

MODULE HANDBOOK

Module Name	ICT-Based Learning Chemistry										
Module level	Bachelor										
Abbreviation, if applicable	8420402215										
Sub-heading, if applicable	-										
Course included in the module, if applicable	-										
Semester/term	6 th /Third Year										
Module coordinator(s)	Dr. Sukarmin, M.Pd.										
Lecturer(s)	Kusumawati Dwiningsih, S.Pd., M.Pd.										
Language	Indonesian										
Classification within the curriculum	Elective Course										
Teaching format/class hours per week during the semester:	2 hours-lecture (50 min per hours)										
Workload:	2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79,33 total hours per semester ~ 3.18 ECTS**										
Credit points:	2 CU = 2 x 1.59 = 3.18 ECTS										
Prerequisites course(s):	-										
Targeted learning outcomes:	<ol style="list-style-type: none"> 1. Making use of learning resources and ICT learning chemistry in accordance with the characteristics of the material. 2. Having knowledge about the selection and presentation of ICT-based learning media in chemistry lessons. 3. Making decisions in choosing and presenting ICT-based learning media in chemistry lessons. 4. Having a responsible attitude in selecting and presenting ICT-based learning media in chemistry lessons. 										
Content:	<ol style="list-style-type: none"> 1. Characteristics of SKL Chemistry SMA and SMK. 2. The relationship between student characteristics, ICT-based learning media, and chemical materials. 3. ICT media selection and search. 4. Development of ICT media-based learning tools. 										
Study / exam achievements:	<p>Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Assessment Components</th> <th style="text-align: left;">Percentage of contribution</th> </tr> </thead> <tbody> <tr> <td>Participation</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>Assignment</td> <td style="text-align: center;">30%</td> </tr> <tr> <td>Mid-semester test</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>Final semester test</td> <td style="text-align: center;">30%</td> </tr> </tbody> </table>	Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%	Final semester test	30%
Assessment Components	Percentage of contribution										
Participation	20%										
Assignment	30%										
Mid-semester test	20%										
Final semester test	30%										
Media:	Computer, LCD, Whiteboard										
Learning Methods	Individuals assignment, group assignment, discussion, presentation, and project-based learning										

Literature:	<ol style="list-style-type: none"> 1. Bhowon, Minu Gupta., Laulloo , Sabina Jhaumeer., Li Kam Wah, Henri., Ramasami, Ponnadurai. 2009. Chemistry Education in the ICT Age. Réduit, Mauritius: Springer 2. Heinich, R., Molenda. (1999). <i>Instructional Media and Technologies for Learning</i>. USA: Prentice Hall. 3. Indriana, Dina. 2011. <i>Ragam Alat Bantu Media Pengajaran</i>. Yogyakarta: DIVA Press. 4. Johannes Krugel. 2020. Web-Based Learning in Computer Science: Insights into Progress and Problems of Learners in MOOCs. Singapore: Springer Nature 5. John J. Clement and Mary Anne Rea-Ramirez. 2008. Model Based Learning And Instruction In Science. USA: Springer 6. LEE, Wing On., HUNG, David Wei Loong., TEH, Laik Woon,. 2015. Authentic Problem Solving and Learning in the 21st Century. Singapore: Springer 7. Michail Giannakos. 2020. Non-Formal and Informal Science Learning in the ICT Era. Singapore: Springer Nature 8. Moursund, David., 2005. Introduction to Information and Communication Technology in Education. Amerika Serikat: University of Oregon 9. Sadiman. 2009. <i>Media Pendidikan</i>. Jakarta 10. Shank , Patti. 2015. The Online Learning Idea Book: 95 Proven Ways to Enhance Technology-Based and Blended Learning. Amerika: John Wiley & Sons, Inc.
Notes:	<p>*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.</p> <p>**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019</p>