of controlling the fermentation process, physical, chemical, microbiological properties and composition of the final product. Processing and development of refined products including ethanol, acetic acid, wine and similar products. Determination of final products, methods of controlling the fermentation process, physical, chemical, microbiological properties and composition of the final product. Processed product development.

Thermodynamics and Heat Transfer
The thermodynamics course covers topics on: 1) Definition of heat, work and unit systems, position of the working fluid, reversible work and irreversible work, 2) First law of thermodynamics, 3) Working fluid, 4) Second law of thermodynamics, 5) Heat engine cycle , 6) Steam generation system. Knowing and understanding the meaning of heat transfer, as a basis for engineering knowledge in the field of agricultural technology (TP), by discussing: conduction, convection and radiation heat transfer mechanisms, heat transfer in geometric objects, empty bodies, solid bodies, generating heat, conduction in steady and unsteady conditions, forced convection and free convection.

Food Microbiological Quality Test
Food microbiological criteria, sampling method and microbiological test methods on food (conventional and up-to-date methods). The role of microbial testing in food control, safety and spoilage.

IX. INDEPENDENT LEARNING INDEPENDENT CAMPUS

Independent Learning-Independent Campus, is a program to improve the competence of graduates both soft skills and hard skills, preparing graduates as future leaders of the nation who are superior and have personality through experiential learning programs to facilitate students to develop their potential according to their interests and talents.

9.1. Implementation

1. The independent learning program is implemented by giving students 3 (three) semester learning rights outside the study program.
2. Students can take the independent learning program which is offered for a maximum of 3 (three) semesters.
3. Implementation of 3 (three) semesters in the independent learning program in the form of 1 (one) semester or the equivalent of 20 credits can take courses outside the study program at the same tertiary institution and 2 (two) semesters or the equivalent of 40 credits carry out learning activities outside the college

9.2. Forms of Learning Activities

9.2.1. The forms of learning activities offered can be in the form of:

1. Student exchanges are carried out in the form of student exchanges between study programs at the same tertiary institution, student exchanges in the same study program at different tertiary institutions, student exchange between study programs at different tertiary institutions.
2. Internships/work practices carried out in the form of learning activities in collaboration with partners, namely companies, non-profit foundations, multilateral organizations, government institutions, and startups
3. Teaching assistance in academic units which is carried out in the form of teaching assistance is carried out by students in educational units such as elementary, middle and high schools. Schools where teaching practice can be located in cities or in remote areas.

4. Research/Research carried out in the form of research activities at research institutes/study centers
5. Humanitarian projects carried out in the form of helping to overcome disasters through humanitarian programs, humanitarian projects and other developments in collaboration with institutions in Indonesia and abroad.
6. Entrepreneurial activities carried out and aimed at students who have an interest in entrepreneurship which aims to encourage the development of student entrepreneurial interests with appropriate learning activity programs.
7. Independent studies/projects aimed at students who have an interest in realizing great works that are contested at the international level or works from innovative ideas and can be carried out in the form of cross-disciplinary group work.
8. Building villages/Thematic Field Study Programme (KKNT) which are carried out in the form of education that provides learning experiences for students to live in the community outside the campus, which directly together with the community identify potential and deal with problems so that they are expected to be able to develop village/regional potential and concocting solutions to existing problems in the village.

9.2.2.9.2.2.

1. The form of Merdeka Learning-Independence Campus learning can be carried out within the Study Program and outside the Study Program.
2. Forms of learning activities outside the study program as referred to in point (a) consist of:
    a. learning in different study programs at Unram
    b. learning in the same study program at other universities
    c. learning in other study programs at other universities and
    d. learning in non-university institutions
3. The learning process outside the study program as referred to in point (2) letters b, c and d is carried out based on a cooperation agreement between Unram and other related universities/institutions and the results of the lectures are recognized through a credit transfer mechanism.
4. The learning process outside the study program as referred to in point (2) can be determined by the Ministry and/or Rector.
5. The learning process outside the study program as referred to in point (2) is carried out under the guidance of the lecturer.

6. The learning process outside the study program as referred to in point (2) letters c and d is carried out only for undergraduate programs outside the health sector.

9.2.3.9.2.3.

1. Students can take credits in different study programs within Unram as referred to in 9.2.2. point (2) letter a for a maximum of 1 (one) semester or the equivalent of 20 credits.
2. Students can take credits in the same study program at other tertiary institutions or other study programs at other tertiary institutions or at non-tertiary institutions as referred to in 9.2.2. point (2) letters b, c and d for a maximum of 2 semesters or the equivalent of 40 credits.

9.2.4. Universities/faculties are required to facilitate students' rights to take credits as referred to in 9.2.3.

9.3. Learning Participant Requirements

9.3.1.

1. The requirements for learning participants are as follows:
   a. Students who come from state universities and accredited
   b. Active students registered at the Higher Education Database (PDDIKTI); and
   c. Students who have passed at least 80 credits with a minimum GPA of 3.00.
2. Students as learning participants are required to:
   a. Planning courses/programs to be taken outside the study program with the approval of the Academic Advisor;
   b. Register for program activities outside the study program;
   c. Complete the requirements for activities outside the study program, including participating in the selection if any
   d. Participate in program activities outside the study program in accordance with existing academic guidelines; and
   e. Show a certificate of physical and mental health as well as evidence of drug-freeness from the authorized agency.

9.4. Learning Implementation Mechanism

9.4.1. The mechanism for implementing study outside the study program as referred to is an integral part of the process of completing student studies.

9.4.2. The mechanism for implementing learning outside the study program for Unram students is as follows:
   a. Students register or choose a course package that can be taken

outside the study program through the academic administration information system;

b. Students take part in administrative and academic selection processes according to their study objectives outside the study program;
c. Students attend lectures outside the study program until they finish according to the time set by the supervisor from Unram and the place of learning I outside the study program;
d. The assessment is carried out by supervisors from Unram together with supervisors from places of learning outside the study program;
e. Students get value from learning outside the study program; and
f. Unram through the Academic Information System (SIA) conducts conversations and recognizes the credit scores and weights listed on the Study Result Card.

9.4.3. The mechanism for implementing learning outside the study program for students from outside Unram is as follows:

a. Students register or choose course packages through the Academic Information System (SIA);
b. Students take part in the administrative and academic selection process in accordance with the study program intended by Unram;
c. Students attend lectures until they finish according to the time set with the supervisor from the university of origin and the supervisor from Unram;
d. The assessment is carried out by supervisors from Unram together with supervisors from the original study program;
e. Students who meet the requirements get scores from the requirements to get scores from learning at Unram; and
f. Unram through the Academic Information System (SIA) sends the grades obtained by students to the home university.

9.4.4.9.4.4.

a. The study program compiles or adapts a curriculum that facilitates students to take courses in other study programs.
b. Determine and offer courses that can be taken by students outside the study program.
c. Set the quota of participants who take courses offered in other study programs at the same university.
d. Set the number of credits that can be taken from other study programs
e. Prepare a list of courses, lecturers, and learning facilities in the context of implementing study programs and outside Unram.

9.5. Partnership

1. The intended partnership is a partnership between Unram and universities, the business world and the industrial world and/or other parties in the form of activities within the framework of implementing independent learning -

independent campus.

2. Unram's partnership with universities and other independent institutions is based on a learning note - the independent campus is based on a memorandum of understanding, cooperation note and cooperation agreement.
3. Partnership activities are coordinated by the Unram Planning and Cooperation Division.

9.6. Role of Related Parties

9.6.1.

1. Related parties in the implementation of Merdeka Learning - Merdeka Campus activities as intended include:
    a. university
    b. faculty
    c. study program; and
    d. partners

2. The related parties as referred to in point (1) have responsibilities according to their respective duties.

9.6.2.

1. Unram has the following tasks:
    a. Facilitating the right for students to take learning outside the study program;
    b. Establish academic policies to facilitate learning activities outside the study program; and
    c. Producing cooperation documents in the form of memorandums of understanding (MoU) with partners'
2. Faculties have duties;
    a. Setting up facilities for a list of faculty-level courses that students can take across study programs; and
    b. Prepare cooperation documents (PKS) with relevant partners.
3. The Study Program has the following tasks:
    a. Arranging or adapting the curriculum to the independent campus implementation model;
    b. Facilitating students who will take cross-study study programs in tertiary institutions;
    c. Offer courses that can be taken by students from outside the study program and outside the teacher's college; and
    d. Carry out equivalence of courses with learning activities outside the study program and outside of Higher Education; and
    e. If there are courses/credits that still need to be fulfilled from learning activities outside the study program and outside of Higher Education, alternative online courses are prepared.
4. Partners have duties:

a. Making cooperation documents in the form of a memorandum of understanding (MoU) with universities;
b. Making cooperation documents in the form of cooperation agreements (PKS) with faculties; and
c. Carry out program activities outside the study program with the provisions contained in the Memorandum of Understanding (MoU/spk).

APPENDICES

Appendix I: SEMESTER EXAMINATION RULES

1. Students taking the exam must be neatly dressed (not allowed to wear T-shirts) and wear shoes.
2. Students taking the exam must be present 10 (ten) minutes before the exam starts and are only allowed to enter the exam room with permission from the supervisor.
3. Students taking the exam who are late, with justifiable reasons and no examinee who has completed the exam and left the exam room, including examinees from their parallel class, are still allowed to take the exam using the remaining available exam time.
4. Students taking the exam show their identity by showing their original Student Card and Semester Credit Unit (SCU).
5. Students taking the exam must sit on the bench that has been determined according to the exam number. Students who are not seated on a bench with the correct number are not allowed to take the exam.
6. Test takers may only bring bags, books or notes to their seats in the room if the officer permits them.
7. Students taking the exam must fill in the attendance list, NIM and exam number, date and signature on the exam answer sheet.
8. Students taking the exam are only allowed to work on questions if there is a sign that they are allowed to work from the supervisor.
9. Students taking the exam may not work with friends and borrow and borrow writing materials during the exam.
10. If it turns out that there are signs of fraud and suspicious actions such as chatting using notes, and so on, after being warned by the supervisor without being heeded, the student taking the exam can be removed from the exam room and the exam is considered canceled/failed, and recorded in the exam report.
11. Students taking the exam who have finished before the time the exam answer papers must be given to the supervisor, then may leave the room.
12. Things that have yet to be listed in the exam rules will be determined later. Students who do not comply with the exam rules will receive sanctions in accordance with the provisions of the Faculty.

Appendix II: PROCEDURE FOR LABORATORY USE FOR PRACTICUM IN THE FACULTY OF FOOD TECHNOLOGY AND AGROINDUSTRY, UNIVERSITY OF MATARAM

I. Requirements for Following Practicum

Those who are eligible to take part in the practicum are those who:
1. Registered as a student in the academic year concerned
2. Planning courses/practicum in SCU
3. Pass the testing held before the practicum

II. Practicum Implementation

1. Students must be present 10 minutes before the practicum begins. For those who are late are only allowed to follow the practicum in question if with a valid reason.
2. Students who only take practicum three times in a row with valid information will be revoked their right to take practicum.
3. During the practicum, the students are required to wear a clean practicum coat.
4. Borrow materials or tools from officers with a loan receipt and after use must be returned in a clean condition according to the loan receipt.
5. Be careful when heating and pouring hazardous and toxic substances.
6. After each practicum has been completed, it must be shown to the assistant supervisor for approval in the interim report.
7. At the end of the practicum submit a final report which is a collection of official reports that have been corrected from each practicum event with the following provisions:
   - Typed writing
   - Writing and cover techniques according to the instructions of the lecturer or assistant
8. Matters that have not been listed in this code of conduct are regulated by each laboratory.

Appendix III: SYSTEM REGULAR USE OF LABORATORY/STUDIO/UPT FOR RESEARCH ACTIVITIES

I. Requirements to research in the Laboratory

1. Have received permission from the Head of Department/Study Program
2. Must report first to the Head of the Laboratory before doing research
3. Pay an analysis fee of at least 50% of the total cost.

II. Research Implementation

1. Before the analysis begins, the analyzer must submit a list of tools and materials used and approved by the Head of the Laboratory to the laboratory staff
2. The analyzer must be accompanied by at least 1 laboratory worker both during business hours and overtime. Overtime is calculated starting at 14.00
3. Laboratory workers who work overtime are the responsibility of the researcher.
4. The analyzer is not allowed to take the tools and materials used himself.
5. During analysis activities, the analyzer must wear a lab coat
6. The analyzer must always take care of the tools and materials so that things do not disturb security in the laboratory.
7. When the analysis is complete, the analyzer must clean the tools and immediately return them to the laboratory staff according to the amount borrowed.
8. When the analysis activity is complete, the analyzer reports back to the Head of the Laboratory and pays the full analysis fee.
9. Each laboratory regulates other things not listed in this code of conduct.

Appendix IV : LETTER APPLICATION FOR THESIS SUPERVISORS

Dear.
Mr/Ms Head of the Food Science and Technology Study Program, Faculty of Food Technology and Agroindustry, University of Mataram

With respect, I hereby :

Name of Student	:
No. Student	:
Study program	:
Study Interest	:

Submitting a request to you to determine thesis supervisor according to my research topic, namely :

1.
2.

Main Supervisor Candidate :

1.
2.

Prospective Assistant Lecturer:

1.
2.

Thus this application letter for your attention, I thank you.

Mataram,……

Know,
Academic Advisor

(name of lecturer)
NIP.

Applicant

(Name Student)
NIM.

Appendix V: EXAMPLE APPLICATION LETTER TO CONDUCT THESIS EXAMINATION SEMINAR

LETTER OF APPLICATION FOR SEMINAR / THESIS EXAMINATION

Mataram, ……
Dear: Mr/Ms Head of Study Program
....
in Mataram

With this I

Name	:..... ..
Student number	: ....
Study program	: ....

Submit a request to Mr / Ms to be able to conduct Seminars / Thesis Examination *)

Thus this application letter and for your attention I thank you.

Applicant,

Signature Full

name

Know:	Name	Sign Main Guide's
hand	(.....)	( )
Companion Advisor	(.....)	( )

Appendix VI : EXAMPLE OF APPLICATION LETTER FOR USE OF LABORATORY/UPT FOR RESEARCH

APPLICATION LETTER

Mataram, ……
Dear : Mr/Ms Head of Laboratory/Studio/UPT*)
....
in Mataram

With this I

Name	:..... ..
Student number	: ....
Study program	: ....

Submitting an application to Mr / Mrs to be willing to permit to use the Laboratory / Studio / UPT ……..... *) and with all the facilities in a series of research activities which we entitled
....**)

Thus this application letter, and I thank you for your attention.

Petitioner,

Signature

Full name
……

Copy:. Dear. Head of Study Program ....., Faculty of Food Technology and Agroindustry UNRAM

Notes *) Filled as needed
**) Write down the title of the research that will be conducted

Appendix VII: SAMPLE OF APPLICATION FOR ACADEMIC LEAVE

APPLICATION LETTER FOR ACADEMIC LEAVE

Mataram, ……
Dear: Rector of the
University of Mataram
in Mataram

With this I

Name	:..... ..
Student number	: ....
Study program	: ....

Submitting a request to Mr / Ms so that I may be allowed not to attend lectures in Semester ……..School Year……/……..., due to …… ……

Thus this application letter, and for your attention, I thank you.

	Petitioner,
Acknowledging	
	Signature
Parent/Guardian, Signature	
Full name	**Full name**
Know	
Academic Advisor,	Study program……
	Chairman,
Signature	Signature
Full name	**Full name**
NIP	NIP

copy :
1. Dean of the Faculty of Food Technology and Agroindustry, University of Mataram
2. Academic Sub-Coordinator of the Faculty of Food Technology and Agroindustry University Mataram.

Appendix VIII: SAMPLE OF APPLICATION LETTER FOR REACTIVATION

REACTIVATION LETTER

Mataram, ……..

Dear: Rector of the
University of Mataram
in Mataram

With this I

Name	:..... ..
Student number	: ....
Study program	: ....

Submitting a request to Mr / Ms so that I may be allowed to return to study in Semester ……..School Year……/……..after Iduring academic leave semester.

Thus this application letter, and for the permission of Mr. / Mrs. I thank you.

	Petitioner,
Acknowledging	Signature
Parent/Guardian, Signature	**Full name**
Full name	
Know	
Academic Advisor,	ProgramStudies……..
	Chairman,
Signature	Signature
Full name	**Full name**
NIP	NIP

copy :
1. Dean of the Faculty of Food Technology and Agro-industries, University of Mataram
2. Academic Sub-Coordinator of the Faculty of Food Technology and Agro-industries, University of Mataram

Appendix IX : SAMPLE OF APPLICATION LETTER TO CHANGE STUDY PROGRAM

CHANGE STUDY PROGRAM

Mataram, ……..
Dear: Rector of the
University of Mataram
in Mataram

With this I

Name	:..... ..
Student number	: ....
Study program	: ....

Submit a request to Mr / Ms so that you may be allowed to change the study program from the …….. study program to the study program with reason …… …… …… .....
Thus this application letter, and for the wisdom and wisdom of Mr/Mrs I thank you.

Acknowledging	Petitioner,
Parent/Guardian, Signature	Signature
Full name	**Full name**
Know Academic Advisor,	Dean of the Faculty of Food Technology and Agroindustry,
Signature	Signature
Full name	**Full name**
NIP	NIP

copy :
1. Head of Study Program..... Faculty of Food Technology and Agro-industries, University of Mataram
2. Academic Sub-Coordinator of the Faculty of Food Technology and Agro-industries, University of Mataram

Appendix X: SAMPLE OF APPLICATION LETTER FOR SUPPLEMENTARY EXAMINATION

SUPPLEMENTARY EXAMINATION LETTER

Mataram, ……..
Dear: Ms. Dean
c/q Representative Food and Agro industry Dean I Faculty of Technology University of Mataram in Mataram

With this I

Name :..... ..
Student number : ....
Study program : ....

Submitting a request to Mr / Ms so that I can be allowed to carry out a follow-up exam for courses because on time exam eye studyingthe held I unable because ……. (certificate attached).

Thus this application letter, and for your wisdom and wisdom, I thank you.

Petitioner,

Knowing Academic

Signature

Advisor's signature

Full name **Full name**
NIP

Appendix XI: SAMPLE OF APPLICATION LETTER FOR REMEDY EXAMINATION

REMEDY TEST APPLICATION LETTER

Mataram, ……..
Dear: Ms. Dean
c/q Representative Dean I Faculty of Technology Food and Agroindustry, University of Mataram in Mataram

With this I

Name : ....
Student number : ....
Study program : ....

I am a final year student completing thesis, but still have D and E grades totaling more than 15 credits for the following courses.

	Course Name	Score
1.		
2.		
3.		
4.		

Submitting a request to Mr / Ms so that I can be allowed to get a remedial exam for the courses mentioned above so that I can take part in the Undergraduate Judiciary for the period ....

Thus this application letter, and for your wisdom and wisdom, I thank you.

Applicant,

Know Academic

Advisor, Signature

Full name
NIP

Signature

Full name

Advisor I Signature

Full name
NIP

Advisor II Signature

Full name
NIP

Appendix XII: EXAMPLE LETTER APPLICATION COLLECTION DATA /RESEARCH IMPLEMENTATION

FACULTY LETTERHEAD

Mataram, ……..

Number :
Attachment :
Regarding :

Dear :
....
....
in Mataram

With respect, in connection with the writing of Scientific Papers / Thesis of Undergraduate Students (S1) Faculty of Food Technology and Agroindustry, University of Mataram:

Name	:..... ..
Student number	: ....
Study	:..... ..
Study program	: ....

We hope that you can assist these students for carry out activity collection data about,
…… ..... in the office / company that you lead.

Thus for the help and good cooperation, we convey our thanks.

Dean,
Ub. Deputy Dean I

(……..)
NIP.

Copy:

-. Dear. Mr. Dean of the Faculty of Food Technology and Agroindustry, University of Mataram, for your understanding
-. Head of Study Program .....Faculty of Food Technology and Agroindustry, University of Mataram, for your understanding

Appendix XIII : Sample Letter of Choice of Interest in Study Program

---

LETTERHEAD OF STUDY PROGRAM

STATEMENT OF SELECTION OF STUDY/STUDY INTEREST

The undersigned, I:

Name : ....
Student number : ....
Force of the Year : ....
Study program : ....
Address : ....
....

I hereby choose the interest of study/study ,on Study Program : ....., Faculty of Food Technology and Agroindustry, University of Mataram, no coercion and based on my own will, so that I am willing not to change my interest in study/study while participating in the learning process in the study program ....
Thus I made this statement letter, to be used properly.

Mataram, ..., ...

Who make the statement

(Light name)
NRM ..... .

copy :

1. head of the study program , Fetapa, UNRAM
2. Academic Sub-Coordinator, Fatepa UNRAM

Appendix XIV: Lecturer Data of the Faculty of Food Technology and Agroindustry, University of Mataram

7.3.2.1. Permanent Lecturer (PNS)

NO	NIP	NAME	ACADEMIC POSITION
1	19550511 198303 1 003	Prof. Ir. Eko Basuki, M.App.Sc., Ph.D.	Professor
2	19590305 198403 1 012	Ir. Nazaruddin, MP.	Chief Lecturer
3	19601231 198503 1 025	Ir. Ahmad Alamsyah, MP.	Chief Lecturer
4	19601201 198603 2 001	Prof. Ir. Sri Widyastuti, M.App.Sc.,Ph.D.	Professor
5	19641231 199001 2 015	Ir. Zainuri, PGDip., M.App.Sc., Ph.D.	Head Lecturer
6	19680313 199203 1 001	Dr. Ir. Satrijo Saloko, MP.	Chief Lecturer
7	19650309 199303 1 002	Ir. I Wayan Sweca Yasa, M.Sc.	Lector
8	19681115 199403 2 013	Baiq Rien Handayani, SP., M.Sc., Ph.D.	Head Lecturer
9	19681214 199702 2 001	Dr. Eng. Sukmawaty, S.TP., M.Sc.	Lector
10	19671127 200212 1 001	Rahmat Sabani, S.TP., MP.	Lector
11	19721231 200312 1 004	Dr. Ansar, S.Pd., MP, MPd.	Head Lecturer
12	19710101 200501 1 004	Sirajuddin Haji Abdullah, S.TP., MP.	Lector
13	19761005 200501 2 001	Asih Priyati, S.TP., M.Sc.	Expert Assistant
14	19720311 200604 1 002	Dr. Joko Sumarsono, S.TP., MP.	Expert Assistant
15	19790601 200604 1 002	Kurniawan Yuniarto, S.TP., MP.	Expert Assistant
16	19751231 200801 1 023	Murad, SP., MP.	Lector
17	19740524 200812 1 002	Dody Handito, S.TP., MP.	Expert Assistant
18	19820822 200812 2 001	Wiharyani Werdiningsih, SP., M.Sc.	Lector
19	19831115 201212 1 004	Guyup Mahardhian Dwi Putra, S.TP., M.Sc	Expert Assistant
20	19830107 201404 2 001	Yeni Sulastri, S.TP.,M.Sc	Expert Assistant
21	19860415 201504 2 002	Diah Ajeng Setiawati, ST., MES	Expert Assistant
22	19861231 201504 1 001	Surya Abdul Muttalib, STP., M.Sc	Expert Assistant
23	19880510 201504 1 001	Hary Kurniawan, STP., M.Sc	Expert Assistant
24	19850622 201504 2 001	Rucitra Widyasari, STP., M.Sc	Expert Assistant
25	19870506 201504 2 004	Moegiratul Amaro, STP., MP., M.Sc	Expert Assistant
26	19871123 201504 2 001	Rini Nofrida, STP., M.Sc	Expert Assistant
27	19870818 201504 2 003	Siska Cicilia, STP., M.Sc	Expert Assistant
28	19870507 201504 2 003	Mutia Devi Ariyana, S.Si., MP	Expert Assistant
29	19840920 201504 1 001	Agriananta Fahmi Hidayat, ST., MMT	Expert Assistant
30	19900712 201803 2 001	Ida Ayu Widiantari, S.TP.,MP.	Expert Assistant
31	19880511 201803 1 001	Dewa Nyoman Adi Paramartha, S.TP., M.Sc.	Expert Assistant
32	19651231 198902 1 001	Amuddin, STP., M.Sc	Pre Function
33	19911224 202012 1 008	Qabul Dinanta Utama, S.TP.,M.Sc	Pre Function
34	19920517 202012 1 011	Rosyid Ridho, S.TP.,M.Sc	Pre Function
35	19920915 202012 1 015	Reza Kusuma Nurrohman, S.TP.,M.Sc	Pre Function
36	19910606 202012 2 019	Gagassage Nanaluih De Side, ST.,MT	Pre Function
37	19851113 202012 2 008	Novia Rahayu, S.TP.,M.Sc	Pre Function
38	19910918 202012 2 013	Tri Isti Rahayu, S.TP., M.Sc	Pre Function

7.3.2.2. Permanent Lecturer (NON-PNS)

NO	CODE	NAME
1	C6	Wahyudi Zulfikar, ST., M.Eng.
2	C7	Fakhrul Irfan Khalil, S.TP.,M.Sc.
3	C13	Lingga Gita Dwikasari, S.Si.,M.Sc.
4	C14	Hanifah Ayu, SP., M.Sc.
5	C16	Ines Marisya Dwi Anggraini, S.Si., M.Biotech
6	C17	Isnaini Puspitasari, S.TP., MT.
7	C18	Husnita Qomalasari, S.TP.,M.Sc.
8	C20	Syahroni Hidayat, ST., M.Eng
9	C21	Fuad Sauqi Isnaini, S.TP., M.TP., M.Sc
10	C22	Umam Hidayaturrohman, S.Stst.,
11	C23	M.Sc. Vera Fitriya Ersalena, S.Si., M.App.Sc