# MODULE HANDBOOK
# CHEMISTRY 1

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| Module name | **CHEMISTRY 1** | |
| Module level | Undergradute | |
| Code | SK184101 | |
| Course (if applicable) | Chemistry 1 | |
| Semester | First/Second Semester | |
| Person responsible for the module | Drs. Muhamad Nadjib, MS | |
| Lecturer | ITS Chemistry Lecturer Team | |
| Language | Bahasa Indonesia | |
| Relation to curriculum | Undergradute degree program, **mandatory**, 1st/2nd semester. | |
| Type of teaching, contact hours | Lectures, <60 students | |
| Workload | 1. Lectures : 3 x 50 = 150 minutes per week.<br>2. Exercises and Assignments : 2 x 60 = 120 minutes (2 hours) per week.<br>3. Private learning : 2 x 60 = 120 minutes (2 hours) per week. | |
| Credit points | 3 credit points (sks) | |
| Requirements according to the examination regulations | A student must have attended at least 75% of the lectures to sit in the exams. | |
| Mandatory prerequisites | - | |
| Learning outcomes and their corresponding PLOs | Course Learning Outcome (CLO) after completing this module,<br>CLO 1 Students are able to use the basic principles of chemistry as a basis for studying science related to chemistry.<br>CLO 2 Students can perform basic chemical calculations | PLO 5,8<br><br>PLO 1,5,8 |
| Content | This course studies the basic principles of chemistry which are used as the basis for studying the next subject related to chemistry. The materials presented including atomic theory, chemical bonds, stoichiometry, state of matter and phase changes, acid-base theorem, ionic equilibrium in solution, chemical thermodynamics, chemical kinetics and electrochemistry. | |
| Study and examination | ● In-class exercises<br>● Assignment 1, 2, 3<br>● Mid-term examination | |

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| requirements and forms of examination | ● Final examination |
| Media employed | LCD, whiteboard, websites (myITS Classroom), zoom. |
| Reading list | Main :<br>1. Tim Dosen Departemen Kimia, (2019). “Kimia 1”, edisi kedua, Media Bersaudara, Surabaya.<br>Supporting :<br>1. Oxtoby, D.W., Gillis, H.P. and Campion, A., (2012). ”Principles of Modern Chemistry”, 7th Edition, Brooks/Cole.<br>2. Chang, R. and Goldsby, K., (2012). “Chemistry”, 11th Edition, McGraw-Hill, USA.<br>3. Goldberg, D. E., (2007). “Fundamental of Chemistry”, 4th Edition, McGraw-Hill Companies |