

## FUNCTIONAL FOODS

|   |   |
|---|---|
| Module designation  | <i>Functional Foods</i>   |
| Semester(s) in which the module is taught                     | 1   |
| Person responsible for the module                             | 1. Dr. Nuzul Wahyuning Diyah, M.Si., Apt ( <b>Course Coordinator</b> )<br>2. Prof. Dr. Purwanto, Apt<br>3. Dr. Bambang Tri Purwanto, M.S., Apt                      |
| Language  | <i>Bahasa Indonesia</i>   |
| Relation to curriculum  | <del><i>Compulsory</i></del> / <del><i>elective</i></del> / <del><i>specialisation</i></del>  |
| Teaching methods  | <i>lecture, discussion, assignment</i>  |
| Workload (incl. contact hours, self-study hours)              | <i>(Estimated) Total workload:<br/>Contact hours (structured activities.): 90,67 hours<br/>Private study including independent learning activities: 90,67 hours</i> |
| Credit points   | <i>2 SCU / 6 ECTS</i>   |
| Required and recommended prerequisites for joining the module | NA  |

|   |   |
|---|---|
| <p>Module objectives/intended learning outcomes</p> | <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>LO6: Able to make decisions in the context of solving problems related to science and technology development based on analytical or experimental studies through collaboration with colleagues, colleagues in institutions and research communities at both national and international levels and utilizing research results for the benefit of the user and other communities.</p> <p>LO7: Able to analyze natural materials to obtain active ingredients and/or pharmaceutical excipients with due observance of nature conservation.</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> |
| <p>Content</p>                                      | <p>The Functional Food course covers topics about:</p> <ol style="list-style-type: none"> <li>a. Definition, scope, and consensus of Functional Food in terms of Pharmaceutical Science</li> <li>b. Functional Food Characteristics and Requirements</li> <li>c. Basic Functions and Classification of Functional Food</li> <li>d. Benefits of Functional Food for health based on the bioactive components, 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)</li> <li>e. Food Development based on Traditional Food</li> </ol>  |
| <p>Exams and assessment formats</p>                 | <p><i>Final exam or take-home written assignments</i></p>   |

|                                    |  |
|------------------------------------|--|
| 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"> <li>1. Wildman, REC., 2007, Handbook of Nutraceuticals and Functional Foods second Edition, CRC Press, Boca Raton.</li> <li>2. BPOM RI. 2005. Peraturan Kepala BPOM No. HK 00.0s.52.0685 tentang Ketentuan Pokok Pengawasan Pangan Fungsional.</li> <li>3. Gunstone, FD., 2012, Lipids for Functional Foods and Nutraceuticals, Woodhead Publishing Ltd, Cambridge.</li> <li>4. Aluko, RE., 2012, Functional Foods and Nutraceuticals, Springer, New York.</li> <li>5. Biliaderis, CG., Izydorczyk, MS., 2007. Functional Food Carbohydrates, CRC Press, Boca Raton.</li> <li>6. 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.</li> <li>7. Liu, KS., 2004, Soybeans as Functional Foods and Ingredients, AOCS Press, Champaign.</li> <li>8. Rai, RV., Bai, JA., 2015, Beneficial Microbes in Fermented and Functional Foods, Taylor &amp; Francis, New York.</li> <li>9. Packer, L., Kraemer, K., Uber-Mueller, J., Sies, H., 2005, Carotenoids and Retinoids Molecular Aspect and Health Issues, AOCS Publishing, Champaign.</li> </ol> |