

MODULE HANDBOOK
META ANALYSIS



BACHELOR DEGREE PROGRAM
DEPARTMENT OF STATISTICS
FACULTY OF SCIENCE AND DATA ANALYTICS
INSTITUT TEKNOLOGI SEPULUH NOPEMBER
SURABAYA, INDONESIA

ENDORSEMENT PAGE

	MODULE HANDBOOK META ANALYSIS DEPARTMENT OF STATISTICS INSTITUT TEKNOLOGI SEPULUH NOPEMBER
---	--

Proses <i>Process</i>	Penanggung Jawab <i>Person in Charge</i>			Tanggal <i>Date</i>
	Nama <i>Name</i>	Jabatan <i>Position</i>	Tandatangan <i>Signature</i>	
Perumus <i>Preparation</i>	Dr. Bambang Widjanarko Otok, M.Si.	Dosen <i>Lecturer</i>		March 28, 2019
Pemeriksa dan Pengendalian <i>Review and Control</i>	Dr. Santi Wulan Purnami, M.Si	Tim kurikulum <i>Curriculum team</i>		April 15, 2019
Persetujuan <i>Approval</i>	Dr. Bambang Widjanarko Otok, M.Si.	Koordinator RMK <i>Course Cluster Coordinator</i>		July 17, 2019
Penetapan <i>Determination</i>	Dr. Kartika Fithriasari, M.Si	Kepala Departemen <i>Head of Department</i>		July 30, 2019

MODULE HANDBOOK

META ANALYSIS

Module name	Meta Analysis	
Module level	Undergraduate	
Code	KS184757	
Course (if applicable)	Meta Analysis	
Semester	7 (Odd)	
Person responsible for the module	Dr. Bambang Widjanarko Otok, M.Si.	
Lecturer	Dr. Bambang Widjanarko Otok, M.Si. Dr. Santi Wulan Purnami, S.Si, M.Si	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergraduate degree program, elective , 7 th semester.	
Type of teaching, contact hours	Lectures, <50 students	
Workload	1. Lectures: 3 x 50 = 150 minutes per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Private learning: 3 x 60 = 180 minutes (3 hours) per week.	
Credit points	3 credit points (sks)	
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.	
Mandatory prerequisites	1. Regression Analysis 2. Categorical Data Analysis	
Learning outcomes and their corresponding PLOs	CLO.1 Able to describe the concept of meta analysis and implementation in the various fields CLO.2 Able to explain the procedure of meta analysis and select the appropriate methods to solve the problem	PLO.1
	CLO.3 Able to analyze the data using the appropriate meta analysis methods efficiently CLO.4 Able to identify, formulate, and solve the problem in the meta analysis	PLO.3
	CLO.5 Able to use computational technique and modern computer in analyzing the metadata CLO.6 Have insight about the current issue and upcoming issue relating to the meta analysis CLO.7 Able to communicate effectively and collaborate with the teams in interdisciplinary and multidisciplinary CLO.8 Have responsibilities and professional ethics CLO.9 Able to motivate themselves to think creatively and lifelong learning	PLO.4

Content	Meta analysis is a proficiency course that is a part of the Statistical Environmental And Health Courses Group. The objectives in learning meta analysis are that the students can understand the basic concept and statistical methods in meta analysis, interpret the result of meta analysis for development and application in the real case. Students are expected to be experienced in critical thinking and make appropriate decisions using meta analysis to solve the problems. The learning strategies used in this course are discussion, exercises, and assignments.
Study and examination requirements and forms of examination	• In-class exercises • Assignment • Mid-term exam • Final exam
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading list	1. Bohning, D., Sasivimol, R., and Ronny, K. 2008. Meta Analysis of Binary Data Using Profile Likelihood. Chapman dan Hall/CRC Taylor dan Francis Group. 2. Borenstein M, Hedenganes LV, Higgins JPT, and Rothstein HR, 2009. Introduction to Meta-Analysis. John Wiley dan Sons, Ltd. 3. Joachim Hartung, Guido K., and Bimal, K. S. 2008. Statistical Meta Analysis with Applications. John Wiley dan Sons, Inc., Publication 4. John, E., Hunter, Frank L. and Schmidt. 2004. Methods of Meta Analysis. Sage Publications, Inc. 5. Larry, V., Hedenganes, and Ingram, O. 1985. Statistical Method for Meta Analysis. New York: Orlando San Diego. 6. Sterne JAC (editor). 2009. Meta-Analysis in Stata: An updated Collection from the Stata Journal. Stata Press. 7. Whitehead, A. 2002. Meta-Analysis of Controlled Clinical Trials. A. Whitehead Copyright. John Wiley dan Sons, Ltd.

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Bahan Kajian	Dasar Sains, Teori Statistika, Pengumpulan Data, Deskripsi dan Eksplorasi, Komputasi dan Data Processing, Pemodelan, Pemerintahan dan Kependudukan, Kesehatan dan Lingkungan
Study Materials	<i>Basic Science, Statistical Theory, Data collection, Description and Exploration, Computing and Data Processing, Modeling, Government and Population, Health and Environment</i>
CPL yang dibebankan MK	CPL-1 Mampu menerapkan pengetahuan teori statistika, matematika, dan komputasi CPL-3 Mampu menganalisis data dengan metode statistika yang tepat dan menginterpretasikannya CPL-4 Mampu mengidentifikasi, memformulasi, dan menyelesaikan masalah statistika di berbagai bidang terapan
PLO	<i>PLO-1 Able to apply knowledge of science, statistical theory, mathematics, and computing to problems in various applied fields</i> <i>PLO-3 Able to analyze data using appropriate statistical methods and interpret them</i> <i>PLO-4 Able to identify, formulate, and solve statistical problems in various applied fields</i>
CP-MK	CPMK.1 Menjelaskan penggunaan konsep meta analisis dan implementasinya di berbagai bidang CPMK.2 Mampu menjelaskan prosedur meta analisis serta mampu memilih metode yang sesuai untuk menyelesaikan suatu permasalahan CPMK.3 Mampu menganalisis data dengan metode meta analisis yang sesuai dan efektif dengan permasalahan CPMK.4 Mampu mengidentifikasi, memformulasi, dan menyelesaikan masalah statistika di bidang meta analisis CPMK.5 Mampu menggunakan teknik komputasi dan perangkat komputer modern yang diperlukan untuk mengolah data meta CPMK.6 Memiliki pengetahuan tentang isu terkini dan mendatang yang berkaitan dengan bidang analisis meta CPMK.7 Mampu berkomunikasi secara efektif dan bekerjasama dalam tim yang interdisiplin dan multidisiplin CPMK.8 Memiliki tanggung jawab dan etika profesi CPMK.9 Mampu memotivasi diri untuk berpikir kreatif dan belajar sepanjang hayat
CLO	<i>CLO.1 Able to describe the concept of meta analysis and implementation in the various fields</i> <i>CLO.2 Able to explain the procedure of meta analysis and select the appropriate methods to solve the problem</i> <i>CLO.3 Able to analyze the data using the appropriate meta analysis methods efficiently</i> <i>CLO.4 Able to identify, formulate, and solve the problem in the meta analysis</i> <i>CLO.5 Able to use computational technique and modern computer in analyzing the metadata</i> <i>CLO.6 Have insight about the current issue and upcoming issue relating to the meta analysis</i> <i>CLO.7 Able to communicate effectively and collaborate with the teams in interdisciplinary and multidisciplinary</i> <i>CLO.8 Have responsibilities and professional ethics</i> <i>CLO.9 Able to motivate themselves to think creatively and lifelong learning</i>

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
1	Dapat menjelaskan statistic dasar yang berhubungan dengan meta analisis dan perhitungan secara lengkap meta analisis <i>Able to explain basic statistics related to the meta analysis and the calculation of meta analysis completely</i>	Mengetahui penerapan metode analisis meta di permasalahan riil (konsep dasar statistika) Mampu menghitung konsep matriks yang sering digunakan dalam meta analisis <i>Understand the application of meta analysis methods in the real case (basic concept of statistics)</i> <i>Able to calculate the concept of matrix that frequently used in meta analysis</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Mengetahui penerapan analisis meta di permasalahan riil. 2. Dapat membedakan antara data univariat dan data multivariate. <i>1. Able to apply meta analysis in the real case</i> <i>2. Able to distinguish the difference between univariate and multivariate data.</i>	5% /5%
2		Mengetahui konsep dari ukuran efek, ukuran presisi dan ukuran efek heterogenitas <i>Understand the concept of Effect Size and Precision, and heterogeneity effect size</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Mengetahui konsep Effect Size pada analisis meta 2. Mengetahui konsep Ukuran Presisi pada analisis meta 3. Mengetahui konsep ukuran heterogenitas pada analisis meta	5% /10%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
						1. Understand the concept of Effect Size in meta analysis 2. Understand the concept of Precision in meta analysis 3. Understand the concept of heterogeneity effect size in meta analysis	
3	Mengetahui langkah-langkah yang harus dilakukan dalam Meta-analisis untuk mean satu sampel <i>Understand the procedures in meta analysis for one sample mean</i>	Dapat menentukan, menghitung dan menginterpretasikan ukuran efek pada uji hipotesis rata-rata satu populasi univariat <i>Able to determine, calculate, and interpret the effect size in one sample mean univariate hypothesis testing</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Menentukan statistik uji pada hipotesis rata-rata satu populasi, 2. menghitung ukuran efek pada hipotesis rata-rata satu populasi 3. menginterpretasikan ukuran efek pada hipotesis rata-rata satu populasi 1. Determine the statistical tests in one sample mean hypothesis testing 2. Calculate the effect size in one sample mean hypothesis testing 3. Interpret the effect size in one sample mean hypothesis testing	10% /20%
4		Dapat menentukan, menghitung dan menginterpretasikan	Ceramah Interaksi, Diskusi, Latihan, Seminar	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. menghitung ukuran presisi pada hipotesis rata-rata satu populasi	10% /30%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
		ukuran presisi pada uji hipotesis rata-rata satu populasi univariat <i>Able to determine, calculate, and interpret the precision in one sample mean univariate hypothesis testing</i>	<i>Interactive Lecture, Discussion, Exercises, Seminar</i>			2. menginterpretasikan ukuran presisi pada hipotesis rata-rata satu populasi <i>1. Calculate the precision in one sample mean hypothesis testing</i> <i>2. Interpret the precision in one sample mean hypothesis testing</i>	
5		Dapat menentukan, menghitung dan menginterpretasikan ukuran efek heterogenitas pada uji hipotesis rata-rata satu populasi univariat <i>Able to determine, calculate, and interpret the heterogeneity effect size in one sample mean univariate hypothesis testing</i>				1. menghitung ukuran heterogenitas pada hipotesis rata-rata satu populasi 2. menginterpretasikan ukuran heterogenitas pada hipotesis rata-rata satu populasi <i>1. Calculate the heterogeneity effect size in one sample mean hypothesis testing</i> <i>2. Interpret the heterogeneity effect size in one sample mean hypothesis testing</i>	5% /35%
6	Mengetahui langkah-langkah yang harus dilakukan dalam Meta-analisis untuk perbedaan mean dua sampel Effect	Dapat menentukan, menghitung dan menginterpretasikan ukuran efek dan ukuran presisi pada uji hipotesis	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Menentukan statistik uji pada hipotesis rata-rata dua populasi, 2. menghitung ukuran efek dan presisi pada hipotesis rata-rata dua populasi	10% /45%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
	<i>Understand the procedure of meta analysis in two effect sample mean difference</i>	rata-rata dua populasi univariat <i>Able to determine, calculate, and interpret the effect size and precision in two samples mean univariate hypothesis testing</i>				3. menginterpretasikan ukuran efek dan presisi pada hipotesis rata-rata dua populasi <i>1. Determine the statistical tests in two samples mean hypothesis testing</i> <i>2. Calculate the effect size and precision in two samples mean hypothesis testing</i> <i>3. Interpret the effect size and precision in two samples mean hypothesis testing</i>	
7		Dapat menentukan, menghitung dan menginterpretasikan ukuran efek heterogenitas pada uji hipotesis rata-rata dua populasi univariat <i>Able to determine, calculate, and interpret the heterogeneity effect size in two samples mean univariate hypothesis testing</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. menghitung ukuran heterogenitas pada hipotesis rata-rata dua populasi 2. menginterpretasikan ukuran heterogenitas pada hipotesis rata-rata dua populasi <i>1. Calculate the heterogeneity effect size in two samples mean hypothesis testing</i> <i>2. Interpret the heterogeneity effect size in two samples mean hypothesis testing</i>	5% /50%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
8	ETS MIDTERM EXAM						
9	Dapat menjelaskan Model Fixed Effect pada Meta Analisis <i>Able to explain the Fixed Effect Model in Meta Analysis</i>	Dapat menentukan, menghitung dan menginterpretasikan ukuran efek dan presisi pada Model Fixed Effect dengan statistik tertentu <i>Able to determine, calculate, and interpret the effect size and precision in Fixed Effect Model using appropriate statistics</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Menentukan estimasi, statistik uji pada model fixed efek, 2. menghitung ukuran efek dan presisi pada model fixed efek 3. menginterpretasikan ukuran efek dan presisi pada model fixed efek <i>1. Determine the estimation and statistical tests in the Fixed Effect Model</i> <i>2. Calculate the effect size and precision in the Fixed Effect Model</i> <i>3. Interpret the effect size and precision in the Fixed Effect Model</i>	10% /60%
10		Dapat menentukan, menghitung dan menginterpretasikan ukuran efek heterogenitas pada Model Fixed Effect dengan statistik tertentu <i>Able to determine, calculate, and interpret the</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. menghitung ukuran heterogenitas pada model fixed efek 2. menginterpretasikan ukuran heterogenitas pada model fixed efek	5% /65%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
		<i>heterogeneity effect size in Fixed Effect Model using appropriate statistics</i>				1. Calculate the heterogeneity effect size in the Fixed Effect Model 2. Interpret the heterogeneity effect size in the Fixed Effect Model	
11	Dapat menjelaskan Model Random Effect dan Campuran pada Meta Analisis <i>Able to explain Random Effect Model and Mixed Effect Model in meta analysis</i>	Dapat menentukan, menghitung dan menginterpretasikan ukuran efek, presisi dan heteroginitas pada Model Random Effect dan Campuran dengan statistik tertentu pada meta analisis <i>Able to determine, calculate, and interpret the effect size, precision and heterogeneity effect size in Random Effect Model and Mixed Effect Model using appropriate statistics in meta analysis</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Menentukan estimasi, statistik uji pada model random efek dan campuran, 2. menghitung ukuran efek dan presisi, heteroginitas pada model random efek dan campuran 3. menginterpretasikan ukuran efek dan presisi, heteroginitas pada model random efek dan campuran 1. Determine the estimation and statistical tests in the Random Effect Model and Mixed Effect Model 2. Calculate the effect size, precision, and heterogeneity effect size in the Random Effect Model and Mixed Effect Model	10% /75%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
						3. Interpret the effect size, precision, and heterogeneity effect size in the Random Effect Model and Mixed Effect Model	
12	Dapat menjelaskan meta regresi linear <i>Able to explain meta linear regression</i>	Dapat menentukan, menghitung dan menginterpretasikan ukuran efek, presisi dan heteroginitas pada Model Regresi linear dengan statistik tertentu pada meta analisis <i>Able to determine, calculate, and interpret the effect size, precision and heterogeneity effect size in linear regression model using appropriate statistics</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Menentukan estimasi, statistik uji pada model regresi linear, 2. menghitung ukuran efek dan presisi serta heteroginitas pada model regresi linear 3. menginterpretasikan ukuran efek dan presisi heteroginitas pada model regresi linear <i>1. Determine the estimation and statistical tests in linear regression model 2. Calculate the effect size, precision, and heterogeneity effect size in linear regression model 3. Interpret the effect size, precision, and heterogeneity effect size in linear regression model</i>	10% /85%
13	Dapat menjelaskan meta regresi logistik	Dapat menentukan, menghitung dan menginterpretasikan	Ceramah Interaksi, Diskusi, Latihan, Seminar	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. Menentukan estimasi, statistik uji pada model regresi logistik,	5% /90%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
	<i>Able to explain meta logistic regression</i>	ukuran efek, presisi dan heteroginitas pada Model Regresi logistik dengan statistik tertentu pada meta analisis <i>Able to determine, calculate, and interpret the effect size, precision and heterogeneity effect size in logistic regression model using appropriate statistics in meta analysis</i>	<i>Interactive Lecture, Discussion, Exercises, Seminar</i>			2. menghitung ukuran efek dan presisi serta heteroginitas pada model regresi logistik 3. menginterpretasikan ukuran efek dan presisi heteroginitas pada model regresi logistik 1. <i>Determine the estimation and statistical tests in logistic regression model</i> 2. <i>Calculate the effect size, precision, and heterogeneity effect size in logistic regression model</i> 3. <i>Interpret the effect size, precision, and heterogeneity effect size in logistic regression model</i>	
14	Dapat menjelaskan konsep Publication bias <i>Able to explain the publication bias</i>	Dapat menentukan, menghitung dan menginterpretasikan bias publikasi pada suatu model dengan statistik tertentu pada meta analisis <i>Able to determine, calculate, and interpret publication bias in the</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. menentukan publikasi bias pada suatu model meta 2. menghitung publikasi bias pada suatu model meta 3. menginterpretasikan publikasi bias pada suatu model meta 1. <i>Determine the publication bias in the meta model</i>	5% /95%

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

Pertemuan <i>Meeting</i>	Kemampuan Akhir Sub CP-MK <i>Final Ability</i>	Keluasan (materi pembelajaran) <i>Extent (learning material)</i>	Metode Pembelajaran <i>Learning methods</i>	Estimasi Waktu <i>Duration</i>	Bentuk Evaluasi <i>Evaluation Type</i>	Kriteria dan Indikator Penilaian <i>Assessment Criteria and Indicators</i>	Bobot Penilaian <i>Scoring</i>
		<i>model using appropriate statistics in meta analysis</i>				2. Calculate the publication bias in the meta model 3. Interpret the publication bias in the meta model	
15	Dapat menjelaskan Analisis Power untuk Meta Analisis <i>Able to explain power analysis in meta analysis</i>	Dapat menentukan, menghitung dan menginterpretasikan analisis power pada suatu model dengan statistik tertentu pada meta analisis <i>Able to determine, calculate, and interpret power analysis in the model using appropriate statistics in meta analysis</i>	Ceramah Interaksi, Diskusi, Latihan, Seminar <i>Interactive Lecture, Discussion, Exercises, Seminar</i>	150 menit <i>150 minutes</i>	Tugas, Latihan Soal <i>Assignment, Exercises</i>	1. menentukan analisis power pada suatu model meta 2. menghitung power test pada suatu model meta 3. menginterpretasikan power test pada suatu model meta 1. Determine the power analysis in the meta model 2. Calculate the power analysis in the meta model 3. Interpret the power test in the meta model	5% /100%
16	EAS FINAL EXAM						

PUSTAKA/REFERENCES:

1. Borenstein M, Hedges LV, Higgins JPT, Rothstein HR, (2009), Introduction to Meta-Analysis. John Wiley & Sons, Ltd.
2. Sterne JAC (editor), (2009), Meta-Analysis in Stata: An updated Collection from the Stata Journal. Stata Press.
3. Joachim Hartung, Guido K., Bimal, K. S. (2008). Statistical Meta Analysis with Applications. John Wiley & Sons, Inc., Publication
4. Larry, V., Hedges, Ingram, O., (1985). Statistical Method for Meta Analysis. Orlando San Diego, New York.

	Program Studi	Sarjana, Departemen Statistika, FMKSD-ITS
	Mata Kuliah	Analisis Meta
	Kode Mata Kuliah	KS184757
	Semester/SKS	VII/3
	MK Prasyarat	Analisis Regresi, Analisis Data Kategori
RP-S1	Dosen Pengampu	Dr. Bambang Widjanarko Otok, M.Si. ; Dr. Santi Wulan Purnami, S.Si, M.Si

5. Bohning, D., Sasivimol, R., Ronny, K. (2008). Meta Analysis of Binary Data Using Profile Likelihood. Chapman & Hall/CRC Taylor & Francis Group.
6. John, E., Hunter, Frank L. Schmidt. (2004). Methods of Meta Analysis. Sage Publications, Inc
7. Whitehead, A., (2002). Meta-Analysis of Controlled Clinical Trials. A. Whitehead Copyright. John Wiley & Sons, Ltd.