UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY
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Module name:	Nanochemistry Technology
Module level, if applicable:	Undergraduate
Code:	KMA6225
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	6th
Module coordinator:	Prof. Dr. Hari Sutrisno
Lecturer(s):	1. Prof. Dr. Hari Sutrisno 2. Dr. Dyah Purwaningsih
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	100 minutes lectures, 120 structured activities and 120 individual study per week
Workload:	Total workload is 90,67 hours per semester which consists of 100 minutes lectures, 120 structured activities and 120 individual study per week for 16 weeks
Credit points:	2 SKS (3 ECTS)
Prerequisites course(s):	-
Course Outcomes	After taking this course, the students have ability to: CO1. Analyze theories and problem solving strategies in Nanochemical Technology as supporters of lifelong learning CO2. Demonstrate the ability to analyze chemical concepts and mindsets and apply them CO3. Communicate ideas in writing with good grammar related to innovations in Nanochemical Technology
Content:	This course discusses Nano Technology, Nano Science and Nanotechnology in Indonesia. The lecture also discussed Nanotools, Nanofabrication, Characterization of Nano Structures, Nano Structure Materials, Nanoparticles and Nanocapsules. Through Nanochemistry Technology courses, students are expected to understand the concepts in Nanotechnology and be able to apply these concepts in a study.
Study / exam achievements:	The final mark will be weight as follow:

No	CO	Assessment Object	Assessment Technique	Weight
1	CO1, CO2,	Individual assignment	Assignment	15%

		CO3	about analysis nanochemistry technology journals		
	2		Structural assignment	Assignment	10%
	3		Presentation skill	Observation	20%
	4		Mid term exam	Written test	25%
	5		Final exam	Written test	30%
				Total	100%
Forms of media:	Board, LCD Projector, handouts, PPT slides, and stationaries				
Reference:	A. Rao, C.N.R. and Govindaraj, A.; Nanotubes and Nanowires; RSC Publishing (2011) B. Rao, C.N.R., Muller, A., Cheetham, A.K.; The Chemistry of Nanomaterials; WILEY-VCH Verlag GmBH & Co.KGaA (2014) C. Rao, C.N.R., Thomas. P.J., Kulkarni, G.U.; Nanocrystal: Synthesis, Properties and Applications; Springer (2012) D. Nalwa, H.S.; Nanostructured Materials and Nanotechnology; Academic Press (2012) E. International Journals of Nanotechnology (in the past five years)				

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1					✓					
CO2							✓			
CO3									✓	