
 Universitas Airlangga	SEMESTER LEARNING PLAN		Prepared by	Examined by	Approved by	Document Registration Number
	SLP		(Person in Charge)	(Head of Bachelor Program / Head of Department)	Vice Dean I	01/S1Kesmas/RPS/2019
			Revision - Date	January 1st, 2019	Dr. Diah Indriani, S.Si., M.Si	
Faculty of Public Health	Valid on Semester (odd/even) / Academic Year	Odd Semester 2019/2020	(sign)	(sign)	(sign)	

- Evaluation of this document is needed every year

A. DETAILS OF COURSE

1. Course Name	Environmental Health Risk Assessment
2. Course Code	MNS404
3. Credits (SKS)	3 (three) SKS
4. Semester / Term	VII (seventh)
5. Study Program	Bachelor of Public Health
6. Student Learning Achievement	<ol style="list-style-type: none"> 1. Able to conduct a situation analysis and analysis (analytic / assessment skills) 2. Able to develop policies and Program Planning (policy development / program planing skills) 3. Able to communicate effectively (communication skills) 4. Able to understand local culture (cultural competency skills) 5. Able to carry out Community Empowerment 6. Have mastery of public health science (Public health science skills) 7. Able to plan financially and be skilled in the field of management (Financial Planning and Management Skills) 8. Has leadership abilities and systems thinking (leadership and system thinking skills) 9. Able to apply the principles of public health in health management in the tropics
7. Course Learning Achievement	
8. Course Description	<ol style="list-style-type: none"> 1. Environmental Risk Assessment / Ecological Risk Assessment 2. Human Health Risk Assessment 3. Environmental Health Risk Assessment / ARKL / Environmental Health Risk Assessment 4. Human Health Risk Analysis / ADKL / Environmental Health Risk Analysis 5. Review of Environmental Health and Public Health in AMDAL 6. ISO 9000 and ISO 14000
9. Course Prerequisites (if any)	
10. Instructor	


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11. Teaching Assistants	
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B. TEACHING PROGRAM

Week	Skills expected at the end of each learning phase (Sub-Course Achievement) (C, A, P)	Study Materials	Teaching Methods	Additional Materials for Learning	Meeting Time	Course Objectives	Criteria and Indicator of Evaluation / Measurable Learning Outcome (hard and soft skills)	Mark / Grade / Percentage (%)	Reference Number Ref. (number)
1	2	3	4	5	6	7	8	9	10
1	The lecture contract and the concept of environmental health risk assessment	1. Lecture contract 2. The basic concept of environmental health risk assessment 3. Exposure, danger and risk 4. Entry agents and toxicics	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
2	Environmental health aspects and public health in the AMDAL	1. AMDAL 2. UKL 3. UPL 4. Environmental audit	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		

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Week	Skills expected at the end of each learning phase (Sub-Course Achievement) (C, A, P)	Study Materials	Teaching Methods	Additional Materials for Learning	Meeting Time	Course Objectives	Criteria and Indicator of Evaluation / Measurable Learning Outcome (hard and soft skills)	Mark / Grade / Percent age (%)	Reference Number Ref. (number)
1	2	3	4	5	6	7	8	9	10
3	ISO 9000 and ISO 14000	ISO 9000 ISO 14000	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
4	Ecological Risk Assessment (ERA)	1. Principles and benefits 2. The planning stage 3. ERA mechanism	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
5	Human Health Risk Assessment (HHRA)	1. Basic principles 2. Identification of variability in humans 3. Health impact mechanism	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
6	(e-learning) ERA and HHRA	1. ERA materials and cases 2. HHRA materials and cases	Lectures Discussions Assignment	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		

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1	2	3	4	5	6	7	8	9	10
7	ERA guest lecture	Description of the preparation and mechanism of ERA in the field	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
8	Environmental Health Risk Assessment (EHRA) (1)	1. Basic principles of EHRA 2. Stages of EHRA 3. Measurement of exposure	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
9	Environmental Health Risk Assessment (2) and Environmental Health Risk Analysis	1. Hazards identification 2. Analysis of exposure 3. Analysis of the response dose 4. Characterization of risk 5. Risk management 6. Risk communication	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		

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1	2	3	4	5	6	7	8	9	10
10	Biomonitoring	1. Basic biological monitoring 2. Benefits and uses of biological monitoring 3. Measurement in biological monitoring	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
11	(e-learning) EHRA	Material and EHRA cases	Lectures Discussions Assignment	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
12	EHRA guest lecture	Description of the preparation and mechanism of EHRA in the field	Lectures Discussions	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
13.	Case studies and biomonitoring presentations	International journal article on biological monitoring of a	Presentation Question and answer	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		


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1	2	3	4	5	6	7	8	9	10
		disease or health disorder							
14.	Case studies and EHRA presentations (Hg, Cd, Cd, benzene)	International journal articles about chemical agents in the environment carried out by environmental health risk studies	Presentation Question and answer	LCD and Whiteboard	3x50 minutes		Complex thinking Cooperate		
FINAL TERM EXAMINATION									

C. REQUIRED TEXTS / REFERENCES / ESSENTIAL READINGS

1. Rahman, A. 2008. Analisis Risiko Kesehatan Lingkungan. Jakarta: IUP.
2. Robson, M.G. and Toscano, W.A. Risk Assessment for Environmental Health. USA: HB Printing
3. Enhealth. 2004. Environmental Health Risk Assessment. Commonwealth of Australia

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4. EPA. 1992. Guidelines for Exposure Assessment. Washington DC: USEPA
 5. IPCS. WHO Human Health Risk Assessment. Canada : WHO
 6. Achmadi U.F. 2012. Manajemen Berbasis Wilayah. Jakarta: RajaGrafindo
 7. Sucipto C.D. 2011. Aspek Kesehatan Masyarakat dalam AMDAL. Gosyen Publishing.
 8. Suratmo, F.G. 1995. Analisis Mengenai Dampak Lingkungan. Yogyakarta : Gadjah Mada University Press.
 9. Hoyle, D. 2001. ISO 9000 Quality System Handbook. 4th edition. England : Butterworth-Heinemann
 10. Morris, AS. 2004. ISO 14000 Environmental Management Standard. England : John Wiley and Sons.