

Module Handbook

Module Name	Electronic Instrumentation and Chemical Sensor				
Module Level	Higher Diploma				
Code, if applicable	VKT536				
The subtitle, if applicable	-				
Courses, if applicable	-				
Semester(s) in which the module is taught	5 th semester				
Person responsible for the module	Prof. Riyanto, Ph.D				
Lecturer	Prof. Riyanto, Ph.D Ganjar Fadillah, M.Si.				
Language	Bahasa Indonesia				
Relation to curriculum	Compulsory				
Type of teaching, contact hours	Lecture (face to face teaching, structured activities, independent study and exam): 5.7 hours x 16 weeks per semester				
Workload	Total Workload	91 hours; 2 CU			
		Face to face teaching	Structured activities	Independent study	Exam
	Hours	24	28	28	11
Credit Points	2 CU/3.4 ECTS				
Requirements according to the examination regulations	75% minimum requirements of attendance				
Recommended prerequisites	Electrochemical Analysis				
Module objectives/intended learning outcomes	<p>PLO 3: Able to express basic concepts of chemistry, chemical analysis, operation and maintenance of chemical instruments that can be applied in their work</p> <p>Subject LO:</p> <ol style="list-style-type: none"> Able to describe standard requirements Able to apply standard system 				
Content	<ol style="list-style-type: none"> Analog and digital chemical instrumentation Electronic components in chemical instrumentation Signal analyzers Sensor classification Sensor selectivity Chemical testing sensor 				
Study and examination requirements and forms of examination	Midterm exams (30%), presentation and discussion (40%), and final exams (30%)				
Media employed	Google classroom, youtube, zoom meeting, google form, google doc				

Reading list

1. Campanella, L., 1990. Principles of Chemical Sensors.: J. Janata. Plenum Press, New York, London
2. Edmonds, T.E., 2013. Chemical sensors. Springer Science & Business Media.
3. (Electrical Engineering Handbook) John G. Webster-Measurement, Instrumentation, and Sensors Handbook-CRC Press (1998)
4. Yamauchi, S. ed., 2012. Chemical sensor technology (Vol. 4). Elsevier.
5. Kuswandi, B., 2010. Sensor kimia, teori, praktek dan aplikasi.
6. Gunawan, B., 2010. Teknologi Sensor Kimia. MAWAS, Edition June, pp.1-9.
7. Harvey, D., 2000. Modern analytical chemistry (Vol. 381). New York: McGraw-Hill.