	Universitas Negeri Surabaya Faculty of Economics and Business Economic Education Undergraduate Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Econometrics	8720303064		T=3	P=0	ECTS=4.77	4	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	Ni'matush Sholikhah, SPd., MPd.	Dr. Retno Mustika Dewi, S.Pd., M.Pd.

Learning model	**Case Studies**	
Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	Program Objectives (PO)	
	PO - 1	Able to apply norms and ethics in analyzing information and data
	PO - 2	Able to utilize science and technology in the field of econometrics and apply it through software, Able to utilize science and technology in the field of econometrics and apply it through software
	PO - 3	Mastering the theoretical concepts of econometrics and processing data in linear regression models and panel regression models, Mastering the theoretical concepts of econometrics and processing data in linear regression models and panel regression models
	PO - 4	Able to make decisions based on analysis of information and data and provide instructions in choosing alternative solutions, Able to make decisions based on analysis of information and data and provide instructions in choosing alternative solutions
	PO - 5	Responsible for informing the results of the analysis of information and data both orally and in writing
	PLO-PO Matrix	

P.O
PO-1
PO-2
PO-3
PO-4
PO-5

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PO-1																
PO-2																
PO-3																
PO-4																
PO-5																

Short Course Description	Describe and analyze the meaning of econometrics; correlation and regression; simple linear regression; multiple linear regression; deviation from classical model assumptions; regression with dummy independent variables; as well as panel regression models. Learning is carried out by applying a direct, cooperative and practical approach.	
References	**Main :**	

1. Andren, Thomas. 2007. Econometrics .melalui www.Bookboon.com.
2. Enders, Walter. 1995. AppliedEconomics Time Series . New York: John Wiley & Sons Inc.
3. Greene, William. 2008. EconometricsAnalysis 6th ed . New Jersey : Pearson.
4. Gujarati Damodar. 2000. EkonometrikaDasar . Jakarta: Penerbit Erlangga.
5. Hansen, Bruce E. 2007. Econometrics .Wisconsin: University of Wiconsin.
6. Imamudin Yuliadi. 2009. EkonometrikaTerapan . Yogyakarta: Unit Penerbitan Fakultas Ekonomi UniversitasMuhammadiyah Yogyakarta (UPFE-UMY).
7. Jurusan Ilmu Ekonomi dan Studi Pembangunan. 2001. Basic Econometris and Manual Guide for TSP . Yogyakarta.IESP UPN Veteran.
8. Mudrajad Kuncoro. 2004. MetodeKuantitatif. Teori dan Aplikasi Untuk Bisnis dan Ekonomi . Yogyakarta: AMP YKPN.
9. Ajijah, Shochrul R.dkk. 2011. CaraCerdas Menguasai Eviews . Jakarta: Penerbit Salemba Empat.

Supporters:

1. Andren, Thomas. 2007. Econometrics melalui www.Bookboon.com‘
2. Enders, Walter. 1995. AppliedEconomics Time Series. New York: JohnWiley & Sons Inc.
3. Gujarati Damodar. 2000. Ekonometrika Dasar. Jakarta: Penerbit Erlangga.
4. Hansen, Bruce E. 2007. Econometrics Wisconsin: University of Wiconsin.
5. Jurusan Ilmu Ekonomi dan Studi Pembangunan. 2001. Basic Econometrisand Manual Guide for TSP. Yogyakarta.IESP UPN Veteran.
6. Mudrajad Kuncoro. 2004. MetodeKuantitatif. Teori dan Aplikasi Untuk Bisnisdan Ekonomi. Yogyakarta: AMP YKPN.
7. Mudrajad Kuncoro. 2004. MetodeKuantitatif. Teori dan Aplikasi Untuk Bisnisdan Ekonomi. Yogyakarta: AMP YKPN

Supporting lecturer	Muhammad Abdul Ghofur, S.E., M.Pd. Ni'matush Sholikhah, S.Pd., M.Pd. Amirusholihin, M.Sc.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (*offline*)	Online (*online*)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Able to describe the meaning of econometrics	1.1.1 Can explain the meaning of econometrics, Can explain the meaning of econometrics 2.1.1.2 Can explain the role of econometrics, Can explain the role of econometrics 3.1.1.3 Can explain the goals of econometrics, Can explain econometric goals 4.1.1.4 Can explain the econometrics category, Can explain the econometrics category 5.1.1.5 Can explain econometric research, Can explain econometric research	**Criteria:** Criteria: Assessment Rubric, Assessment Technique: Written test. Criteria: Rubric Assessment, Assessment Techniques: Written test **Form of Assessment** : Participatory Activities	Discussions and lectures, Discussions and lectures 3 X 50		**Material:** The Fundamentals of Econometrics **Library:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.* **Material:** The Fundamentals of Econometrics **Reader:** *Andren, Thomas. 2007. Econometrics .via www.Bookboon.com.*	5%

2	Able to Analyze Differences in Correlation and Regression, Able to Analyze Differences in Correlation and Regression	1. 2.1 Can explain the meaning of correlation 2. 2.2 Can analyze the differences between correlation and regression 3. 2.3 Can analyze and apply the Pearson correlation coefficient to examples of questions 4. 2.4 Can analyze and apply examples of Spearman Rank correlation questions 5. 2.5 Be able to explain the historical origins of the term regression 6. 2.6 Can explain the modern interpretation of regression 7. 2.7 Can explain the difference between statistical and functional dependency 8. 2.8 Can explain regression and cause and effect relationships 9. 2.9 Can explain the difference between regression and correlation 10. 2.10 Can explain terms and notation	**Criteria:** Minimum score 20, maximum 100 **Form of Assessment** : Participatory Activities	Reading assignments, lectures, solving problems, practice regression and correlation, Reading assignments, lectures, solving problems, practice regression and correlation 3 X 50		**Material:** Regression **Bibliography:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%

3	Able to Analyze Differences in Correlation and Regression, Able to Analyze Differences in Correlation and Regression	1. 2.1 Can explain the meaning of correlation 2. 2.2 Can analyze the differences between correlation and regression 3. 2.3 Can analyze and apply the Pearson correlation coefficient to examples of questions 4. 2.4 Can analyze and apply examples of Spearman Rank correlation questions 5. 2.5 Be able to explain the historical origins of the term regression 6. 2.6 Can explain the modern interpretation of regression 7. 2.7 Can explain the difference between statistical and functional dependency 8. 2.8 Can explain regression and cause and effect relationships 9. 2.9 Can explain the difference between regression and correlation 10. 2.10 Can explain terms and notation	**Criteria:** Minimum score 20, maximum 100 **Form of Assessment** : Participatory Activities	Reading assignments, lectures, solving problems, practice regression and correlation, Reading assignments, lectures, solving problems, practice regression and correlation 3 X 50		**Material:** Regression **Bibliography:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%

4	Can analyze simple linear regression	1.3.1 Can explain the basic concepts of simple linear regression 2.3.2 Can explain the concept of population regression function 3.3.3 Can explain the stochastic specification of the population regression function 4.3.4 Can explain the sample regression function 5.3.5 Can explain the meaning of the term linear 6.3.6 Can explain the basic nature of stochastic disturbances 7.3.7 Can explain the basic assumptions of linear regression 8.3.8 Can analyze and apply the least squares method to examples of problems 9.3.9 Can explain the properties of estimators (a) and (b) 10.3.10 Can explain the coefficient of determination 11.3.11 Can explain the normality assumption 12.3.12 Can explain the properties of estimators based on normality assumptions 13.3.13 Can apply simple regression analysis via computer media. Can apply simple regression analysis via computer media	**Criteria:** maximum value 100 **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Reading assignments, lectures, questions and answers, and econometric practice 3 X 50		**Material:** regression **Bibliography:** *Greene, William. 2008. Econometrics Analysis 6th ed. New Jersey : Pearson.*	5%

5	Can analyze simple linear regression	1.3.1 Can explain the basic concepts of simple linear regression 2.3.2 Can explain the concept of population regression function 3.3.3 Can explain the stochastic specification of the population regression function 4.3.4 Can explain the sample regression function 5.3.5 Can explain the meaning of the term linear 6.3.6 Can explain the basic nature of stochastic disturbances 7.3.7 Can explain the basic assumptions of linear regression 8.3.8 Can analyze and apply the least squares method to examples of problems 9.3.9 Can explain the properties of estimators (a) and (b) 10.3.10 Can explain the coefficient of determination 11.3.11 Can explain the normality assumption 12.3.12 Can explain the properties of estimators based on normality assumptions 13.3.13 Can apply simple regression analysis via computer media. Can apply simple regression analysis via computer media	**Criteria:** maximum value 100 **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Reading assignments, lectures, questions and answers, and econometric practice 3 X 50		**Material:** regression **Bibliography:** *Greene, William. 2008. Econometrics Analysis 6th ed. New Jersey : Pearson.*	5%

6	Able to analyze multiple linear regression	1. 4.1 Can explain the meaning and multiple regression model 2. 4.2 Can explain the assumptions of the multiple regression model 3. 4.3 Can explain the interpretation of multiple regression equations 4. 4.4 Can explain the meaning and estimation of partial regression coefficients 5. 4.5 Can explain the standard error of partial multiple regression 6. 4.6 Can explain the coefficient of determination 7. 4.7 Can analyze and apply examples of multiple regression problems 8. 4.8 Can explain the adjusted coefficient of determination (Adjusted R2) Can explain the adjusted coefficient of determination (Adjusted R2) 9. 4.9 Can analyze and apply partial regression coefficients to examples of questions 10. 4.10 Can apply multiple regression analysis via computer media	**Criteria:** maximum value 100 **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Tests	Reading assignments, questions and answers, discussions, practice working on questions, working on a 3 X 50 multiple regression project		**Material:** multiple linear regression **Reader:** *Andren, Thomas. 2007. Econometrics .via www.Bookboon.com.* **Material:** multiple linear regression **Reference:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%

7	Able to analyze multiple linear regression	1. 4.1 Can explain the meaning and multiple regression model 2. 4.2 Can explain the assumptions of the multiple regression model 3. 4.3 Can explain the interpretation of multiple regression equations 4. 4.4 Can explain the meaning and estimation of partial regression coefficients 5. 4.5 Can explain the standard error of partial multiple regression 6. 4.6 Can explain the coefficient of determination 7. 4.7 Can analyze and apply examples of multiple regression problems 8. 4.8 Can explain the adjusted coefficient of determination (Adjusted R2) Can explain the adjusted coefficient of determination (Adjusted R2) 9. 4.9 Can analyze and apply partial regression coefficients to examples of questions 10. 4.10 Can apply multiple regression analysis via computer media	**Criteria:** maximum value 100 **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Tests	Reading assignments, questions and answers, discussions, practice working on questions, working on a 3 X 50 multiple regression project		**Material:** multiple linear regression **Reader:** *Andren, Thomas. 2007. Econometrics .via www.Bookboon.com.* **Material:** multiple linear regression **Reference:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%
8	UTS, Mid-Term Exam	Able to do questions	**Criteria:** Maximum value 100 **Form of Assessment** : Test	Doing UTS questions, Doing UTS questions 3 X 50		**Material:** material that has been taught **Library:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	15%

9	Able to analyze deviations from classical model assumptions	1. Can detect overcoming autocorrelation problems in regression 2. Can analyze and apply to examples of autocorrelation questions 3. Can detect overcoming heteroscedasticity problems in regression analysis 4. Can analyze and apply examples of heteroscedasticity questions 5. Can detect multicollinearity problems in regression analysis 6. Can analyze and apply to examples of multicollinearity problems 7. Can apply classical assumption tests via computer media	**Criteria:** maximum value 100 **Form of Assessment** : Participatory Activities, Tests	Group assignments and presentations Discussion and practice working on questions using the 3 X 50 computer application		**Material:** Able to analyze deviations from classical model assumptions. **Reference:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%
10	Able to analyze deviations from classical model assumptions	1. Can detect overcoming autocorrelation problems in regression 2. Can analyze and apply to examples of autocorrelation questions 3. Can detect overcoming heteroscedasticity problems in regression analysis 4. Can analyze and apply examples of heteroscedasticity questions 5. Can detect multicollinearity problems in regression analysis 6. Can analyze and apply to examples of multicollinearity problems 7. Can apply classical assumption tests via computer media	**Criteria:** maximum value 100 **Form of Assessment** : Participatory Activities, Tests	Group assignments and presentations Discussion and practice working on questions using the 3 X 50 computer application		**Material:** Able to analyze deviations from classical model assumptions. **Reference:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%

11	Able to analyze deviations from classical model assumptions	1. Can detect overcoming autocorrelation problems in regression 2. Can analyze and apply to examples of autocorrelation questions 3. Can detect overcoming heteroscedasticity problems in regression analysis 4. Can analyze and apply examples of heteroscedasticity questions 5. Can detect multicollinearity problems in regression analysis 6. Can analyze and apply to examples of multicollinearity problems 7. Can apply classical assumption tests via computer media	**Criteria:** maximum value 100 **Form of Assessment** : Participatory Activities, Tests	Group assignments and presentations Discussion and practice working on questions using the 3 X 50 computer application		**Material:** Able to analyze deviations from classical model assumptions. **Reference:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%
12	Can Analyze Regression with Dummy Independent Variables	1. Can explain the meaning and use of dummy variables 2. Can explain regression with several qualitative variables 3. Can apply regression with dummy independent variables via computer media	**Criteria:** Maximum value 100 **Form of Assessment** : Participatory Activities, Practical Assessment	lecture, practice, project 3 x 50		**Material:** Can Analyze Regression with Dummy Independent Variables **Library:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.* **Material:** Can Analyze Regression with Dummy Independent Variables **References:** *Andren, Thomas. 2007. Econometrics via www.Bookboon.com'*	5%
13	Can Analyze Regression with Panel Models	1. Can describe the definition of Data Panel 2. Can apply Panel Data Modeling 3. Can choose the right Model 4. Can apply the Data Panel Model using computer media	**Criteria:** Maximum value 100 **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practice / Performance, Tests	Reading assignments, lectures and discussions, practice, dproject 3 X 50		**Material:** Can Analyze Regression with Panel Models **Library:** *Imamudin Yuliadi. 2009. Applied Econometrics. Yogyakarta: Publishing Unit of the Faculty of Economics, Muhammadiyah University of Yogyakarta (UPFE-UMY).*	5%
14	Can analyze time series regression	1. Can describe the characteristics of time series data 2. Can describe trends and seasonality 3. Can apply Autoregressive Distributed Lag Model (ARDL)	**Criteria:** Maximum value 100 **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Tests	Discussion and practice questions using computer applications, 3 X 50 practice		**Material:** Time series **References:** *Ajijah, Shochrul R. et al. 2011. How to Smartly Master Eviews. Jakarta: Salemba Empat Publishers.* **Material:** time series **Bibliography:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%

15	Can analyze time series regression	1. Can describe the characteristics of time series data 2. Can describe trends and seasonality 3. Can apply Autoregressive Distributed Lag Model (ARDL)	**Criteria:** Maximum value 100 **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Tests	Discussion and practice questions using computer applications, 3 X 50 practice		**Material:** Time series **References:** *Ajijah, Shochrul R. et al. 2011. How to Smartly Master Eviews. Jakarta: Salemba Empat Publishers.* **Material:** time series **Bibliography:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	5%
16	Final Test	Students can do assignments correctly	**Criteria:** Maximum value 100 **Form of Assessment** : Test	3 X 50 test		**Material:** all subjects that have been taught. **Library:** *Gujarati Damodar. 2000. Basic Econometrics. Jakarta: Erlangga Publishers.*	15%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	37.93%
2.	Project Results Assessment / Product Assessment	12.93%
3.	Practical Assessment	2.5%
4.	Practice / Performance	1.25%
5.	Test	45.43%
		100%

Notes

1. **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.
6. **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.
9. **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.
10. **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.