STUDYING CONTRACT
LEARNING PROGRAM OUTLINE
LEARNING UNIT PROGRAM

SAMPLING METHODS

COURSE CODE: PAM 564

3 SCU

SEMESTER VI

MATHEMATICS STUDY PROGRAM
MATHEMATICS AND NATURAL SCIENCES FACULTY
DIPONEGORO UNIVERSITY
SEMARANG

TEACHING – LEARNING CONTRACT

Course Title : Sampling Methods .

Code : PAM 564

Credit : 3

Semester : 6

1. Course Advantage

Valid data very big its role in statistical inferensi, so that process intake of data become the part of most determining statistika. At some condition cannot be obtained data from all population, so that needed by sample. The correct Methods of survey sampling was expected will yield population parameter estimation having the character of unbias.

2. Course Description

This course include; some Methods of survey sampling that is : simple random sampling, stratified random sampling, systematic sampling, simple cluster sampling and two-stage cluster sampling.

3. General Instructional Aim

After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.

4. Lecture Strategic.

To reach the target of this course this study system use two way teaching Methodss, that are lecturing and discussing. To increase the activity of student are given some assignation in the form of quiz in the class, and task that self done at home.

5. References

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical

and Decision Sciences. PWS-KENT Publising Company, Boston.

2. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.

6. Scoring Criteria.

Criteria of scoring in this course is :

scoring	value
A	4.0
AB	3.5
B	3.0
BC	2.5
C	2.0
CD	1.5
D	1.0
DE	0.5
E	0.0

Determination of scoring criteria is used weighted such as :

No	Component	Percentage
1	Quiz	15
2	Self-done task	15
4	Midterm	30
5	Final exam	40

7. Lecture Schedule

week	materials	references
1	1. Teaching-learning contract 2. Introduction 3. Element of the sampling problem	[1] : 23-54 [2] : 48-63
2 , 3	Simple random sampling	[1] : 55-83 [2] : 59-101
4,5,6,7	Stratified random sampling	[1] : 97-137 [2] : 102-158
8	Midterm.	
9	Systematic sampling	[1] : 205-230 [2] : 159-183
10,11	Simple cluster sampling	[1] : 243-262
12,13,14,15	Two-stage cluster sampling	[1] : 285-300 [2] : 186-236 ; 272-290
16	Final exam	-

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Code : PAM 564

Credit : 3

Semester : 6

Course Description : This course include; some Methods of survey sampling that is : simple random sampling, stratified random sampling, systematic sampling, simple cluster sampling and two-stage cluster sampling.

General Instructional Aim : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.

No	Specific Instructional Aim	Subject	Sub Subject	duration	References
1	The students can to mention the aim, advantage and process of studying	Teaching – learning contract	General instructional aim. Relevance this course to another course.Evaluation and scoring criteria	1x50 minutes	-
2	Students can define population, sample, and explain elementary concept of sampling theory.	Element of the sampling problem	Introduction, population, sample, unit sample, scheme sample,how to select the sample.	2x50 minutes	[1]:23-54 [2] :48-63
3	Students can take sample, making population parameter inference by using simple random sampling	Simple random sampling	Introduction, how to draw a simple random sample, estimation of population means, total and proportion , sample size.	6x50 minutes	[1] : 55-83 [2] : 59-101
4	Students can take sample, making population parameter inference by using stratified random sampling	Stratified random sampling	Introduction, how to draw a stratified random sample, estimation of population means and total, allocation of the sample, estimation of population proportion, sample size.	12x50 minutes	[1] : 97-137 [2] : 102-158
5	Students can take sample, making population parameter inference by using	Systematic sampling	Introduction, how to draw a systematic sample, estimation of population means, total,	3x50 minutes	[1] : 205-230 [2} : 159-183

	systematic sampling		and proportion , sample size.		
6	Students can take sample, making population parameter inference by using simple cluster sampling	Simple cluster sampling	Introduction, how to draw a simple cluster sample, estimation of population means, total and proportion, sample size.	6x50 minutes	[1] : 243-262
7	Students can take sample, making population parameter inference by using two-stage cluster sampling	Two-stage cluster sampling	Introduction, how to draw a two-stage cluster sample, estimation of population means, total and proportion, sample size.	12x50 minutes	[1] : 203-226

References :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

3. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.

LEARNING UNIT PROGRAM

Course Title : Sampling Methods

Code : PAM 564

Credit : 3

Duration : 150 minutes

Week : 1

A. INSTRUCTIONAL AIM

1. General : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.
2. Specific : Students can define population, sample, and explain elementary concept of sampling theory.

B. SUBJECT : Element of the sampling problem

C. SUB SUBJECT :1. Introduction.

2. population, sample and unit sample.

3. scheme sample.

4.how to select the sample.

D. TEACHING-LEARNING ACTIVITIES

STAGE	LECTURER ACTIVITIES	STUDENT ACTIVITIES	LEARNING MEDIA
INTRODUCTION	1.Submitting teaching-learning contract 2.Explaining relevance this course with the other course 3.Explaining general aim	Observing and taking notes	OHP, transparancy White board
PRESENTATION	1.Explaining define of population, sample unit and scheme sample 2.Explaining principle of sampling theori 2.Explaining precision 3.Giving example 4.Giving task to be done students	Observing, asking, taking notes, doing task	OHP, transparancy White board.
CLOSING	1. Giving comment to	Answering to,	White board

	work of student. 2. Giving task to be done at home 3.Describing material at week 2.	discussion	

E. ASSESSMENT : Giving problem to the students..

F. REFERENCES :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

2. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.

LEARNING UNIT PROGRAM

Course Title : Sampling Methods

Code : PAM 564

Credit : 3

Duration : 6x50 minutes

Week : 2, 3

A. INSTRUCTIONAL AIM

1. General : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.
2. Specific : Students can take sample, making population parameter inference by using simple random sampling

B. SUBJECT : Simple random sampling

C. SUB SUBJECT :1. Introduction.

2. How to draw a simple random sample,.
3. Estimation of population means, total and proportion
4. Sample size

D. TEACHING-LEARNING ACTIVITIES

STAGE	LECTURER ACTIVITIES	STUDENT ACTIVITIES	LEARNING MEDIA
INTRODUCTION	1. Giving opportunity to student to ask previous items which not yet been mastered 2.Explaining relevance this section with previous section 3.Explaining the material for this section	Observing and taking notes	OHP, transparancy White board
PRESENTATION	1.Explaining principle of simple random sampling 2.Explaining how to draw a sample 3.Explaining estimation of population means, total and proportion.	Observing, asking, taking notes, doing task	OHP, transparancy White board.

	4.Explaining how selecting the sample size 5. Giving example 6.Giving task to be done		
CLOSING	1. Giving comment to work of student. 2. Giving task to be done at home 3.Describing material at next week .	Answering to, discussion	White board

E. ASSESSMENT : Giving problem to the students..

F. REFERENCES :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

2. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall.Inc. Englewood Cliffs.

LEARNING UNIT PROGRAM

Course Title : Sampling Methods

Code : PAM 564

Credit : 3

Duration : 12x50 minutes

Week : 4, 5, 6, 7

A. INSTRUCTIONAL AIM

1. General : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.
2. Specific : Students can take sample, making population parameter inference by using stratified random sampling

B. SUBJECT : Stratified random sampling

C. SUB SUBJECT :1. Introduction.

2. How to draw a stratified random sample,.
3. Estimation of population means, total and proportion
4. Allocation of the sample
5. Sample size

D. TEACHING-LEARNING ACTIVITIES

STAGE	LECTURER ACTIVITIES	STUDENT ACTIVITIES	LEARNING MEDIA
INTRODUCTION	1. Giving opportunity to student to ask previous items which not yet been mastered 2. Explaining relevance this section with previous section 3.Explaining the material for this section	Observing and taking notes	OHP, transparancy White board
PRESENTATION	1.Explaining stratified principle 2. Explaining how to draw a sample 3.Explaining estimation	Observing, asking, taking notes, doing task	OHP, transparancy White board.

	of population means, total and proportion. 4.Explaining the allocation sample 5..Explaining how selecting the sample size 6. Giving example 7.Giving task to be done		
CLOSING	1. Giving comment to work of student. 2. Giving task to be done at home 3.Describing material at next week	Answering to, discussion	White board

E. ASSESSMENT : Giving problem to the students..

F. REFERENCES :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

2. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.

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Course Title : Sampling Methods

Code : PAM 564

Credit : 3

Duration : 150 minutes

Week : 9

A. INSTRUCTIONAL AIM

1. General : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.
2. Specific : Students can take sample, making population parameter inference by using systematic sampling

B. SUBJECT : Systematic sampling

C. SUB SUBJECT :1. Introduction.

2. How to draw a systematic sample

3. Estimation of population means, total and proportion

D. TEACHING-LEARNING ACTIVITIES

STAGE	LECTURER ACTIVITIES	STUDENT ACTIVITIES	LEARNING MEDIA
INTRODUCTION	1. Giving opportunity to student to ask previous items which not yet been mastered 2. Explaining relevance this section with previous section 3.Explaining the material for this section	Observing and taking notes	OHP, transparancy White board
PRESENTATION	1.Explaining principle of systematic sampling 2. Explaining how todraw a sample 3.Explaining estimation of population means, total and proportion. 5. Giving example 6.Giving task to be done	Observing, asking, taking notes, doing task	OHP, transparancy White board.

CLOSING	1. Giving comment to work of student. 2. Giving task to be done at home 3.Describing material at next week .	Answering to, discussion	White board

E. ASSESSMENT : Giving problem to the students..

F. REFERENCES :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

3. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.

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Course Title : Sampling Methods

Code : PAM 564

Credit : 3

Duration : 6x50 minutes

Week : 10, 11

A. INSTRUCTIONAL AIM

1. General : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.
2. Specific : Students can take sample, making population parameter inference by using simple cluster sampling

B. SUBJECT : Simple cluster sampling

C. SUB SUBJECT :1. Introduction.

2. How to draw a simple cluster sample

3. Estimation of population means, total and proportion

D. TEACHING-LEARNING ACTIVITIES

STAGE	LECTURER ACTIVITIES	STUDENT ACTIVITIES	LEARNING MEDIA
INTRODUCTION	1. Giving opportunity to student to ask previous items which not yet been mastered 2. Explaining relevance this section with previous section 3.Explaining the material for this section	Observing and taking notes	OHP, transparancy White board
PRESENTATION	1.Explaining principle of simple cluster sampling 2. Explaining how to draw a sample 3.Explaining estimation of population means, total and proportion. 5. Giving example 6. Giving task to be done	Observing, asking, taking notes, doing task	OHP, transparancy White board.

CLOSING	1. Giving comment to work of student. 2. Giving task to be done at home 3.Describing material at next week .	Answering to, discussion	White board

E. ASSESSMENT : Giving problem to the students..

F. REFERENCES :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

4. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.

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Course Title : Sampling Methods

Code : PAM 564

Credit : 3

Duration : 12x50 minutes

Week : 12, 13, 14, 15

A. INSTRUCTIONAL AIM

1. General : After attend the lecture this student expected can chosen Methods of survey sample matching with population investigated and making inference about population parameter.
2. Specific : Students can take sample, making population parameter inference by using two-stage cluster sampling

B. SUBJECT : Two-stage cluster sampling

C. SUB SUBJECT :1. Introduction.

2. How to draw a two-stage cluster sample

3. Estimation of population means, total and proportion

D. TEACHING-LEARNING ACTIVITIES

STAGE	LECTURER ACTIVITIES	STUDENT ACTIVITIES	LEARNING MEDIA
INTRODUCTION	1. Giving opportunity to student to ask previous items which not yet been mastered 2. Explaining relevance this section with previous section 3.Explaining the material for this section	Observing and taking notes	OHP, transparancy White board
PRESENTATION	1.Explaining principle of two-stage cluster sampling 2. Explaining how to draw a sample 3.Explaining estimation of population means, total and proportion. 5. Giving example	Observing, asking, taking notes, doing task	OHP, transparancy White board.

	6. Giving task to be done		
CLOSING	1. Giving comment to work of student. 2. Giving task to be done at home 3.Describing material for final exam .	Answering to, discussion	White board

E. ASSESSMENT : Giving problem to the students..

F. REFERENCES :

1. Scheaffer, R.L; Mendenhall, W and Ott, L. (1990). Elementary Survey Sampling. 4nd Edition. The Duxbury Advance Series in Statistical and Decision Sciences. PWS-KENT Publising Company, Boston.

5. Yamane, T. (1967). Elememtary Sampling Theary. Prentice-Hall. Inc. Englewood Cliffs.