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Universitas Negeri Surabaya Faculty of Social Sciences and Law Geography Education Undergraduate Study Program

SEMESTER LEARNING PLAN

				3	EIVIES I		_EA	KIN	IIVG	PL	AIN				
Courses				CODE		Course	e Fami	ily	Cred	it Wei	ght	SEMES	STER	Co	mpilation te
Geograp	hy of	f Natural Resour	ces	872020205	60	Study I			T=2	P=0	ECTS=3.18		4	Ju	y 17, 2024
AUTHOR	RIZAT	TON		SP Develo	per	Electiv	e Cour		se Clu	ster Co	oordinator	Study	Progra	n Coordi	nator
					rasetyo, M.S. adirubun, M.P		nmi	Dr, Nugroho Hari Purnomo, S.P., M.Si.			Dr. Nuç	groho H	ari Purnor	no, S.P., M.Si.	
Learning model	j	Project Based L	_earni	l ing											
Program		PLO study pro	gram	that is cha	arged to the	course									
Learning Outcom (PLO)		PLO-7		to make app oach	oropriate decis	sions to r	esolve	region	al prob	lems ir	n a spatial co	ntext ba	sed on	an integra	ted geographi
		Program Object	ctives	s (PO)											
		PO - 1	Synt	hesizing the	concept of nat	tural reso	ources	from a	geogra	aphic p	erspective				
		PLO-PO Matrix	(
				P.O	PLO	-7									
				PO-1											
		PO Matrix at th	ne en	d of each le	earning stag	e (Sub-	PO)								
					1										
				P.O						W	/eek				
					1 2	3 4	5	6	7	8 9	9 10 1	12	13	14	15 16
			Р	O-1											
Short Course Descript	tion	This course disc resource use on													
Reference	ces	Main :													
		1. a. Tom Tietenberg, 2000.Environmental and Natural Resource Economics. b. Sixth Edition, Addison-Wesley, International Reading. Massachusetts, USA. (TT). c. Erhun Kula, 1992. Economics of Natural Resources and the Environment. d. Fir Edition, Chapman & Hall, London- New York-Tok-yo-Melboume and Madras. (EK). e. Charles W. Howe, 1979. Natural Resource Economics: -Issues, Analysis and Policy. John Wiley & Son, USA. (CH). f. Alan Randall, 1987. Resource Economics: A Economic Approach to Natural Resource and Environmental Policy. John Wiley & Son, New York. (AR). g. Nick Hanley & Clin L. Spash, 1998. Cost Benefit Analysis and the Environment. Edgar Elgar, Cheltenham. UK (HS). h. A. Myrick Freeman 113 1979. The Benefit of Environmental Improvement Theory and Practice. John Hopkins University Press, Baltij nore. (MF). i. Pa Barrow, 1980. The Economic Theory of Pollution Control. The MIT Press, Cambridge, Massachusetts. (PB).							nment. d. Firsi utural Resource Economics: An Hanley & Clive Freeman 111,						
		Supporters:													
Support lecturer		Prof. Dr. Ketut P Dr. Nugroho Har Dr. Aida Kurniaw Dr. Fahmi Fahru	i Purn <i>ı</i> ati, S.	iomo, S.P., N .Pd., M.Si.											
Week-	eac			Eva	lluation			Help Learning, Learning methods, Student Assignments, [Estimated time]				ning ma	aterials ces]	Assessment Weight (%)	
	(Su	b-PO)	lr	ndicator	Criteria &	Form		ine (ine)	0	nline (online)				

1	Able to understand the meaning of geography of natural resources	Explain the meaning of natural resource geography	Criteria: 1.A; 85 -100 2.B; 70 - 84 3.C: 56- 69 4.D: 44- 55 5.E > 44 Form of Assessment : Participatory Activities	Lectures, discussions and presentation of 2 X 50 group papers	Material: Definition of environmental geography and natural resources References: a. Tom Tietenberg, 2000. Environmental and Natural Resource Economics. b. Sixth Edition, Addison-Wesley, International Reading. Massachusetts, USA. (TT). c. Erhun Kula,	5%
					the Environment. d. First Edition, Chapman & Hall, London-New York-Tok-yo-Melbourne and Madras. (OAK). e. Charles W. Howe, 1979. Natural Resource Economics: -Issues, Analysis and Policy. John Wiley & Son, USA. (CH). f. Alan Randall, 1987. Resource Economics: An Economic Approach to Natural Resources and Environmental Policy. John Wiley & Son, New York. (AR). g. Nick Hanley & Clive L. Spash, 1998. Cost Benefit Analysis and the Environment. Edgar Elgar, Cheltenham. UK (HS). h. A. Myrick Freeman 111, 1979. The Benefits of Environmental	
					Improvement Theory and Practice. John Hopkins University Press, Baltij nore. (MF). i. Paul Barrow, 1980. The Economic Theory of Pollution Control. The MIT Press, Cambridge, Massachusetts. (PB).	

2	Students are able to understand water resources	- Explain the process of water travel	Criteria: 1.A; 85 -100 2.B: 70 - 84	Lectures, discussions and	Material: Discuss the hydrological cycle, utilization of water	5%
2	to understand	process of		discussions	hydrological cycle,	5%
					The MIT Press, Cambridge, Massachusetts. (PB).	

3	Students are able	 Explain the 	On the second of	1.1	Made wiel Die street de s	
1			Criteria:	Lectures,	Material: Discuss the	5%
	to understand	meaning of 3T	1.A; 85 -100	discussions	meaning of 3T and	ĺ
	surface water	- Explain the	2.B; 70 - 84	and	problems in	
	problems	problems in	3.C: 56- 69	presentation	watersheds, and look	
		the watershed	4.D: 44- 55	of	for examples of cases	
				2 X 50	of problems in	
			5.E > 44	group	watersheds.	
				papers	Library: a. Tom	
			Form of	papers	Tietenberg, 2000.	
			Assessment :		Environmental and	
			Practice /			
			Performance		Natural Resource	
					Economics. b. Sixth	
					Edition,	
					Addison-Wesley,	
					International Reading.	
					Massachusetts, USA.	
[(TT). c. Erhun Kula,	ĺ
					1992. Economics of	1
]					Natural Resources and	ĺ
					the Environment. d.	ĺ
1					First Edition, Chapman	ĺ
					& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues,	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	ĺ
[ĺ
					Benefit Analysis and	ĺ
					the Environment. Edgar	ĺ
					Elgar, Cheltenham. UK	ĺ
[(HS). h. A. Myrick	ĺ
[Freeman 111, 1979.	ĺ
[The Benefits of	ĺ
[Environmental	ĺ
1					Improvement Theory	ĺ
					and Practice. John	ĺ
[Hopkins University	ĺ
[Press, Baltij nore. (MF).	ĺ
					i. Paul Barrow, 1980.	ĺ
					The Economic Theory	ĺ
						ĺ
					of Pollution Control.	ĺ
					The MIT Press,	ĺ
1					Cambridge,	ĺ
1				ı	Massachusetts. (PB).	

4	Students are able	-Explain the	Criteria:	Lectures,	Material: Discuss and	5%
	to understand	causes and	1.A; 85 -100	discussions	look for examples of	3 ,5
	groundwater	consequences	2.B; 70 - 84	and	groundwater problems	
	issues	of	3.C: 56- 69	presentation	. Reference: a. Tom	
		groundwater problems, land	4.D: 44- 55	of	Tietenberg, 2000.	
		conversion	5.E > 44	2 X 50	Environmental and	
		CONVENSION	J.E > 44	group	Natural Resource	
			Form of	papers	Economics. b. Sixth	
			Assessment :	parport.	Edition,	
			Project Results		Addison-Wesley,	
			Assessment /		International Reading.	
			Product		Massachusetts, USA.	
			Assessment		(TT). c. Erhun Kula,	
			Assessment		1992. Economics of	
					Natural Resources and	
					the Environment. d.	
					First Edition, Chapman	
					& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues,	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR). g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
					Benefit Analysis and	
					the Environment. Edgar	
					Elgar, Cheltenham. UK	
					(HS). h. A. Myrick	
					Freeman 111, 1979.	
					The Benefits of	
					Environmental	
					Improvement Theory	
					and Practice. John	
					Hopkins University	
					Press, Baltij nore. (MF).	
					i. Paul Barrow, 1980.	
					The Economic Theory	
					of Pollution Control.	
					The MIT Press,	
					Cambridge,	
					Massachusetts. (PB).	

5	Students are able	-Explain the	Criteria:	Lectures,	Material: Discuss and	5%
	to understand	causes and	1.A; 85 -100	discussions	look for examples of	370
	groundwater	consequences	2.B; 70 - 84	and	groundwater problems	
	issues	of .		presentation	. Reference: a. Tom	
		groundwater	3.C: 56- 69	of	Tietenberg, 2000.	
		problems, land conversion	4.D: 44- 55	2 X 50	Environmental and	
		CONVENSION	5.E > 44	group	Natural Resource	
				papers	Economics, b. Sixth	
			Form of	papers	Edition,	
			Assessment :		Addison-Wesley,	
			Project Results		International Reading.	
			Assessment /		Massachusetts, USA.	
			Product Assessment		(TT). c. Erhun Kula,	
			Assessment		1992. Economics of	
					Natural Resources and	
					the Environment. d.	
					First Edition, Chapman	
					& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues,	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
					Benefit Analysis and	
					the Environment. Edgar	
					Elgar, Cheltenham. UK	
					(HS). h. A. Myrick Freeman 111, 1979.	
					The Benefits of	
					Environmental	
					Improvement Theory	
					and Practice. John	
					Hopkins University	
					Press, Baltij nore. (MF).	
					i. Paul Barrow, 1980.	
					The Economic Theory	
					of Pollution Control.	
					The MIT Press,	
					Cambridge,	
					Massachusetts. (PB).	

6	Students are able	-Explain	Criteria:	Lectures,		Material: Discuss	5%
	to understand	aspects of	1.A: 85 -100	discussions		aspects of water	3%0
	aspects of water	water		and		resources management	
	resources	resources	2.B; 70 - 84	presentation		References: a. Tom	
	management	management	3.C: 56- 69	of		Tietenberg, 2000.	
			4. D: 44- 55	2 X 50		Environmental and	
			5.E > 44			Natural Resource	
				group		Economics. b. Sixth	
			Form of	papers			
			Assessment :			Edition, Addison-Wesley,	
			Project Results				
			Assessment /			International Reading.	
			Product			Massachusetts, USA.	
			Assessment			(TT). c. Erhun Kula,	
						1992. Economics of	
						Natural Resources and	
						the Environment. d.	
						First Edition, Chapman	
						& Hall, London-New	
						York-Tok-yo-Melbourne	
						and Madras. (OAK). e.	
						Charles W. Howe,	
						1979. Natural Resource	
						Economics: -Issues,	
						Analysis and Policy.	
						John Wiley & Son,	
						USA. (CH). f. Alan	
						Randall, 1987.	
						Resource Economics:	
						An Economic Approach	
						to Natural Resources	
						and Environmental	
						Policy. John Wiley &	
						Son, New York. (AR).	
						g. Nick Hanley & Clive	
						L. Spash, 1998. Cost	
						Benefit Analysis and	
						the Environment. Edgar	
						Elgar, Cheltenham. UK	
						(HS). h. A. Myrick	
						Freeman 111, 1979.	
						The Benefits of	
						Environmental	
						Improvement Theory	
						and Practice. John	
						Hopkins University	
						Press, Baltij nore. (MF).	
						i. Paul Barrow, 1980.	
						The Economic Theory	
						of Pollution Control.	
						The MIT Press,	
						Cambridge,	
						Massachusetts. (PB).	
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7	Students are able	-Explain	Criteria:	Lectures,		Material: Discuss	10%
'	to understand	aspects of	1.A: 85 -100	discussions		aspects of water	10%
	aspects of water	water		and		resources management	
	resources	resources	2.B; 70 - 84	presentation		References: a. Tom	
	management	management	3.C: 56- 69	of		Tietenberg, 2000.	
			4.D: 44- 55	2 X 50		Environmental and	
			5.E > 44			Natural Resource	
				group		Economics. b. Sixth	
			Form of	papers			
			Assessment :			Edition, Addison-Wesley,	
			Project Results				
			Assessment /			International Reading.	
			Product			Massachusetts, USA.	
			Assessment			(TT). c. Erhun Kula,	
						1992. Economics of	
						Natural Resources and	
						the Environment. d.	
						First Edition, Chapman	
						& Hall, London-New	
						York-Tok-yo-Melbourne	
						and Madras. (OAK). e.	
						Charles W. Howe,	
						1979. Natural Resource	
						Economics: -Issues,	
						Analysis and Policy.	
						John Wiley & Son,	
						USA. (CH). f. Alan	
						Randall, 1987.	
						Resource Economics:	
						An Economic Approach	
						to Natural Resources	
						and Environmental	
						Policy. John Wiley &	
						Son, New York. (AR).	
						g. Nick Hanley & Clive	
						L. Spash, 1998. Cost	
						Benefit Analysis and	
						the Environment. Edgar	
						Elgar, Cheltenham. UK	
						(HS). h. A. Myrick	
						Freeman 111, 1979.	
						The Benefits of	
						Environmental	
						Improvement Theory	
						and Practice. John	
						Hopkins University	
						Press, Baltij nore. (MF).	
						i. Paul Barrow, 1980.	
						The Economic Theory	
						of Pollution Control.	
						The MIT Press,	
						Cambridge,	
						Massachusetts. (PB).	
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8	Midterm Exam (UTS)	Midterm Exam (UTS)	Criteria: 1.A; 85 -100 2.B; 70 - 84 3.C: 56- 69 4.D: 44- 55 5.E > 44 Form of Assessment: Test	Midterm Exam (UTS) 2 X 50	Material: basic natural resources References: a. Tom Tietenberg, 2000. Environmental and Natural Resource Economics. b. Sixth Edition, Addison-Wesley, International Reading. Massachusetts, USA. (TT). c. Erhun Kula, 1992. Economics of Natural Resources and the Environment. d. First Edition, Chapman & Hall, London-New York-Tok-yo-Melbourne and Madras. (OAK). e. Charles W. Howe, 1979. Natural Resource Economics: -Issues,	5%
					Natural Resource	
			Form of			
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
					Benefit Analysis and	
					the Environment. Edgar	
					Elgar, Cheltenham. UK (HS). h. A. Myrick	
					Freeman 111, 1979.	
					The Benefits of	
					Environmental	
					Improvement Theory	
					and Practice. John	
					Hopkins University	
					Press, Baltij nore. (MF). i. Paul Barrow, 1980.	
					The Economic Theory	
					of Pollution Control.	
					The MIT Press,	
					Cambridge,	
					Massachusetts. (PB).	

9	Ctudente ere el-l-	Evaloin ob+	Ouite uie	1 4	Matarial Discuss 22	F0/
9	Students are able to explain land and	-Explain about land		Lectures,	Material: Discuss soil	5%
	water resources	resources	1.A; 85 -100	discussions	resources (erosion and	
	water resources	(erosion and	2.B; 70 - 84	and	sedimentation)	
		sedimentation)	3.C: 56- 69	presentation	References: a. Tom	
		,	4.D: 44- 55	of	Tietenberg, 2000.	
			5.E > 44	2 X 50	Environmental and	
				group	Natural Resource	
			Form of	papers	Economics. b. Sixth	
			Assessment :		Edition,	
			Project Results		Addison-Wesley,	
			Assessment /		International Reading.	
			Product		Massachusetts, USA.	
			Assessment		(TT). c. Erhun Kula,	
			7.000001110111		1992. Economics of	
					Natural Resources and	
					the Environment. d.	
					First Edition, Chapman	
					& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues.	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
					Benefit Analysis and	
					the Environment. Edgar	
					Elgar, Cheltenham. UK	
					(HS). h. A. Myrick	
					Freeman 111, 1979.	
					The Benefits of	
					Environmental	
					Improvement Theory	
					and Practice. John	
					Hopkins University	
					Press, Baltij nore. (MF).	
					i. Paul Barrow, 1980.	
					The Economic Theory	
					of Pollution Control.	
					The MIT Press,	
					Cambridge,	
					Massachusetts. (PB).	

	0. 1					
10	Students are able	-Explain about	Criteria:	Lectures,	Material: Discuss soil	5%
	to explain land and water resources	land resources	1 .A; 85 -100	discussions	resources (erosion and	
	water resources	(erosion and	2.B; 70 - 84	and	sedimentation)	
		sedimentation)	3.C: 56- 69	presentation	References: a. Tom	
		oodo	4.D: 44- 55	of	Tietenberg, 2000.	
			5.E > 44	2 X 50	Environmental and	
			0.27 11	group	Natural Resource	
			Form of	papers	Economics. b. Sixth	
			Assessment :		Edition,	
			Project Results		Addison-Wesley,	
			Assessment /		International Reading.	
			Product		Massachusetts, USA.	
			Assessment		(TT). c. Erhun Kula,	
			Assessment		1992. Economics of	
					Natural Resources and	
					the Environment. d.	
					First Edition, Chapman	
					& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues.	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
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					Elgar, Cheltenham. UK	
					(HS). h. A. Myrick	
					Freeman 111, 1979.	
					The Benefits of	
					Environmental	
					Improvement Theory and Practice. John	
					Hopkins University	
					Press, Baltij nore. (MF).	
					i. Paul Barrow, 1980.	
					The Economic Theory	
					of Pollution Control.	
					The MIT Press,	
					Cambridge,	
					Massachusetts. (PB).	

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11	to explain soil and water conservation methods	-explain conservation methods agronomic, mechanical, chemical and water conservation methods	Criteria: 1.A; 85 -100 2.B; 70 - 84 3.C: 56- 69 4.D: 44- 55 5.E > 44 Form of Assessment : Project Results Assessment / Product Assessment	Lectures, discussions and presentation of 2 x 50 group papers		Material: Discuss soil and water conservation methods and look for examples of applications of soil and water conservation methods References: a. Tom Tietenberg, 2000. Environmental and Natural Resource Economics. b. Sixth Edition, Addison-Wesley, International Reading. Massachusetts, USA. (TT). c. Erhun Kula, 1992. Economics of Natural Resources and the Environment. d. First Edition, Chapman & Hall, London-New York-Tok-yo-Melbourne and Madras. (OAK). e. Charles W. Howe, 1979. Natural Resource Economics: -Issues, Analysis and Policy. John Wiley & Son, USA. (CH). f. Alan Randall, 1987. Resource Economics: An Economic Approach to Natural Resources and Environmental Policy. John Wiley & Son, New York. (AR). g. Nick Hanley & Clive L. Spash, 1998. Cost Benefit Analysis and the Environment. Edgar Elgar, Cheltenham. UK (HS). h. A. Myrick Freeman 111, 1979. The Benefits of Environmental Improvement Theory and Practice. John Hopkins University Press, Baltij nore. (MF). i. Paul Barrow, 1980. The Economic Theory of Pollution Control. The MIT Press, Cambridge, Massachusetts. (PB).	5%

12 Students are able to explain sol and with the conservation methods	7%

	1		I		T	
13	Students are able	-explain the	Criteria:	Lectures,	Material: Discuss the	10%
	to explain	meaning of	1.A; 85 -100	discussions	meaning of WS, DAS,	
	watershed	WS, DAS,	2.B; 70 - 84	and	CAT, DA functions,	
	conservation	CAT -explain	3.C: 56- 69	presentation	watershed conservation	
		the function of a watershed -	4.D: 44- 55	of	efforts and look for	
		explain		2 X 50	examples of watershed	
		watershed	5.E > 44	group	conservation.	
		conservation		papers	Reference: a. Tom	
		efforts	Form of	papers	Tietenberg, 2000.	
			Assessment :		Environmental and	
			Project Results		Natural Resource	
			Assessment /		Economics. b. Sixth	
			Product			
			Assessment		Edition,	
					Addison-Wesley,	
					International Reading.	
					Massachusetts, USA.	
				1	(TT). c. Erhun Kula,	
				1	1992. Economics of	
				1	Natural Resources and	
				1	the Environment. d.	
				1	First Edition, Chapman	
				1	& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues,	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
					Benefit Analysis and	
				1	the Environment. Edgar	
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				1	Elgar, Cheltenham. UK	
				1	(HS). h. A. Myrick	
				1	Freeman 111, 1979.	
				1	The Benefits of	
					Environmental	
				1	Improvement Theory	
				1	and Practice. John	
				1	Hopkins University	
				1	Press, Baltij nore. (MF).	
				1	i. Paul Barrow, 1980.	
				1	The Economic Theory	
				1	of Pollution Control.	
				1	The MIT Press,	
				1	Cambridge,	
				1	Massachusetts. (PB).	
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Students are able to explain watershed conservation Students are able to explain the meaning of WS, DAS, CAT -explain the function of a watershed explain watershed Students are able to explain the meaning of WS, DAS, CAT -explain the function of a watershed explain watershed Students are able to explain the meaning of WS, DAS, CAT -explain the function of a watershed explain watershed Students are able to explain the meaning of WS, DAS, CAT -explain the function of a watershed explain watershed of S.E > 44 Students are able to explain the meaning of WS, DAS, CAT -explain the function of a watershed explain the function of a watershed explain watershed of S.E > 44 Students are able to explain the meaning of WS, DAS, CAT -explain the function of a watershed explain the function of a watershed explain watershed explain the function of a watershed explain waters	Material: Discuss the meaning of WS, DAS, CAT, DA functions, watershed conservation efforts and look for examples of watershed conservation. Reference: a. Tom
watershed conservation WS, DAS, CAT -explain the function of a watershed explain watershed WS, DAS, CAT -explain the function of a watershed watershed LD: 44- 55 S.E > 44 group	CAT, DA functions, watershed conservation efforts and look for examples of watershed conservation. Reference: a. Tom
conservation CAT -explain the function of a watershed explain watershed CAT -explain the function of a watershed CAT -explain watershed CAT -explain the function of a watershed -explain watershed CAT -explain the function of a watershed CAT -explain the function of a watershed -explain watershed CAT -	watershed conservation efforts and look for examples of watershed conservation. Reference: a. Tom
the function of a watershed explain watershed CAT - Explain the function of a watershed explain watershed 4.D: 44-55 2 X 50 group	efforts and look for examples of watershed conservation. Reference: a. Tom
a watershed - 4.D: 44- 55 of 2 X 50 group	examples of watershed conservation. Reference: a. Tom
explain watershed 5.E > 44 2 X 50 group	examples of watershed conservation. Reference: a. Tom
watershed group	conservation. Reference: a. Tom
	Reference: a. Tom
conservation Form of papers	
efforts Form of Popular	
Assessment :	Tietenberg, 2000. Environmental and
Portfolio	
Assessment	Natural Resource
	Economics. b. Sixth
	Edition,
	Addison-Wesley,
	International Reading.
	Massachusetts, USA.
	(TT). c. Erhun Kula,
	1992. Economics of
	Natural Resources and
	the Environment. d.
	First Edition, Chapman
	& Hall, London-New
	York-Tok-yo-Melbourne
	and Madras. (OAK). e.
	Charles W. Howe,
	1979. Natural Resource
	Economics: -Issues,
	Analysis and Policy.
	John Wiley & Son,
	USA. (CH). f. Alan
	Randall, 1987.
	Resource Economics:
	An Economic Approach
	to Natural Resources
	and Environmental
	Policy. John Wiley &
	Son, New York. (AR).
	g. Nick Hanley & Clive
	L. Spash, 1998. Cost
	Benefit Analysis and
	the Environment. Edgar
	Elgar, Cheltenham. UK
	(HS). h. A. Myrick
	Freeman 111, 1979.
	The Benefits of
	Environmental
	Improvement Theory
	and Practice. John
	Hopkins University
	Press, Baltij nore. (MF).
	i. Paul Barrow, 1980.
	The Economic Theory
	of Pollution Control.
	The MIT Press,
	Cambridge,
	Massachusetts. (PB).
	Massachasens. (1 b).

	 		ı	1	Τ	1	
15	Students are able to explain the environmental carrying capacity and environmental capacity	-explain the meaning of environmental carrying capacity and environmental carrying capacity, explain how to calculate DDL	Criteria: 1.A; 85 -100 2.B; 70 - 84 3.C: 56- 69 4.D: 44- 55 5.E > 44 Form of Assessment: Portfolio Assessment	Lectures, discussions and presentation of 2 X 50 group papers		Material: Discusses environmental carrying capacity, environmental carrying capacity, environmental carrying capacity, environmental carrying capacity, environmental carrying capacity and methods for calculating DDL and examples of DDL cases. Reference: a. Tom Tietenberg, 2000. Environmental and Natural Resource Economics. b. Sixth Edition, Addison-Wesley, International Reading. Massachusetts, USA. (TT). c. Erhun Kula, 1992. Economics of Natural Resources and the Environment. d. First Edition, Chapman & Hall, London-New York-Tok-yo-Melbourne and Madras. (OAK). e. Charles W. Howe, 1979. Natural Resource Economics: -Issues, Analysis and Policy. John Wiley & Son, USA. (CH). f. Alan Randall, 1987. Resource Economics: An Economic Approach to Natural Resources and Environmental Policy. John Wiley & Son, New York. (AR). g. Nick Hanley & Clive L. Spash, 1998. Cost Benefit Analysis and the Environment. Edgar Elgar, Cheltenham. UK (HS). h. A. Myrick Freeman 111, 1979. The Benefits of Environmental Improvement Theory and Practice. John Hopkins University Press, Baltij nore. (MF). i. Paul Barrow, 1980. The Economic Theory of Pollution Control. The MIT Press, Cambridge, Massachusetts. (PB).	10%

40	F:10	First		I		===
16	Final Semester Examination	Final Semester	Criteria:	Final	Material: applied	5%
	(UAS)	Examination	1.A; 85 -100	Semester	library resources : a.	
	(UA3)	(UAS)	2.B; 70 - 84	Examination	Tom Tietenberg, 2000.	
		(0/10)	3.C: 56- 69	(UAS)	Environmental and	
			4.D: 44- 55	2 X 50	Natural Resource	
			5.E > 44		Economics. b. Sixth	
			0.2		Edition,	
			Form of		Addison-Wesley,	
			Assessment :		International Reading.	
			Test		Massachusetts, USA.	
			1631		(TT). c. Erhun Kula,	
					1992. Economics of	
					Natural Resources and	
					the Environment. d.	
					First Edition, Chapman	
					& Hall, London-New	
					York-Tok-yo-Melbourne	
					and Madras. (OAK). e.	
					Charles W. Howe,	
					1979. Natural Resource	
					Economics: -Issues,	
					Analysis and Policy.	
					John Wiley & Son,	
					USA. (CH). f. Alan	
					Randall, 1987.	
					Resource Economics:	
					An Economic Approach	
					to Natural Resources	
					and Environmental	
					Policy. John Wiley &	
					Son, New York. (AR).	
					g. Nick Hanley & Clive	
					L. Spash, 1998. Cost	
					Benefit Analysis and	
					the Environment. Edgar	
					Elgar, Cheltenham. UK	
					(HS). h. A. Myrick	
					Freeman 111, 1979.	
					The Benefits of	
					Environmental	
					Improvement Theory	
	1	1			and Practice. John	
					Hopkins University	
					Press, Baltij nore. (MF).	
	1				i. Paul Barrow, 1980.	
					The Economic Theory	
	1				of Pollution Control.	
					The MIT Press,	
					Cambridge,	
					Massachusetts. (PB).	
L	L		1			

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	10%
2.	Project Results Assessment / Product Assessment	55%
3.	Portfolio Assessment	20%
4.	Practice / Performance	5%
5.	Test	10%
	_	100%

Notes

- Learning Outcomes of Study Program Graduates (PLO Study Program) are the abilities possessed by each Study
 Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their
 study program obtained through the learning process.
- 2. The PLO imposed on courses are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
- 3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
- 4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
- 5. **Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
- Assessment Criteria are benchmarks used as a measure or measure of learning achievement in assessments based on
 predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased.
 Criteria can be quantitative or qualitative.
- 7. Forms of assessment: test and non-test.
- 8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
- Learning Methods: Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
- Learning materials are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 11. The assessment weight is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.

12. TM=Face to face, PT=Structured assignments, BM=Independent study.