



**Diponegoro University**  
**Faculty of Science and Mathematics**  
**Undergraduate Program Of Chemistry**

Module designation	<b>Internet of Things (IoT)</b>
Semester(s) in which the module is taught	1
Person responsible for the module	Damar Nurwahyu Bima, S.Si, M.Si Prof. Dr. Dwi Hudyanti, M.Sc Ismiyarto, S.Si., M.Si., Ph.D
Language	Indonesian
Relation to curriculum	Compulsory/ <del>elective</del> / <del>specialisation</del>
Teaching methods	Lecture
Workload (incl. contact hours, self-study hours)	Face to face: 1 x (2 x 50 min); Structure study: 1 x (2 x 60 min); Self study: 1 x (2 x 60 min)
Credit points	2
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	Students can apply the use of the internet of things in society (C3), operate internet of things (IoT) devices both socially and scientifically (P3), and realize (A3) internet of things (IoT) as a solution in various scientific fields according to laws and regulations applicable.

Content	<ol style="list-style-type: none"> <li>1. Definition IoT, IoT in society, and IoT ethics and the power of social media</li> <li>2. Internet Connectivity, E-Learning (Video Conference, Kulon), Device in internet connectivity, Data collection, and Social media as a data and survey platform</li> <li>3. Assignment Presentation</li> <li>4. Software and Application Usage on IoT, Hardware for IoT from a practical and economic aspect, and Business platform from IoT</li> <li>5. An introduction to the basics of big data, Search for diversified market opportunities from various fields of science for IoT products, Video creation as content and media marketing platform for IoT products</li> <li>6. Assignment Presentation</li> <li>7. The general concept of artificial intelligence in the use of IoT in the field of science and social science, and Explain the basics of data science in understanding people's patterns or habits in the use of IoT</li> <li>8. Introduction to computer viruses and antivirus, Introduction to hackers, cybercrime and security concepts in IoT, and ITE Law</li> <li>9. IoT architecture, IoT Organization, and IoT as a supporter of the Information Technology component</li> <li>10. E-Commerce in supporting IoT-based entrepreneurship</li> <li>11. Assignment Presentation</li> <li>12. Various examples of IoT applications (e.g., voice commands to turn off/on IoT devices, google assistant for activity reminders, video conference organizations, etc.)</li> <li>13. IoT Project</li> <li>14. Assignment Presentation</li> </ol>
Exams and assessment formats	Mid-Semester Exam and Final Exam
Study and examination requirements	Participatory Activities -10% Project Results -30% Cognitive/Task Knowledge -5% Quiz -5% Mid-semester -25% Final exams -25%
Reading list	-