

FOOD QUALITY AND SAFETY

Module designation	<i>Food Quality and Safety</i>
Semester(s) in which the module is taught	1
Person responsible for the module	<ol style="list-style-type: none"> 1. Prof. Dr. apt. Sudjarwo, MS. (Course Coordinator) 2. Dr. apt. Nuzul Wahyuning Diyah, M.Si 3. Prof. Dr. apt. Purwanto. 4. Prof. Dr. apt. Bambang Tri Purwanto, MS.
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory / elective / specialisation</i>
Teaching methods	<i>lecture, discussion, assignment</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload:</i> <i>Contact hours (structured activities.): 90,67 hours</i> <i>Private study including independent learning activities: 90,67 hours</i></p>
Credit points	<i>2 SCU / 6 ECTS</i>
Required and recommended prerequisites for joining the module	NA
Module objectives/intended learning outcomes	<p>Students are:</p> <p>LO1: Able to realize excellence based on religious morals (excellence with morality), able to work together, and show a responsible attitude to work in their field of expertise independently</p> <p>LO2: Able to internalize the spirit of independence, struggle, and entrepreneurship</p> <p>LO4: Able to develop a pharmaceutical professional performance with analytical acumen in solving pharmaceutical problems and managing research in the pharmaceutical field related to national and global systems and policies, both inter and inter-disciplinary approaches.</p> <p>LO5: Able to access and review information through an Information and Communication Technology (ICT) system, decide on a specific subject of study, maintain the feasibility of implementing research designs, conduct research, analyze data, conclude research results comprehensively, and create strategic issues based on the study that reflect the latest updates in the field of pharmaceutical sciences, and communicate them in the media and scientific forums at the national and international level through an interdisciplinary or multidisciplinary approach in the form of a thesis or other equivalent forms.</p> <p>LO12: Able to develop analytical methods to ensure the quality of drugs, cosmetics, foods, and beverages.</p> <p>LO15: Able to plan and organize concepts and procedures for quality assurance and recommendations on pharmaceutical products, which include drugs, cosmetics, foods, and beverages as products and therapeutic goods.</p>

Content	<p>The material discussed in this course includes: the understanding of food quality and safety (laws and regulations regarding food), the concept of GMP in quality control and food safety, the HACCP concept of basic principles and their implementation, in terms of food safety microbiological contamination analysis methods and chemical contamination analysis methods on food. In addition, this course presents and explains:</p> <ul style="list-style-type: none"> ● Definition, scope, consensus on Functional Food in terms of Pharmaceutical Science ● Characteristics and Requirements for Functional Food ● Basic Function and Classification of Functional Food ● Functions and benefits of Functional Foods for health based on the bioactive components they contain, as well as the physicochemical properties of each bioactive compound, including: carbohydrate derivatives, functional lipids, probiotics, amino acids/peptides and other components (isoflavones, polyphenols, carotenoids) ● Food Development based on Traditional Food regarding preparative chromatography.
Exams and assessment formats	<i>Take-home written assignments</i>
Study and examination requirements	<i>The final grade in the module is composed of 25% presentation 65% take-home assignments, 10% in-class participation and soft-skills assessment. Students must have a final grade of 70% or higher to pass</i>

Reading list	<ol style="list-style-type: none"> 1. UU 18 tahun 2012 tentang Pangan 2. PP No. 86 Tahun 2018 tentang Keamanan Pangan. 3. AOAC : Official Methods of Analysis, 21st Edition (2019) 4. Journal : Food Quality and Safety (open access 2017 - 2019) 5. Anonim, Guidelines for developing Good Manufacturing Practices (GMPs), Standard Operating Procedures (SOPs) and Enviromental sampling/Testing Recommendations (ESTRs), Ready –to-EAT (RTE) Product; April 1999. 6. Hewitt, W., 2015. Microbiological Assay for Pharmaceutical Analysis, A Rational Approach. 7. Easter, M.C., 2015. Rapid Microbiological Methods in the Pharmaceutical Industry. 8. Shafiur Rachman, 2015. Handbook of Food Prevertation second edition, Maret 2021 9. Wildman, REC., 2007, Handbook of Nutraceuticals and Functional Foods second Edition, CRC Press, Boca Raton. 10. BPOM RI. 2005. Peraturan Kepala BPOM No. HK 00.0s.52.0685 tentang Ketentuan Pokok Pengawasan Pangan Fungsional. 11. Gunstone, FD., 2012, Lipids for Functional Foods and Nutraceuticals, Woodhead Publishing Ltd, Cambridge. 12. Aluko, RE., 2012, Functional Foods and Nutraceuticals, Springer, New York. 13. Biliaderis, CG., Izydorczyk, MS., 2007. Functional Food Carbohydrates, CRC Press, Boca Raton. 14. Yoshinori Mine, Y., Eunice Li-Chan, E., Jiang, B. 2010, Bioactive Proteins and Peptides as Functional Foods and Nutraceuticals, Blackwell Institute of Food Technologists, Iowa. 15. Liu, KS., 2004, Soybeans as Functional Foods and Ingredients, AOCS Press, Champaign. 16. Rai, RV., Bai, JA., 2015, Beneficial Microbes in Fermented and Functional Foods, Taylor & Francis, New York. 17. Packer, L., Kraemer, K., Uber-Mueller, J., Sies, H., 2005, Carotenoids and Retinoids Molecular Aspect and Health Issues, AOCS Publishing, Champaign.
--------------	---