SYLLABUS:

Date / Revision 23 May 2015 / 02 May 2017 / PP
Faculty Life Sciences (LS)
Study Program Food Technology (FTE)

SUBJECT: Food Nutrition

1 Basic Information

1.01	**Subject Name**	**Food Nutrition**
1.02	**Semester**	4
1.03	**Level**	*1*
1.04	**SKS**	2
1.05	**Mandatory / Curriculum**	*D-02*
1.06	**Subject Code**	FONU
1.07	**Subject Code**	FONU
1.08	**Year**	2017 (7)
1.09	**Quality Control**	Final Test, OFSE, see evaluation
1.10	**Limitations**	Min 12 and Max 32 students in one class
1.11	**Combined with**	None
1.12	**Pre-requisite**	Chemistry Chemistry Laboratory Organic Chemistry Biology Biochemistry
1.13	**Responsible**	Dr. Tutun Nugraha
1.14	**Revision**	15-05-2017/pp

2 Description of Subject

The Food Nutrition is the science that links food to health and disease of the organism especially human. The materials that are presented in this class are closely linked to and the continuation of the materials that are given in Chemistry, Biology, Food Chemistry and Biochemistry Classes. Thus, students will not only understand the cncepts in food processing technology, but they will also learn how to link this concept to the impact of food on human health and well being.

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3 Objectives

- This course will provide the link between the science of food chemistry and food processing technology and how they are going to affect human health. This course will enrich students' knowledge who has been mainly focusing on food science and food processing. Thsi course is also linked to one of th elective course given in food technology which is the human anatomy and physiology.

4 Competency

After taking this course studnets will understand concept regarding:

- what people eat & why
- guidelines for designing a healthy diet
- a nutrition perspective of the human body
- energy balance & weight control,
- nutrition for fitness & sports,
- eating disorders, malnutrition,
- safety of food supply,
- nutrition in the life cycle.

5 Learning Approach / Methodology

- Lectures/ Class contact (time-tabled) supplemented with interactive questions and answers to build the projects;
- Tutorial/Laboratory/Practice Classes: preview of materials, revision and/or reports writing;
- Student Study Effort: homework/assignment; preparation for test/quizzes/ examination.
- Writing assignments/preseantations

6 Evaluation

5.1	**Absence maximum**	25%
5.2	**Participation in Discussion**	10 Points
5.3	**Homework / Classwork**	20 Points
5.4	**Presentation /Simulation**	-
5.5	**Daily Quiz**	10 Points
5.6	**Final Examination**	60 Points
	Total	100 Points

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7 Text Book and Reference

1	**Main Text Book:** • *Wardlaw, G.M., Smith, A. M., Lindeman, A. K. 2012. Contemporary Nutrition: A Functional Approach 2nd edition. McGraw-Hill, New York.*
2	**Supplement Textbooks:** • *Mahan, K. & Stump, S.E. 2004. Krause's Food, Nutrition & Diet Therapy. 11th Edition. USA: Elsevier.* • *Indonesian concents (regulaion, association recoomendation) Persatuan Ahli Gizi Indonesia (PERSAGI, Indonesian Association of Nutritionists). 2009. Tabel Komposisi Pangan Indonesia (TKPI). PT Elex Media Komputindo. Gramedia. Jakarta*

8 Content / Topics of Lecture

Week	Content/ Topics of Lecturing	Text Book	Remark
1	**What You Eat & Why** • Good Health: The Nutrition Connection • Classes & Sources of Nutrients • Nutrient Composition of Diet & Human Body • Energy Sources & Uses • Improving Our Diets • Why Am I so Hungry?	Wardlaw, Smith, Lindeman, Chapter 1	1 x 2 x 50 minutes
2	**Guidelines for Designing a Healthy Diet** • A Food Phylosophy That Works • States of Nutritional Health • How Can Your Nutritional State Be Measured? • Recommendation for Healthy Eating • Specific Nutrient Standards & Recommendations • Scientific Method to Determine Nutrient Needs • Food Labels & Diet Planning	Wardlaw, Smith, Lindeman, Chapter 2	1 x 2 x 50 minutes
3,4	**A Nutrition Perspective of the Human Body** • Human Physiology • The Cell: Structure, Function & Metabolism • Organization of the Body • Cardiovascular & Lymphatic System • Nervous System • Endocrine System • Immune System • Digestive System • Urinary System • Storage Capabilities • Genetics & Nutrition	Wardlaw, Smith, Lindeman, Chapter 3	2 x 2 x 50 minutes

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5	**Energy Balance & Weight Control** • Energy Balance • Determination of Energy Use by The Body • Estimation of Healthy Weight • Energy Imbalance • Why Some People Are Obese • Treatment of Overweight & Obesity • Control of Calorie Intake – 1st Key • Regular Physical Activity – 2nd Key • Behaviour Modification – 3rd Key • Professional Help for Weight Loss • Treatment of Underweight	Wardlaw, Smith, Lindeman, Chapter 7	1 x 2 x 50 minutes
6	**Nutrition for Fitness & Sports** • Relationship between Nutrition & Fitness • Guidelines for Achieving & Maintaining Physical Fitness • Energy Sources for Exercising Muscles • Power Food for Athletes • A Focus of Fluid Needs • Specialized Dietary Advice for Before, During & After Endurance Exercise	Wardlaw, Smith, Lindeman, Chapter 12	1 x 2 x 50 minutes
7	**Midterm Review & Presentation**		1 x 2 x 50 minutes
8	**MIDTERM SEMESTER BREAK**		
9	**Eating Disorders** • From Ordered to Disordered Eating Habits • Aneroxia Nervosa • Bulimia Nervosa • Other Disordered Eating Patterns • Prevention of Eating Disorders	Wardlaw, Smith, Lindeman, Chapter 13	1 x 2 x 50 minutes
10	**Malnutrition Throughout the World** • World Hunger • Malnutrition in the Developing World • The Role of Sustainable Agriculture & Biotechnology in Worldwide Food Availability • SUN Movement	Wardlaw, Smith, Lindeman, Chapter 14	1 x 2 x 50 Minutes
11	**Safety of Food Supply** • Food Safety • Food Preservation • Foodborne Illness • Food Additives • Substances That Occur Naturally in Foods & Can Cause Illness • Environmental Contaminants in Food • Food Production Choices	Wardlaw, Smith, Lindeman, Chapter 15	1 x 2 x 50 Minutes

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12	**Nutrition in the Life Cycle: Pregnancy & Lactation** • Planning for Pregnancy • Prenatal Growth & Development • Success in Pregnancy • Increased Nutrient Needs to Support Pregnancy • Food Plan for Pregnant Women • Physiological Changes of Concern During Pregnancy • Breastfeeding	Wardlaw, Smith, Lindeman, Chapter 16	1 x 2 x 50 minutes
13	**Nutrition in the Life Cycle: from Infancy through Adolescence** • Introduction of Nutrition & Child Health • Infant Growth & Nutrition Needs • Nutrition Concerns of Preschool Children • Nutrition Concerns of School-Age Children • Nutrition Concern of Teenagers	Wardlaw, Smith, Lindeman, Chapter 17	1 x 2 x 50 minutes
14	**Nutrition in the Life Cycle: Adulthood** • Physiological Changes During Adulthood • Nutrient Needs During Adulthood • Factors Related to Food Intake & Nutrient Needs • Nutrition Implications of Alcohol Consumption • Ensuring a Healthful Diet for the Adult Years	Wardlaw, Smith, Lindeman, Chapter 18	1 x 2 x 50 minutes
15	**Wrap up the whole semester course / Review the Semester**		1 x 2 x 50 minutes
16	**Final Examination**		

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