

**CURRICULUM DOCUMENT
BACHELOR PROGRAM IN NUTRITION**



**UNIVERSITAS AIRLANGGA
FACULTY OF PUBLIC HEALTH
SURABAYA - INDONESIA**

2021

**PROGRAM SPECIFICATION
UNIVERSITAS AIRLANGGA**

1	Awarding body/institution	<i>Universitas Airlangga</i>
2	Name of the program	Bachelor Programme in Nutrition
3	Details of the accreditation by a professional or statutory body	Accredited as Grade “Unggul” by the Indonesian Accreditation Agency for Higher Education in Health (0316/LAM-PTKes/Akr/Sar/IV/2023)
4	Type (e.g. full/part-time, residential/distance learning, dual, intensive program)	<i>Full-time</i>
5	Final degree (title)	Bachelor of Nutrition
6	Expected Learning outcomes of the program	<i>Refer to Chapter 3</i>
7	Standard period of study and credit points gained (according to ECTS)	4 years with 146 credits (233.6 ECTS)
8	Expected intake for the program	Students who have completed high school education and have a high-school diploma. Selection mechanism are available on <u>PPMB Universitas Airlangga (unair.ac.id)</u>
9	Program starting date within the academic year and first time the program has been/will be offered	The study program was established in 2013, based on the Decree of the Director General of Higher Education, Department of Education and Culture of the Republic of Indonesia. The admission is on August every year since 2013 according to document no. 6093/UN3/KR/2013
10	Program structure including courses, credits, learning strategy etc. (curriculum map)	<i>(Refer to Chapter 4 p. 22)</i>
11	Amount and type of fees/charges	Students are charged with Single Enrollment Fee, payable every semester. The fee ranges from IDR 500.000 to IDR 12.000.000 (EUR 30 – EUR 685) based on the economic condition of the students. Further details of the fees are accessible on <u>PPMB Universitas Airlangga (unair.ac.id)</u>
12	Date on which the program specification was written or revised	June 30 th , 2021

Table of Contents

PROGRAM SPECIFICATION	2
Table of Contents.....	3
List of Tables	4
BACKGROUND	5
1.1. Study program profile.....	5
1.2. Basis for Curriculum Design and Development	5
VISION, MISSION, AND OBJECTIVES.....	7
2.1 Vision.....	7
2.2 Missions	7
2.3 Objectives	7
GRADUATE PROFILE AND LEARNING OUTCOME.....	8
3.1 Graduate Profile and Profile Descriptions	8
3.2 Learning Outcomes (LO).....	8
3.3 Learning Outcome Alignment to the Indonesian Qualification Framework (KKNI)	10
3.4 Credit Equivalence.....	10
3.5 Association of Graduate Profile and Learning Outcome (LO).....	11
3.6 Association of Courses and Learning Outcome.....	18
CURRICULUM MAP AND MATRIX	21
4.1. Curriculum Structure.....	21
4.2 Curriculum Content.....	24
LEARNING STRATEGY AND EVALUATION.....	28
5.1. Learning Method.....	28
5.3. Learning Media.....	30
5.4. Learning Assessment	31
5.5 Grading system	34
CURRICULUM MANAGEMENT AND IMPLEMENTATION	36
Contact us:	37

List of Tables

Table 1 Graduate Profiles	8
Table 2 Association of Graduate Profile, LO	11
Table 3 Association of Courses and Learning Outcome.....	18
Table 4 Curriculum Structure of Study Program	211
Table 5 Example of Course Description	244
Table 6 Learning Outside the Program	320
Table 7 Learning Outcomes and Assessment Method.....	322
Table 8 Grading reference.....	344
Table 9 Example of Course Assessment Rubric	344

CHAPTER 1

BACKGROUND

1.1. Study program profile

Nutrition science has long developed worldwide, including in Indonesia. Nutrition academic programs in Indonesia have been started since the 1950s and continue to grow. The nutrition problems are also changing overtimes, which resulting in the need for growing perspective and research. In 2004, the Bachelor of Nutrition program was opened in several universities in Indonesia. The Nutrition Program of Universitas Airlangga was officially established on March 28, 2013, according to the DIKTI Decree No. 6093/UN3/KR/2013. Since 2018, the Nutrition Program has received accreditation A from the Indonesian Accreditation Agency for Higher Education in Health (0316/LAM-PTKES/Akr/Sar/IV/2023). To guarantee the quality standard of Nutrition graduates, the Nutrition programs in Indonesia have formed the Association of Indonesian Nutrition Education Institutions (AIPGI).

In brief, the curriculum of the Nutrition program should account for three main fields of nutrition, particularly clinical nutrition, community nutrition, and food service management. AIPGI serves as the former body that developed standard competence for all Nutrition graduates in Indonesia. However, at Universitas Airlangga (UNAIR), the Nutrition Program focuses on urban nutrition, concentrating on nutritional problems that commonly occur ranged from under to overnutrition. This aspect differs the Nutrition Program of UNAIR from the Nutrition programs of other universities in Indonesia. AIPGI has allowed each institution to choose a specific institutional curriculum for 10-33% of the total curriculum.

Efforts to develop the learning process continue to be made based on the Program's vision, missions, and objectives. Periodically, the curriculum is redesigned and adjusted to the scientific development and the needs of society. The curriculum is also adjusted to the need of the Indonesian Nutritionist Association (PERSAGI) which also play roles as graduate users. In addition, the Nutrition Program of UNAIR also continues to increase the capacity and competence of its students and lecturers through several activities, such as short courses, study exchanges, staff exchange, and guest lectures through inbound and outbound programs.

1.2. Basis for Curriculum Design and Development

The development of the Nutrition Program curriculum was based on the AIPGI decree in 2016 (Reg No. 003/SK/AIPGI/V/2016) and the Indonesian Qualification Framework Curriculum (KKNI). The curriculum development also considered other aspects such as (1) stakeholders' suggestion, (2) professional advice, (3) the development of nutritional studies both domestically and globally, (4) development of information technology, and (5) uniqueness of the Nutrition Program of UNAIR. Along with the increased rank in the Nutrition Program accreditation from B to A in 2018, the previously implemented curriculum was also necessary to improve its quality. Considering the Republic of Indonesia's Constitution Number 20 of 2003, Government Regulation Number 19 of 2005, other laws and

regulations, and the trend in the policies development on higher education that emphasizes the quality and public accountability of higher education institutions and study programs, it is necessary to develop a curriculum that adapts to the developments, policies, and community demands on nutrition programs.

Based on the AIPGI competency standards, Permenristekdikti Number 44 of 2015, and the LAMPTKes accreditation standard, it is necessary to adjust the current curriculum by considering several nutritional competencies that need to be retained. Following its visions and missions, the Nutrition Program needs to adjust its curriculum to become more specific to its specialization, namely urban nutrition. In addition, curriculum development is also planned to make the course composition more efficient and comprehensive to avoid material repetition.

The curriculum is then translated into several subjects that can achieve twelve graduate learning outcomes. Meanwhile, the total credit that students must take is 146. This structure allows students to complete their studies within eight semesters (4 years) with an average of 16-24 credits each semester. Students cannot graduate earlier than four years as the thesis will not be available until semester 8. The switch from 2013 to the 2021 curriculum has posed several adjustments to obtain the desired learning outcomes. Adjustments are also made in material composition, learning methods, Semester Learning Plan, and contracts.

CHAPTER 2

VISION, MISSION, AND OBJECTIVES

2.1 Vision

The vision of the Nutrition Program is to become the leading nutrition program that produces highly competitive human resources in the nutrition field at the national and international levels, following the University's motto, "Excellence with Morality."

2.2 Missions

1. Organizing and developing education, research, and community service that are innovative, entrepreneurial, and based on religious morals.
2. Becoming a reference for nutrition programs in eastern Indonesia.
3. Becoming a center for urban nutrition studies at the national, regional, and international levels.
4. Improving the quality and quantity of human resources in the development of nutritional science and technology.
5. Building partnerships and networks in the nutrition fields at the local, national, regional, and international levels.

2.3 Objectives

The objectives of the Nutrition Program are:

1. Producing graduates who are proactive, innovative, and professional.
2. Conducting research in the nutrition field that supports the development of science and technology.
3. Applying knowledge and technology in the nutrition field in community service activities.
4. Implementing the learning process in an effective, efficient, sustainable, and competitive environment and a conducive academic atmosphere.
5. Providing resources that can keep up with the development of knowledge and technology in the nutrition field.
6. Establishing partnerships with stakeholders who mutually support both at the national and international levels.

CHAPTER 3 GRADUATE PROFILE AND LEARNING OUTCOME

3.1 Graduate Profile and Profile Descriptions

The graduate profile of the Nutrition Program is determined based on several approaches. Stakeholders that will benefit from the graduates are one of the things that define the graduate profile. Besides, there are also testimonials from graduates or alumni, such as necessities and difficulties to apply for the job. Fundamentally, the Program also takes the decision of scientific associations like PERSAGI and annual self-evaluation instruments for the study programs into account through risk management analysis. Based on the analysis, it is formulated that the graduate profiles of the Nutrition Program are decision-makers, managers, care providers, community leaders, communicators, and researchers. In detail, the graduate profiles are described as follows:

Table 3.1 The Graduate Profiles of the Nutrition Program

No.	Graduate Profiles	Description
1	Decision-makers	Being able to carry out a nutritional assessment of individuals, groups, and communities (nutritional assessment skills), analyze nutritional problems systematically, and adapt to resource-limited settings.
2	Managers and care providers	Being able to manage (plan, implement, and evaluate) food and nutrition services and execute interventions for individuals, groups, and communities comprehensively following everyday life.
3	Community leaders and communicators	Being able to perform community development activities, effective communication, and advocacy in dealing with nutritional problems of individuals, groups, and communities.
4	Researchers	Being able to conduct research and follow the development of science and technology in the nutrition field.

3.2 Learning Outcomes (LO)

The graduate profiles defined by the Nutrition Program determine the competencies that each graduate must hold. These competencies are contained in the Graduate Learning Outcomes (GLO) and formulated together with the nutrition programs from other universities in a workshop held by AIPGI based on KKNi. The Learning Outcomes (LO) are the minimum requirement that each candidate of Bachelor of Nutrition needs to obtain. Meanwhile, the learning outcomes of the Nutrition Program are the minimum GLO coupled

with the characteristics that the Faculty of Public Health of UNAIR have defined in the vision and missions.

The Learning Outcomes (LO) of the Nutrition Program of the Faculty of Public Health of UNAIR are:

A. Attitude (A)

1. Demonstrating compliance with religious values, general norms, values upheld by society, and professional ethics concerning the application of knowledge in nutrition (excellence with morality).
2. Demonstrating contribution to the benefit of humankind and society with responsibility in performing academic and professional practices concerning the application of knowledge in the nutrition field as specified by the law and professional ethics.

B. General Skills (GS)

1. Applying logical, critical, systematic, and innovative thinking in developing or implementing science and technology that regards and applies humanistic values in line with their field of expertise.
2. Writing academic reports and rediscovering data to ensure validity and prevent plagiarism in their field of expertise based on scientific research in producing solutions, ideas, designs, or criticisms.
3. Performing the self-evaluation process of the workgroup under their responsibility and managing to study independently.

C. Knowledge (K)

1. Mastering the basic theory of food and nutrition, biomedicine, pathophysiology, humanities, research, public health, and knowledge of nutritionists' services and authorities in the national health system and the national food and nutrition security system.
2. Mastering the theoretical concepts of in-depth dietetics to formulate solutions to nutritional problems of individuals, groups, and communities through nutritional status assessment.
3. Mastering the basics, substances, and skills of science in the nutrition field and identifying, understanding, explaining, and formulating ways to solve nutritional problems.

D. Specific Skills (SS)

1. Explaining and thinking broadly (meta-cognitively) on basic theory, nutrition science and technology, and related sciences, conducting research in the nutrition field, and disseminating the results.
2. Communicating effectively using media and methods according to target characteristics in counseling services, nutrition education, and dietetics to handle

nutritional problems of individuals, groups, and communities based on the results of the nutrition diagnosis.

3. Applying nutritional science and technology then making decisions in solving nutritional problems of individuals, groups, and communities through assessment of nutritional status and related factors.
4. Developing and managing promotive, preventive, curative, and rehabilitative nutrition services, and adapting to resource-limited settings.
5. Working in a team, being responsible for independent or group work results, and having a critical attitude, empathy for clients, and teamwork at the organization's internal and external levels.
6. Designing, managing, and developing business plans for programs, products, or services, including budget development, staffing and facility requirements, equipment, and supplies in food services by applying nutrition and management concepts.

3.3 Learning Outcome Alignment to the Indonesian Qualification Framework (KKNI)

The Program's learning outcomes are developed following the Indonesian Qualification Network (IQF) set up by the Indonesian Government. For an undergraduate program, the learning outcomes must refer to IQF level 6 (a reference to the IQF levels can be accessed in <http://kkni.kemdikbud.go.id/pendidikan/deskripsi>). The alignment of the LO and IQF level 6 is proven by the accreditation rewarded by the Indonesian Accreditation Agency for Higher Education in Health (LAMPTKes) through a thorough assessment of the Program curriculum and teaching-learning process.

3.4 Credit Equivalence

The Bachelor's Program of Nutrition measures student's academic progress using a credit system. Based on the Directorate of Higher Education Number 44 of 2015 on the National Standards for Higher Education, one *credit* is equivalent to 14 meetings of 170 minutes of student activities in a semester. To accomplish this degree, the students must obtain 146 credits, with each course weighted from 2 to 6 credits. One credit equals 170 minutes per week, comprising 50 minutes of in-class activities, 60 minutes of structured academic activities, and 60 minutes of self-study activities.

There are 14 weeks of learning activities in one semester, and one credit amounts to 2,380 minutes (170 minutes x 14 weeks). Since one ECTS equals 1,500 minutes, one credit thus equals 1,5867 ECTS or roughly 1.6. Thus, to complete the Bachelor's Program, students need to have approximately 234 ECTS (from 146 x 1.6).

3.5 Association of Graduate Profile and Learning Outcome (LO)

The Bachelor program in Nutrition produces graduates who have capabilities to become decision makers, managers, care providers, community leaders, communicators, and researchers. During their study in the program, they learn several courses which support increasing those abilities. Basically, the courses relate to their theoretical, methodological, insights, and skills in critical thinking. The association between the graduate profile and courses that lead to achieve learning outcome is presented in Table 2.

Table 2. Association of Graduate Profile and Learning Outcome

Profile	Graduate Learning Outcomes (GLO) *number only	Courses	Credits	ECTS
Decision maker	<ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 1, 2, 3 • Specific skills: 1, 3, 4, 5, 6 	- Religion I and II	4	6.4
		- Pancasila education	2	3.2
		- Civic education	2	3.2
		- Critical thinking logic	2	3.2
		- Food safety	2	3.2
		- Mathematics	2	3.2
		- Communication and Personal Development	2	3.2
		- Organic and an-organic chemistry	3	4.8
		- Introduction to human biology	2	3.2
		- Physiology	4	6.4
		- Introduction to biochemistry	2	3.2
		- Psychology	2	3.2
		- Analysis of nutrients	2	3.2
		- Food service management internship	2	3.2
		- Food & Nutrition Entrepreneurship Practice	2	3.2
		- Nutrition care process	2	3.2
		- Nutritional Sociology	2	3.2
		- Nutrition Education	2	3.2
		- Nutrition Education Practice	1	1.6
		- Dietetic internship	4	6.4
		- Research methodology	2	3.2
		- Fieldwork (<i>Kuliah Kerja Nyata</i>)	3	4.8
		- Advanced Nutrition Science	2	3.2
- Health Ethics and Law	2	3.2		
- Community nutrition internship	4	6.4		
- Thesis proposal	2	3.2		
- Thesis	4	6.4		
- Food Science and Technology Practice	1	1.6		
- Food Microbiology	2	3.2		
- Nutritional Assessment Practice	2	3.2		

		- Pathophysiology of Infectious Diseases and Malnutrition	2	3.2
Manager	<ul style="list-style-type: none"> • Attitude: 1 2 • General Skill: 1 • Knowledge: 1, 2, 3 • Specific skills: 1, 4, 5, 6 	- Religion I and II	4	6.4
		- Pancasila education	2	3.2
		- Civic education	2	3.2
		- Basic Management	2	3.2
		- Communication and Personal Development	2	3.2
		- Culinary practice	1	1.6
		- Food & Nutrition Entrepreneurship Practice	2	3.2
		- Food Science and Technology Practice	1	1.6
		- Food Microbiology Practice	1	1.6
		- Food Formulation Practice	1	1.6
		- Food service and management practice	1	1.6
		- Food service and management internship	2	3.2
		- Nutrition through the Life Cycle	2	3.2
		- Life Cycle Nutrition Practice	1	1.6
		- Nutritional Assessment	2	3.2
		- Nutritional Assessment Practice	2	3.2
		- Food Consumption Survey	2	3.2
		- Food Consumption Survey Practice	1	1.6
		- Nutrition Education Practice	2	3.2
		- Nutritional Computing Practice	1	1.6
		- Dietetics of Infectious Diseases and Malnutrition	2	3.2
		- Dietetics of Infectious Diseases and Malnutrition Practice	2	3.2
		- Dietetics of Degenerative Disease	2	3.2
		- Dietetics of Degenerative Disease Practice	2	3.2
		- Statistics Practice	1	1.6
		- Dietetic internship	4	6.4
		- Nutrition Program Evaluation	2	3.2
- Field work (<i>Kuliah Kerja Nyata</i>)	3	4.8		
- Health Ethics and Law	2	3.2		
- Community nutrition internship	4	6.4		
- Thesis proposal	2	3.2		
- Thesis	4	6.4		
- Research methodology	2	3.2		
- Nutrient Analysis	2	3.2		
- Food Formulation	2	3.2		
- Nutrition Counseling	3	4.8		
Care	<ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 	- Religion I	2	3.2
		- Communication and Personal	2	3.2

Provider	3	Development		
	• Knowledge: 1, 2, 3	- Pancasila education	2	3.2
	• Specific skills: 2, 3, 4, 5	- Civic education	2	3.2
		- Basic Management	2	3.2
		- Food service and management	2	3.2
		- Food service and management practice	1	1.6
		- Food service and management internship	2	3.2
		- Religion II	2	3.2
		- Food & Nutrition Entrepreneurship Practice	2	3.2
		- Dietetic internship	4	6.4
		- Field work (<i>Kuliah Kerja Nyata</i>)	3	4.8
		- Health Ethics and Law	2	3.2
		- Community nutrition internship	4	6.4
		- Thesis proposal	2	3.2
		- Thesis	4	6.4
		- Introduction to human biology	2	3.2
		- Physiology	4	6.4
		- Introduction to biochemistry	2	3.2
		- Principle of Nutrition	2	3.2
		- Psychology	2	3.2
		- Culinary Fundamentals	2	3.2
		- Food Science and Technology	2	3.2
		- Food Microbiology	2	3.2
		- Food Safety	2	3.2
		- Nutrient Analysis	2	3.2
		- Energy & Macronutrients Metabolism	2	3.2
		- Food Security	2	3.2
		- Nutrition through the Life Cycle	2	3.2
		- Food Formulation	2	3.2
		- Food Formulation Practice	1	1.6
		- Nutritional Assessment	2	3.2
		- Pathophysiology of Infectious Diseases and Malnutrition	2	3.2
		- Pathophysiology of Degenerative Diseases	2	3.2
		- Micronutrient Metabolism	2	3.2
	- Pharmacology & Drug-Food Interaction	2	3.2	
	- Nutritional Sociology	2	3.2	
	- Nutrition Education	2	3.2	
	- Nutrition Education Practice	1	1.6	
	- Dietetics of Degenerative Disease	2	3.2	
	- Urban Nutrition	2	3.2	
	- Nutrition Program Evaluation	2	3.2	

		- Nutritional Anthropology	2	3.2
		- Research methodology	2	3.2
		- Elective Course I	2	3.2
		- Elective Course II	2	3.2
		- Advance Nutrition Science	2	3.2
Community Leader	<ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 1, 3 • Specific skills: 1, 4, 5 	- Pancasila education	2	3.2
		- Civic education	2	3.2
		- Bahasa Indonesia	2	3.2
		- Religion I	2	3.2
		- Critical thinking logic	2	3.2
		- Food formulation	2	3.2
		- Food formulation practice	1	1.6
		- Food & Nutrition Entrepreneurship Practice	2	3.2
		- Religion II	2	3.2
		- Nutrition through the life cycle	2	3.2
		- Nutrition through the life cycle practice	1	1.6
		- Nutritional Assessment	2	3.2
		- Nutritional Assessment practice	2	3.2
		- Nutrition Care Process	2	3.2
		- Nutrition Education	2	3.2
		- Nutrition Education Practice	1	1.6
		- Dietetics of Infectious Diseases and Malnutrition	2	3.2
		- Dietetics of Infectious Diseases and Malnutrition Practice	1	1.6
		- Dietetics of Degenerative Disease	2	3.2
		- Dietetics of Degenerative Disease Practice	1	1.6
		- Dietetic internship	4	6.4
		- Nutrition counselling	3	4.8
		- Field work (<i>Kuliah Kerja Nyata</i>)	3	4.8
		- Elective Course I	2	3.2
		- Community nutrition internship	4	6.4
		- Health Ethics and Law	2	3.2
		- Food service management	2	3.2
		- Food service management practice	1	1.6
		- Food Consumption Survey	2	3.2
		- Food Consumption Survey Practice	1	1.6
		- Basic Management	2	3.2
Communicator	<ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 3 • Special Skill: 2, 	- Religion I	2	3.2
		- Communication and Personal Development	2	3.2
		- Health Communications and Basic	2	3.2

	4, 5	Health Services		
		- Pancasila Education	2	3.2
		- Civic education	2	3.2
		- Basic Management	2	3.2
		- Religion II	2	3.2
		- Food & Nutrition Entrepreneurship Practice	2	3.2
		- Nutritional Sociology	2	3.2
		- Dietetic internship	4	6.4
		- Nutrition and Program Evaluation	2	3.2
		- Nutrition Counseling	3	4.8
		- Field work (<i>Kuliah Kerja Nyata</i>)	3	4.8
		- Elective Course I	2	3.2
		- Elective Course II	2	3.2
		- Health Ethics and Law	2	3.2
		- Community nutrition internship	4	6.4
		- Bahasa Indonesia	2	3.2
		- Psychology	2	3.2
		- Food Formulation Practice	1	1.6
		- Food service management practice	1	1.6
		- Food service management internship	2	3.2
		- English	2	3.2
		- Nutrition Education	2	3.2
		- Nutrition Education Practice	1	1.6
		- Dietetics of Infectious Diseases and Malnutrition	2	3.2
		- Dietetics of Infectious Diseases and Malnutrition Practice	1	1.6
		- Dietetics of Degenerative Disease	2	3.2
		- Dietetics of Degenerative Disease Practice	1	1.6
		- Physiology	4	6.4
		- Principle of Nutrition	2	3.2
		- Food security	2	3.2
		- Nutrition through the life cycle	2	3.2
		- Nutrition through the life cycle practice	1	1.6
		- Nutritional assessment	2	3.2
		- Nutritional assessment practice	2	3.2
		- Nutrition care process	2	3.2
		- Sport nutrition	2	3.2
		- Nutrition education	2	3.2
		- Nutrition education practice	1	1.6
		- Urban nutrition	2	3.2
		- Nutritional anthropology	2	3.2

		- Advance nutrition science	2	3.2
Researcher	<ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 2 • Knowledge: 1, 3 • Specific skills: 1, 4 	- Religion I	2	3.2
		- Pancasila education	2	3.2
		- Civic education	2	3.2
		- Critical thinking logic	2	3.2
		- Culinary Fundamentals	2	3.2
		- Culinary Fundamentals practice	1	1.6
		- Food science and technology	2	3.2
		- Food science and technology practice	1	1.6
		- Food microbiology	2	3.2
		- Food microbiology practice	1	1.6
		- Food formulation practice	1	1.6
		- Food service management	2	3.2
		- Food service management practice	1	1.6
		- Food service management internship	2	3.2
		- Religion II	2	3.2
		- Food & Nutrition Entrepreneurship Practice	2	3.2
		- Nutrition through the life cycle practice	1	1.6
		- Nutritional assessment practice	2	3.2
		- Nutrition care process	2	3.2
		- Nutrition education practice	1	1.6
		- Dietetics of Infectious Diseases and Malnutrition	2	3.2
		- Dietetics of Infectious Diseases and Malnutrition Practice	1	1.6
		- Dietetics of Degenerative Disease	2	3.2
		- Dietetics of Degenerative Disease Practice	1	1.6
		- Statistic	2	3.2
		- Statistic Practice	1	1.6
		- Dietetic internship	4	6.4
		- Nutrition and Program Evaluation	2	3.2
		- Research methodology	2	3.2
		- Research methodology practice	1	1.6
		- Nutrition counselling	3	4.8
		- Field work (<i>Kuliah Kerja Nyata</i>)	3	4.8
		- Health Ethics and Law	2	3.2
- Community nutrition internship	4	6.4		
- Thesis proposal	2	3.2		
- Thesis	4	6.4		
- Advance nutrition science	2	3.2		
- Anatomy	2	3.2		
- Introduction to human biology	2	3.2		
- Food service management				

		- Food service management practice	2	3.2
		- Food Consumption Survey	1	1.6
		- Physiology	2	3.2
		- Introduction to biochemistry	4	6.4
		- Psychology	2	3.2
		- Food safety	2	3.2
		- Energy & Macronutrients Metabolism	2	3.2
		- Pathophysiology of Infectious Diseases and Malnutrition	2	3.2
		- Pathophysiology of Degenerative Diseases	2	3.2
		- Micronutrient Metabolism		
		- Pharmacology & Drug-Food Interaction	2	3.2
		- Nutritional Sociology		
		- Nutrition Epidemiology	2	3.2
		- Nutritional Anthropology	2	3.2
		- English	2	3.2
		- Data and References	2	3.2
		- Introduction to Scientific Collaboration	2	3.2

3.6 Association of Courses and Learning Outcome

To produce graduates who are expert in decision making, managing, providing care, leading community, communicating, and researching as shown in point 3.5, this bachelor program designs a set of comprehensive courses. Furthermore, the courses are arranged in such a way which accommodates certain objectives; therefore, they are divided into courses provided in different levels, that is the university level, the faculty level, and the study program level. At the university and faculty levels, the courses consist of compulsory subjects to fulfill both the national ideology and the need to shape certain characteristics of graduates. Meanwhile, at the study program level, the courses consist of compulsory, limited elective, and elective courses. Table 3 further shows the relationship between courses and the construction of learning outcomes.

Table 3. Association of Courses and Learning Outcome

Courses	Attitude		General Skill			Knowledge			Specific Skill					
	A1	A2	GS1	GS2	GS3	K1	K2	K3	SS1	SS2	SS3	SS4	SS5	SS6
Religion 1 (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pancasila education (2 credits)	√	√	√		√	√	√	√	√	√	√	√	√	√
Critical thinking logic (2 credits)	√	√	√		√	√	√	√	√		√	√	√	√
Bahasa Indonesia (2 credits)	√	√	√		√	√		√	√	√		√	√	
Data and references (2 credits)	√	√	√		√	√		√	√			√		
Health ethic and law (2 credits)	√	√	√	√	√	√		√	√	√		√	√	
Communication and Basic Health Services (2 credits)	√	√	√		√			√		√		√	√	
Mathematics (2 credits)	√	√	√		√	√	√	√	√		√	√	√	√
Organic and an-organic chemistry (3 credits)	√	√	√		√	√	√	√	√		√	√	√	√
Logic and Critical Thinking (2 credits)	√	√	√		√	√	√	√	√		√	√	√	√
Introduction to Scientific Collaboration (2 credits)	√	√	√	√		√		√	√			√		
Communication and Personal Development (2 credits)	√	√	√		√	√	√	√	√	√	√	√	√	√
Anatomy (2 credits)	√	√	√	√		√		√	√			√		
Introduction to human biology (2 credits)	√	√	√	√	√	√	√	√	√		√	√	√	√
Basic Management (2 credits)	√	√	√		√	√	√	√	√	√		√	√	√
Physiology (4 credits)	√	√	√		√	√	√	√		√	√	√	√	
Biochemistry (2 credits)	√	√	√		√	√	√	√		√	√	√	√	
Psychology (2 credits)	√	√	√		√	√	√	√	√	√	√	√	√	√
Culinary fundamentals (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Culinary fundamentals	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Curriculum Document of Bachelor Program in Nutrition

Courses	Attitude		General Skill			Knowledge			Specific Skill					
practice (1 credits)														
Food Science and Technology (2 credits)	√	√	√	√		√	√	√	√	√	√	√	√	√
Food Science and Technology Practice (1 credits)	√	√	√	√	√	√	√	√	√		√	√	√	√
Food Microbiology (2 credits)	√	√	√		√	√	√	√	√	√	√	√	√	√
Food Microbiology Practice (1 credits)	√	√	√			√	√	√	√	√		√	√	√
Food Security (2 credits)	√	√	√		√	√	√	√	√	√	√	√	√	
Nutrient Analysis (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Religion II (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutritional Sociology (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	
Nutritional Anthropology (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	
Food Safety (2 credits)	√	√	√	√	√	√		√	√	√	√	√	√	√
Food Formulation (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Food Formulation Practice (1 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Food Service Management (2 credits)	√	√	√	√	√	√		√	√			√	√	√
Food Service Management Practice (1 credits)	√	√	√	√	√	√		√	√			√	√	√
Internship Industry Management Food Service and nutrition (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Energy and Macronutrient Metabolism (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	
Micronutrient Metabolism (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	
Nutrition Through the Life Cycle (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutrition Through the Life Cycle Practice (1 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Food & Nutrition Entrepreneurship Practice (1 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutritional Assessment (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutritional Assessment Practice (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pathophysiology of Infectious Diseases & Malnutrition (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pathophysiology of Degenerative Diseases (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutrition Care Process (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pharmacology and Drug-Food Interaction (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	

Courses	Attitude		General Skill			Knowledge			Specific Skill					
Food Consumption Survey (2 credits)	√	√	√		√	√		√	√	√		√	√	
Food Consumption Survey Practice (1 credits)	√	√	√		√	√		√		√		√	√	
Sport Nutrition (2 credits)	√	√	√		√			√		√		√	√	
Nutrition Education (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutrition Education Practice (1 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutrition Computation (2 credits)	√	√	√			√	√	√	√			√	√	√
Statistics (2 credits)	√	√	√	√		√		√				√		
Statistics Practice (1 credits)	√	√	√	√		√		√				√	√	√
Elective Course I (Food and Nutrition Economics, Nutrition and Productivity, Nutrition and HIV/AIDS, Nutrition in Emergency, Industrial Nutrition) (2 credits)	√	√	√		√	√	√	√	√	√	√	√	√	
Dietetics of Infectious Diseases and Malnutrition (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Dietetics of Infectious Diseases and Malnutrition Practice (1 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Dietetics of Degenerative Disease (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Dietetics of Degenerative Disease Practice (1 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Elective Course II (Vegetarian Nutrition, Consumer Behavior, Geriatric Nutrition, Functional Food) (2 credits)	√	√	√		√	√	√	√			√	√	√	
Field work (Kuliah Kerja Nyata) (3 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutrition Counselling (3 credits)	√	√	√	√	√	√		√				√	√	
Research Methodology (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Urban Nutrition (2 credits)	√	√	√		√	√	√	√		√	√	√	√	
Nutrition and Program Evaluation (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Nutrition Epidemiology (2 credits)	√	√	√	√		√		√				√		
English (2 credits)	√	√	√	√	√	√		√	√	√		√	√	
Advance Nutrition Science (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Thesis Proposal (2 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Community Nutrition Internship (4 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Dietetic Internship (4 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Thesis (4 credits)	√	√	√	√	√	√	√	√	√	√	√	√	√	√

CHAPTER 4

CURRICULUM MAP AND MATRIX

This chapter describes the organization of courses or the map of curriculum, which was designed in a logical and systematic way in regards to the learning outcomes of the graduates. The distribution of courses is arranged in semesters required to accomplish the study.

4.1. Curriculum Structure

The curriculum structure is arranged per semester, which consists of courses provided for students. The courses comprise compulsory and elective of which can be taken unconditionally or conditionally.

Table 4. Curriculum Structure of Bachelor Program in Nutrition

No	Courses		Credit Unit (SKS/ECTS)			
	Code	Name	Lecture	Tutorial	Practice	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Semester 1						
1.	AGB101 AGC101 AGH101 AGI101 AGK101 AGP101	Buddha I* Kong Hu Chu I* Hindu I* Islam I* Catholic I* Christian I*	2/3.2	0	0	2/3.2
2.	NOP103	Pancasila education	2/3.2	0	0	2/3.2
3.	NOP101	Civil education	2/3.2	0	0	2/3.2
4.	BAI101	Bahasa Indonesia	2/3.2	0	0	2/3.2
5.	SIP107	Data and references	2/3.2	0	0	2/3.2
6.	ETM101	Health ethics and law	2/3.2	0	0	2/3.2
7.	KMU103	Communication and Basic Health Services	2/3.2	0	0	2/3.2
8.	KID109	Organic and an-organic chemistry	3/4.8	0	0	3/4.8
9.	MAT108	Mathematics	2/3.2	0	0	2/3.2
Sub-Total			19/30.4	0	0	19/30.4
Total Credit in Semester 1						19/30.4
Semester 2						
10.	PHP103	Logic and Critical Thinking	2/3.2	0	0	2/3.2
11.	MNM107	Introduction to Scientific Collaboration	2/3.2	0	0	2/3.2
12.	MNM106	Communication and Personal Development	2/3.2	0	0	2/3.2
13.	BIA102	Anatomy	2/3.2	0	0	2/3.2
14.	BIF104	Physiology	3/4.8	0	1/1.6	4/6.4
15.	MNU401	Basic Management	2/3.2	0	0	2/3.2
16.	BID107	Introduction to human biology	2/3.2	0	0	2/3.2
17.	BIK102	Introduction to Biochemistry	2/3.2	0	0	2/3.2
18.	PSG105	Psychology	2/3.2	0	0	2/3.2

No	Courses		Credit Unit (SKS/ECTS)			
	Code	Name	Lecture	Tutorial	Practice	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub-Total			19/30.4	0	1/1.6	20/32.0
Total Credit in Semester 2						20/32.0
Semester 3						
19.	NUM101	Principle of Nutrition	2/3.2	0	0	2/3.2
20.	NUM204	Culinary fundamentals	2/3.2	0	0	2/3.2
21.	NUM221	Culinary fundamentals practice	0	0	1/1.6	1/1.6
22.	NUM222	Food Science and Technology	2/3.2	0	0	2/3.2
23.	NUM223	Food Science and Technology Practice	0	0	1/1.6	1/1.6
24.	NUM224	Food Microbiology	2/3.2	0	0	2/3.2
25.	NUM225	Food Microbiology Practice	0	0	1/1.6	1/1.6
26.	NUM216	Food Security	2/3.2	0	0	2/3.2
27.	NUM226	Nutrient Analysis	1/1.6	0	1/1.6	2/3.2
28.	AGB401	Buddha II*	2/3.2	0	0	2/3.2
	AGC401	Kong Hu Chu II*				
	AGH401	Hindu II*				
	AGI401	Islam II*				
	AGK401	Catholic II*				
	AGP401	Christian II*				
29.	SOS236	Nutritional Sociology	2/3.2	0	0	2/3.2
30.	SOA103	Nutritional Anthropology	2/3.2	0	0	2/3.2
SUB JUMLAH			17/27.2	0	4/6.4	21/33.6
Total Credit in Semester 3						21/33.6
Semester 4						
31.	NUM211	Food Safety	2/3.2	0	0	2/3.2
32.	NUM227	Food Formulation	2/3.2	0	0	2/3.2
33.	NUM215	Food Formulation Practice	0	0	1/1.6	1/1.6
34.	NUM302	Food Service Management	2/3.2	0	0	2/3.2
35.	NUM329	Food Service Management Practice	0	0	1/1.6	1/1.6
36.	KLM304	Food Service Management Internship	0	0	2/3.2	2/3.2
37.	NUM103	Energy and Macronutrient Metabolism	2/3.2	0	0	2/3.2
38.	NUM104	Micronutrient Metabolism	2/3.2	0	0	2/3.2
39.	NUM105	Nutrition Through the Life Cycle	2/3.2	0	0	2/3.2
40.	NUM229	Nutrition Through the Life Cycle Practice	0	0	1/1.6	1/1.6
41.	NUM231	Food & Nutrition Entrepreneurship Practice	0	0	2/3.2	2/3.2
42.	NUM406	Nutritional Assessment	2/3.2	0	0	2/3.2
43.	NUM402	Nutritional Assessment Practice	0	0	2/3.2	2/3.2
Sub-Total			14/22.4	0	9/14.4	23/36.8
Total Credit in Semester 4						23/36.8
Semester 5						
Mandatory						
44.	BIF301	Pathophysiology of Infectious	2/3.2	0	0	2/3.2

Curriculum Document of Bachelor Program in Nutrition

No	Courses		Credit Unit (SKS/ECTS)			
	Code	Name	Lecture	Tutorial	Practice	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Diseases & Malnutrition				
45.	BIF302	Pathophysiology of Degenerative Diseases	2/3.2	0	0	2/3.2
46.	NUM324	Nutrition Care Process	2/3.2	0	0	2/3.2
47.	NUF302	Pharmacology and Drug-Food Interaction	2/3.2	0	0	2/3.2
48.	NUM321	Food Consumption Survey	2/3.2	0	0	2/3.2
49.	NUM322	Food Consumption Survey Practice	0	0	1/1.6	1/1.6
50.	NUM314	Sport Nutrition	2/3.2	0	0	2/3.2
51.	NUM203	Nutrition Education	2/3.2	0	0	2/3.2
52.	NUM323	Nutrition Education Practice	0	0	1/1.6	1/1.6
53.	NUM306	Nutrition Computation	0	0	2/3.2	2/3.2
54.	MAS210	Statistics	2/3.2	0	0	2/3.2
55.	MAS115	Statistics Practice	0	0	1/1.6	1/1.6
Elective Course						
56.	Elective Course I		2/3.2	0	0	2/3.2
	NUM209	Food and Nutrition Economics				
	NUM311	Nutrition and Productivity				
	NUM310	Nutrition and HIV/AIDS				
	NUM313	Nutrition in Emergency				
	NUM312	Industrial Nutrition				
Sub-Total			18/28.8	0	5/8.0	23/36.8
Total Credit in Semester 5						23/36.8
Semester 6						
Mandatory						
57.	NUD302	Dietetics of Infectious Diseases and Malnutrition	2/3.2	0	0	2/3.2
58.	NUD303	Dietetics of Infectious Diseases and Malnutrition Practice	0	0	1/1.6	1/1.6
59.	NUD304	Dietetics of Degenerative Disease	2/3.2	0	0	2/3.2
60.	NUD305	Dietetics of Degenerative Disease Practice	0	0	1/1.6	1/1.6
61.	NUM318	Urban Nutrition	2/3.2	0	0	2/3.2
62.	NUM202	Nutrition Counselling	2/3.2	0	1/1.6	4.8
63.	NUM207	Nutrition and Program Evaluation	2/3.2	0	0	2/3.2
64.	NUM210	Nutritional Epidemiology	2/3.2	0	0	2/3.2
65.	PNM491	Research Methodology	2/3.2	0	0	2/3.2
66.	KNM401	Field work (<i>Kuliah Kerja Nyata</i>)	0	0	3/4.8	3/4.8
67.	BAE110	English	2/3.2	0	0	2/3.2
Elective Course						
68.	Elective Course II		2/3.2	0	0	2/3.2
	NUM315	Vegetarian Nutrition				
	PSO403	Consumer Behavior				
	NUM326	Geriatric Nutrition				
	NUM327	Functional Food				

No	Courses		Credit Unit (SKS/ECTS)			
	Code	Name	Lecture	Tutorial	Practice	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub-Total			18/28.8	0	6/9.6	24/38,4
Total Credit in Semester 6						24/38,4
Semester 7						
69.	NUM307	Advance Nutrition Science	2/3.2	0	0	2/3.2
70.	KLM403	Dietetic Internship	0	0	4	4
71.	KLM402	Community Nutrition Internship	0	0	4	4
72.	PNM498	Thesis Proposal	0	0	2/3.2	2/3.2
Sub-Total			2/3.2	0	10/16.0	12/19.2
Total Credit in Semester 7						12/19.2
Semester 8						
73.	PNM499	Thesis	0	0	4/6.4	4/6.4
Sub-Total			0	0	4/6.4	4/6.4
Total Credit in Semester 8						4/6.4
TOTAL CREDITS						146/ 233.6

PS: *) adjust to student's religion

4.2 Curriculum Content

Among the courses, there are four courses which can represent the peculiarity of Nutrition program that focusing in Urban Nutrition. Those are the urban nutrition, food formulation, nutrition education, and industrial nutrition. The content of the four courses displays in Table 5.1 – 5.4.

Table 5.1. Description of Urban Nutrition Course

1	Course	Urban Nutrition
2	Code	NUM318
3	Credit	2 CREDITS / 3.2 ECTS
4	Semester	6 (six)
5	Requirement	Principle of Nutrition (NUM101)
6	Learning Outcomes	Students are expected to be able to provide dietary consultation related to health problems and/or nutritional needs of urban communities.
7	Description	This course explains nutritional problems that occur in urban areas, such as double and triple malnutrition, its causes (genetic, fetal programming, individual variation, lifestyle, behavior, sociocultural impact, food, economic, physical and built environment). In addition, this course also discusses the demographic transition, epidemiological transition, and nutrition transition. This course also discusses the existing dual nutrition problem programs and policies.
8	Soft Skills Attributes	Communication and teamwork
9	Learning Method	Lecture, Discussion, Assignment
10	Learning Media	LCD, computer/notebook, white board
11	Learning Assessment	Mid exam (30%), Assignment (25%), Final exam (40%),

		Softskills (5%)
12	Lecturer	<ol style="list-style-type: none"> 1. Dr. Siti Rahayu Nadhiroh, S.KM., M.Kes 2. Prof. Dr. Sri Sumarmi, S.KM., M.Si 3. Trias Mahmudiono, SKM., MPH (Nutr.), GCAS., Ph.D 4. Lailatul Muniroh, S.KM., M.Kes 5. Septa Indra Puspikawati, S.KM., M.PH 6. Emyr Reisha Isaura, S.Gz., M.PH., Ph.D
13	Compulsory References	Caballero, Benjamin. 2002. <i>The Nutrition Transition: Diet and Disease in the developing world (Food Science and Technology)</i> . Amsterdam: Academic Press.

Table 5.2. Description of Food Formulation Practice Course

1	Course	Food Formulation Practice
2	Code	NUM215
3	Credit	1 CREDITS / 1.6 ECTS
4	Semester	4 (four)
5	Requirement	Food Science and Technology (NUM222) Culinary Fundamentals (NUM204)
6	Learning Outcomes	Students are able to design food formulations for the prevention and/or intervention of nutrition problems
7	Description	This course discusses introduction to the need for new product development; development of food formulas (traditional and modern) for specific age group through food experiment stages. The experimental stages include.
8	Soft Skills Attributes	Creativity and critical thinking
9	Learning Method	Practice and Presentation
10	Learning Media	Laboratory, LCD, computer/notebook, white board
11	Learning Assessment	Mid exam (30%), Assignment (30%), Final exam (30%), Softskills (10%)
12	Lecturer	<ol style="list-style-type: none"> 1. Dr. Annis Catur Adi. Ir., M.Si 2. Dr. Hari Basuki Notobroto, dr., M. Kes 3. Dra. Venny Indrawati., M.Kes 4. Dominikus Raditya Atmaka, S.Gz., M.PH
13	Compulsory References	<ol style="list-style-type: none"> 1. Mc Williams, M. 2001 Food: Experiment Perspective. 4th ed. Prentice Hall 2. Wildman RE. Edt. 2007. Nutraceutical dan Functional Foods. CRC Press. 3. Dept ITP Fateta IPB dan Seafast Center IPB. 2008. Teknik Pengembangan Produk Baru. 4. Muchtadi, D. 1989. Petunjuk Laboratorium Evaluasi Nilai Gizi Pangan. Bogor: PAU IPB 5. Soekarto, ST. 1990. Dasar-Dasar Pengawasan dan Standarisasi Mutu Pangan. Bogor: IPB Press 6. Meilgaard et.al. 1999. Sensory Evaluation Technique.

		3thed. CRS Press. 7. Kuntoro. 2009. Statistik Parametrik. Surabaya: Pustaka Melati 8. Sri Winarti. 2010. Makanan Fungsional. Yogyakarta: Graha Ilmu 9. Klimchuk MR dan Krasowec SA. 2007. Desain Kemasan. Jakarta: Erlangga
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Table 5.3 Description of Nutrition Education Course

1	Course	Nutrition Education
2	Code	NUM203
3	Credit	2 CREDITS / 3.2 ECTS
4	Semester	5 (five)
5	Requirement	Nutrition Through the Life Cycle (NUM105)
6	Learning Outcomes	Students are able to carry out nutrition education using media and methods according to target characteristics.
7	Description	This course explains the process of developing nutrition education based on specific nutrition problem, theory of behavioral change, and specific target group.
8	Soft Skills Attributes	Communication, listening skills, problem solving
9	Learning Method	Lecture, Assignment and Field Work, Presentation and Discussion
10	Learning Media	LCD, computer/notebook, white board
11	Learning Assessment	Mid exam (30%), Assignment (20%), Final exam (40%), Softskills (10%)
12	Lecturer	1. Trias Mahmudiono, S.KM., M.PH (Nutr), GCAS., Ph.D 2. Dr. Siti Rahayu Nadhiroh, SKM., M.Kes
13	Compulsory References	Contento IR. 2007. <i>Nutrition Education. Linking Research, Theory, and Practice</i> . Jones and Bartlett Publishers. Sudbury, Mass.

Table 5.3 Description of Industrial Nutrition Course

1	Course	Industrial Nutrition
2	Code	NUM312
3	Credit	2 CREDITS / 3.2 ECTS
4	Semester	5 (five)
5	Requirement	Principle of Management

6	Learning Outcomes	Students are able to formulate the role of nutrition in the food industry, regulations related to functional food, supplements and fortification, as well as regulations related to food labeling and safety aspects in the food industry in accordance with applicable regulations.
7	Description	This course discusses the role of nutrition in food and beverages industry especially in urban setting, also regulation followed.
8	Soft Skills Attributes	Critical Thinking, Creative
9	Learning Method	Lecture, Tutorial, Presentation and Discussion
10	Learning Media	LCD, computer/notebook, white board
11	Learning Assessment	Mid exam (30%), Assignment (10%), Tutorial (15%), Final exam (40%), Softskills (5%)
12	Lecturer	<ol style="list-style-type: none"> 1. Dr. Annis Catur Adi, Ir., M.Si 2. Dominikus Raditya Atmaka, S.Gz., M.PH 3. Budi Sulistyowati, S.Farm., Apt
13	Compulsory References	<ol style="list-style-type: none"> 1. Fortin ND. 2009. Food Regulation: Law, Science, Policy and Practice. John Wiley & Sons, Inc. New Jersey. 2. Blanchfield JR. 2000. Food Labelling. Woodhead Publishing Limited. Cambridge 3. Mortimore S and Wallace C. 2001. Food Industry Briefing Series: HACCP. Blackwell Science Ltd. Oxford

CHAPTER 5

LEARNING STRATEGY AND EVALUATION

The Nutrition Program adopts a combination of teaching and learning strategies, such as learning methodology, instructional media, and learning evaluation (assessment), which every element is to be further discussed in this chapter.

5.1. Learning Method

The learning methods used are group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based and problem-based learning, or other learning methods that can effectively facilitate the fulfillment of graduate learning outcomes while emphasizing the Student-Centered Learning (SCL) method. To face the fourth industry revolution (4.0) era, the methodology used is thus expected to be a combination of conventional class-based and online learning, such as e-learning, the Massive Open Online Course (MOOC), and so on. At least 10% of the total meetings for each course is carried out online.

The learning methodology applied in the Nutrition Program broadly consists of lectures, tutorials, practices, e-learnings, internships, fieldworks, assignments, and presentations. Each learning method is more elaborated below.

1. Lectures (Mini, Large, and Expert Lectures)

a. Classic Lectures

In this method, lectures tend to go unilaterally. Lecturers deliver lecture materials each week, while students are allowed to ask or discuss the materials given. Learning evaluation is carried out in the form of assignments, Mid-Semester Exams, and Final Exams.

b. Expert Lectures

Expert lectures are performed by the expertise from various sectors, including industry, professionals, academia, and government. The purpose of expert lectures is to enrich students' insights, especially practical aspects, and to provide an overview of the working life.

c. Problem-Based Learning (PBL) Lectures

PBL lectures emphasize student activity in finding learning resources and independence in learning. It begins with developing small groups (4-5 people) and followed by giving a scenario by the lecturer to be discussed and analyzed. At the following meeting, students exchange their ideas about the learning outcomes. Then, each group makes a report and presents their analysis results. The assessment is carried out thoroughly through several aspects, including activeness, discussion, presentation skills, and the material suitability with the learning targets performed by group members and facilitators.

d. Project-Based Learning Lectures

In this method, students are expected to complete a specific project. Each group (3-5 people) works together to complete a planning report for one semester under the

guidance of the lecturers. This learning model is suitable for skills courses related to entrepreneurship.

2. Tutorial (Journal Reading, Presentation, Discussion, and Bed Side Teaching)

This method is implemented through designing assignments to students about a certain object, then they have to discuss it with experts to ensure the validity of their understanding of the object. Assignments are expected to make students responsible, think independently, and be confident of what they have produced.

3. Practice (Demonstrations, Guided and Guarded Practice, and Individual Practice)

Certain subjects need to be supported by laboratory practice. Students learn to use tools or perform certain methods in the laboratory or in the field. The results of experiments in the laboratory should then be reported. At the end, a practical exam is carried out to evaluate the learning process.

4. E-learning Method

E-learning is a method and learning media which can be conducted synchronously or asynchronously to ease the process of learning. E-learning is facilitated through the Airlangga University E-Learning Application (AULA) system. During the COVID-19 pandemic, synchronous learning is also conducted through some video conference applications, such as Zoom, Google Meet, and others.

5. Internship

The internship program in the Nutrition Program is implemented in the community, hospital, and food industry. Internships are part of education outside school, which aim to develop abilities or skills in a person with the principle of learning while working. Lecturers have to supervise the students during the internship period.

6. Fieldwork

Fieldwork (*Kuliah Kerja Nyata* or KKN) is mainly necessary for courses that require practical skills. It also facilitates students to be able to make direct observations of field conditions and support students' understanding of the material presented in class.

7. Assignment and Presentation

Assignments are utilized to develop the student's ability in implementing theories when analyzing a problem. Assignments can either be given individually or in groups in a certain period and should be presented in the class.

5.2. Learning Experience Outside Study Program

The Nutrition Program always supports its students to improve their skills by joining some programs offered outside the study program itself. Students can take elective courses outside the study program, ranged from the same faculty, different faculty, different university, and even programs abroad. Besides, Universitas Airlangga also supports this program through Airlangga Global Engagement (AGE) programs, which most programs are focusing on foreign programs. AGE also provides proper preparation, permission, and in some extend, the faculty also provides students with transportation and accommodation costs through the student outbound scheme. Furthermore, AGE has noted some learning

experiences outside the study program of the Nutrition students, such as to Asia University Taiwan, Kumamoto University, UCSI Malaysia, Malaya University, and Management and Science University Malaysia.

Students can also enroll in courses offered by other study programs that contribute to the completion of their final project or that later benefit their career through education/knowledge enrichment. Moreover, students are allowed to study in non-higher education institutions and can convert it into coursework through the Semester Credit System (credits).

Table 6 Learning Outside the Program

No	Learning Activities	Descriptions
1	Internship	Internship can be converted to some courses that have equivalent graduate learning outcomes and duration of learning for the course credits. Courses which have internship program are dietetic, food service management, and community nutrition.
2	Community thematical services	This is one agenda of MBKM (Independent learning) in which extension of regular community service and can be converted to courses that have equivalent graduate learning outcomes and learning duration for the course credits.
3	Entrepreneurship	Entrepreneurship as one agenda of MBKM (Independent learning) can be converted to courses that have equivalent graduate learning outcomes and learning duration for the course credits. Courses: Food and nutrition entrepreneurship.
4	Research	It can be converted to courses that have equivalent graduate learning outcomes and learning duration for the course credits such as research methodology or final thesis.

5.3. Learning Media

Some of the media utilized in the Nutrition Program include:

1. Microsoft PowerPoint

Microsoft PowerPoint is widely used by the lecturers to deliver materials. Apart from that, nevertheless, lectures are sometimes delivered using video.

2. Electronic Media

Electronic media used are online, audio-visual creation technology, and learning materials with audio-visual benefits. Online video platform like YouTube is also used to deliver materials instead of Microsoft PowerPoint because some courses will be better understood if delivered through audio-visual presentation.

3. Textbooks

Textbooks are required by the lecturer as a reference material in lectures besides needed by students in the learning process and as a reference in writing scientific articles and thesis.

4. Laboratory Equipment

The Nutrition Program is equipped with laboratory equipment to support courses that require special skills, for example: food model, stadiometer, digital wright, cooking equipment, etc. At least, the Nutrition Program has three laboratories to support some courses, including nutritional assessments, nutrient analysis, food consumption surveys, food formulations, practices in nutrition through the life cycle, culinary fundamentals, and dietetics.

To produce competent quality graduates, adequate facilities are essential to the successful learning methods. The learning media used are:

1. LCD
2. Microphone
3. Whiteboard
4. AULA representing the e-learning model
5. Online classroom applications (Zoom, Google Meet, etc.)
6. Online text-messaging (WhatsApp, Line, etc.)
7. Handouts/modules
8. Textbooks
9. Online Media (YouTube, etc.)
10. Field study
11. Online links for e-books and e-journals
12. Adequate internet connection

5.4. Learning Assessment

Evaluation of the Nutrition Program is carried out to measure the achievement of graduate learning outcomes, learning success, and student developments. Evaluation methods can be carried out through various methods, such as a written exam, which consists of Mid-Semester Examinations (UTS), the Final Semester Examinations (UAS), practice examinations, project assignments, and thesis that is written in the Semester Learning Plan (RPS) and lecture agreements.

There are several rules that students must obey in order to take the course examination, including the minimum attendance of 75%. However, the program coordinator and the first vice dean can grant permission to blocked students for the following reasons:

1. Sick, proven by a doctor's prescription and note.
2. Attending a curricular activity off-campus or extracurricular activity with a permission letter from the rector or dean.
3. Having a specific business approved by the dean of faculty head.

Table 7. Learning Outcomes and Assessment Method

Graduate Learning Outcome (GLO)	Courses	Learning Method	Assessment Types
Decision maker <ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 1, 2, 3 • Special Skills: 1, 3, 4, 5, 6 	1. Food & Nutrition Entrepreneurship Practice	1. Project based method	1. Bussiness plan proposal 2. Final presentation 3. Softskills
	2. Nutrition care process	1. Lecture 2. Discussion 3. Case study and presentation 4. Field visit	1. Written examination 2. Case study report 3. Softskills
	3. Nutrition education	1. Lectures 2. Project based learning 3. Presentation 4. Discussion	1. Written examination 2. Project report 3. Presentation (oral examination) 4. Softskills
	4. Dietetic internship	1. Field visit 2. Presentation 3. Discussion	1. Written examination 2. Reference and literature review 3. Internship Report 4. Softskills
Manager <ul style="list-style-type: none"> • Attitude: 1 2 • General Skill: 1 • Knowledge: 1, 2, 3 • Specific skills: 1, 4, 5, 6 	1. Nutrition through the life cycle	1. Lectures 2. Discussion 3. Quiz 4. Assignment	1. Written examination 2. Quiz 3. Assignment report 4. Softskills
	2. Nutrition Program Evaluation	1. Lectures 2. Presentation 3. Discussion 4. Meta-plan case study	1. Written examination 2. Presentation 3. Meta-plan 4. Softskills
	3. Fieldwork (KKN)	1. Fieldwork	1. Presentation 2. Fieldwork Report 3. Softskills
Care Provider <ul style="list-style-type: none"> • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 1, 2, 3 • Specific skills: 2, 	1. Food service management	1. Lectures 2. Discussion 3. Stadium general 4. Assignment	1. Written examination 2. Assignment Report 3. Presentation 4. Softskills
	2. Nutritional	1. Lectures	1. Written

Graduate Learning Outcome (GLO)	Courses	Learning Method	Assessment Types
3, 4, 5	Assessment	2. Discussion 3. Assignment	examination 2. Assignment Report 3. Presentation 4. Softskills
	3. Urban Nutrition	1. Lectures 2. Presentation 3. Discussion	1. Written examination 2. Assignment Report 3. Presentation 4. Softskills
	4. Food Formulation	1. Lectures 2. Discussion 3. Assignment 4. Presentation	1. Written examination 2. Final Report 3. Presentation 4. Softskills
Community Leader • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 1, 3 • Specific skills: 1, 4, 5	1. Community Nutrition Internship	1. Internship 2. Presentation 3. Discussion	1. Written examination 2. Reference and literature review 3. Internship Report 4. Softskills
Communicator • Attitude: 1, 2 • General Skill: 1, 3 • Knowledge: 3 • Special Skill: 2, 4, 5	1. Communication and Personal Development	1. Lectures 2. Discussion 3. Assignment	1. Written examination 2. Assignment Report 3. Presentation 4. Softskills
	2. Health Communications and Basic Health Services	1. Lectures 2. Discussion 3. Assignment	1. Written examination 2. Assignment Report 3. Presentation 4. Softskills
	3. Nutrition Counseling	1. Lectures 2. Discussion 3. Assignment 4. Practice	1. Written examination 2. Assignment Report 3. Presentation 4. Softskills
Researcher • Attitude: 1, 2 • General Skill: 1, 2 • Knowledge: 1, 3 • Specific skills: 1, 4	1. Research methodology	1. Lectures 2. Presentation 3. Discussion	1. Final paper 2. Softskills
	2. Thesis	1. Project based learning	1. Scientific works 2. Thesis
	3. Statistics	1. Lectures 2. Tutorial	1. Written examination 2. Softskills

Graduate Learning Outcome (GLO)	Courses	Learning Method	Assessment Types
		3. Presentation 2. Discussion	

5.5 Grading system

The grading system used by the Nutrition Program is under the Rector's Decree Number 27 of 2018, which aims to identify the result of the student learning within a specific course and in the thesis. In broad, the course lecturer determines a numerical score (ranging from 0 to 100) to show the grading standard of the students' learning process in the managed course.

(1) The lecturer makes a relative grading system based on the calculated score outcome of the students as such:

Table 8. Grading reference

Letter grades	Ranges of Values	Scores
A	86 – 100	4
AB	78 – <86	3.5
B	70 – <78	3
BC	62 – <70	2.5
C	54 – <62	2
D	40 – <54	1
E	<40	0

(2) The final semester grades of each course must be submitted to learning administration system (Universitas Airlangga Cyber Campus/UACC) by the course coordinator (PJMK), at the latest, two weeks after the final semester exam is finished.

Table 9 Example of Course Assessment Rubric

Course Name	Learning Outcome	Assessment Rubric
Urban Nutrition	Students are expected to be able to provide dietary consultation related to health problems and/or nutritional needs of urban communities.	Mid exam (30%), Assignment (25%), Final exam (40%), Softskills (5%)
Food Formulation	Students are able to design food formulations for the prevention and/or intervention of nutrition problems	Mid exam (35%), Assignment (20%), Final exam (40%), Softskills (5%)
Nutrition Education	Students are able to carry out nutrition education using media and methods	Mid exam (30%), Assignment (20%), Final

Course Name	Learning Outcome	Assessment Rubric
	according to target characteristics.	exam (40%), Softskills (10%)
Industrial Nutrition	Students are able to formulate the role of nutrition in the food industry, regulations related to functional food, supplements and fortification, as well as regulations related to food labeling and safety aspects in the food industry in accordance with applicable regulations.	Mid exam (30%), Assignment (10%), Tutorial (15%), Final exam (40%), Softskills (5%)

CHAPTER 6

CURRICULUM MANAGEMENT AND IMPLEMENTATION

The Nutrition Program applies the curriculum through several stages, namely planning, implementation, and evaluation, to make it relevant and can be evaluated for improvements. The applied curriculum is included in a quality assurance system carried out by an institution in the faculty. This chapter briefly describes the curriculum implementation system, the Internal Quality Assurance System (IQAS), in the Nutrition Program.

1. Planning

The preparation for implementing this curriculum refers to the 2020/2021 Academic Guideline for Undergraduate Programs of Universitas Airlangga (PP UA) and is equipped with other supporting tools, including educational guidebooks/ academic regulations, academic calendars, lecture-practice schedules, teaching decrees, course coordinator (PJMK) decrees, lists of lecture facilities/ infrastructure, and learning tools (RPS, lecture contracts). Moreover, the preparation is expected to produce graduates who have the qualifications as written in the Education Guideline (Graduate Learning Outcomes).

2. Implementation

The curriculum implementation process also refers to the Academic Guideline for Undergraduate Programs of Universitas Airlangga, particularly in the methods and learning method chapters. Furthermore, the learning methods that can be adopted in the Nutrition Program include collaborative, cooperative, case/problem/project-based learning, group discussions, simulations, and case studies carried out online or offline. In the implementation, lecturers can choose several above-mentioned methods to be combined and accommodated (lectures, tutorials, seminars, practices, internships, community service, and so on).

To implement the curriculum, the Nutrition Program develops an educational guide for the bachelor program, which includes the student enrollment through the UACC in each semester, internal lecture preparation meeting, and teaching team member planning as well as scheduling. Additionally, the guide is also equipped with evidences of students' attendance, lecturers' attendance, changes in class schedules, check list of lecture facilities/infrastructures, and data on the lecture activity results, which comprises the conformity of lecture material with student scores, work instructions related to fieldwork (KKN), internships, and practices.

3. Evaluation

The evaluation of the curriculum implementation refers to the Academic Guideline for Undergraduate Programs of Universitas Airlangga, supported by several tools such as lectures' evaluation reports and annual evaluation meeting reports. In each semester, students and lecturers have to evaluate the courses they have enrolled. A tracer study involving the alumni is also performed annually to evaluate the curriculum. Lastly, the stakeholders that cooperate in internship programs are to fill an evaluation form to identify the skills of prospective graduates.

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