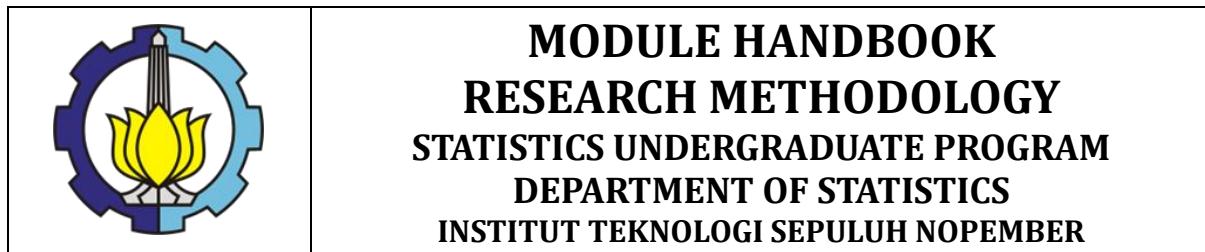# MODULE HANDBOOK

RESEARCH METHODOLOGY

STATISTICS UNDERGRADUATE PROGRAM
DEPARTMENT OF STATISTICS
FACULTY OF SCIENCE AND DATA ANALYTICS
INSTITUT TEKNOLOGI SEPULUH NOPEMBER
SURABAYA

MODULE HANDBOOK
RESEARCH METHODOLOGY
STATISTICS UNDERGRADUATE PROGRAM
DEPARTMENT OF STATISTICS
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Proses *Process*	Penanggung Jawab *Person in Charge*			Tanggal *Date*
	Nama *Name*	Jabatan *Position*	Tanda tangan *Signature*	
Perumus *Preparation*	Dr. Muhammad Ahsan	Dosen Lecturer		
Pemeriksa dan Pengendalian *Review and Control*	Dr. Ismaini Zain; Dr. Santi Wulan Purnami, Dr. Muhammad Ahsan	Tim kurikulum Curriculum team		
Persetujuan *Approval*	Dr. Wibawati, S.Si., M.Si	Koordinator RMK Course Cluster Coordinator		
Penetapan *Determination*	Dr. Kartika Fithriasari, M.Si	Kepala Departemen Head of Department		

MODULE HANDBOOK
RESEARCH METHODOLOGY

Module name	RESEARCH METHODOLOGY	
Module level	Undergraduate	
Code	SS234742	
Course (if applicable)	RESEARCH METHODOLOGY	
Semester	7	
Person responsible for the module	Dr. Muhammad Ahsan	
Lecturer	Dr. Ismaini Zain; Dr. Santi Wulan Purnami, Dr. Muhammad Ahsan	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergradute degree program, mandatory, 7th semester.	
Type of teaching, contact hours	Non SCL (100%)	
Workload	1. Lectures [L] : 3 x 50 = 150 minutes per week. 2. Exercises and Assignments [EA] : 3 x 60 = 180 minutes (3 hours) per week. 3. Independent learning [IL]: 3 x 60 = 180 minutes (3 hours)perweek.	
Credit points	3 credit points (SKS) Equivalent to 4.8 ECTS	
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.	
Mandatory prerequisites	Regression Analysis	
Learning outcomes and their corresponding PLOs	CLO.1 Able to compile research proposals equivalent to Final Projects; CLO.2 Can identify research descriptions and statistical methods to analyze problems in the fields of business and industry, social and population, environment and health, economics and finance, and computing. CLO.3 Able to express research ideas in a scientific writing, both written and oral	PLO.2 PLO.7 PLO.9 PLO.10
Content	Research Methodology is a course that supports graduate learning outcomes (CPL) of study programs, namely: CPL-2, CPL-7, CPL-9, and CPL-10. Research Methodology is one of the expertise courses which is part of the field of study in the Statistical Modeling course cluster. The aim of studying Research Methodology is that students are able to understand concepts and methodologies in scientific research, especially	

	the stages in research in the field of applied statistics, and can apply them to a real problem in society. Through this course it is hoped that students will have learning experience to think critically and be able to make the right decisions about the stages in conducting scientific research that are appropriate to a problem and its solution. The learning strategies used are discussions and exercises as well as assignments to make research proposals
Assessment and its weight	Quiz I–25% Midterm Exam – 25% Assignment–25% Presentation– 25%
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom
Reading list	1. Sekaran, U, 2006. Research Methods for Business: Metodologi Penelitian untuk Bisnis, Penerbit Salemba Empat, Edisi 4, Buku 1 dan 2 2. Rakhmat, J., 2004. Metodologi Penelitian Komunikasi, Penerbit PT. Remaja Rosdakarya, Bandung.\ **3.** Suyanto, B. dan Sutinah, 2005, Metode Penelitian Sosial: Berbagai Alternatif Pendekatan. Kencana Prenada Media Group, Jakarta. **4.** Nasution, A.H., 2002. Pola Indusksi Seorang EKPERIMENTALIS, IPB Press, Bogor. 5. Malhotra, N.K., 2004. Riset Pemasaran: Pendekatan Terapan (terjemahan), Prentoce Hall: New Jersey, Edisi 4, Buku 1 dan 2. 6. Bungin, B., 2005. Metodologi Penelitian Kuantitatif: Komunikasi, Ekonomi, dan Kebijakan Publik, serta Ilmi-Ilmu Sosial Lainnya, Kencana Prenada Media Group, Jakarta.

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INSTITUT TEKNOLOGI SEPULUH NOPEMBER

FAKULTAS SAINS DAN ANALITIKA DATA

PROGRAM STUDI SARJANA STATISTIKA

DEPARTEMEN STATISTIKA

</td><td>**Kode Dokumen**</td></tr>
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		RENCANA PEMBELAJARAN SEMESTER/				
		SEMESTER LEARNING PLAN				

MATA KULIAH (MK)/ *Course*		**KODE/** *Code*	**Rumpun MK/** *Course Group*	**BOBOT (sks)/** *Weight (credit)*		**SEMESTER/** *Semester*	**Tgl Penyusunan/** *Drafting Date*
METODOLOGI PENELITIAN/ *RESEARCH METHODOLOGY*		SS234742	SBI	**T= 3**	**P=**	VII	17 Desember 2022

OTORISASI/ *AUTHORIZATION*		**Pengembang RPS/** *RPS Developer*	**Koordinator RMK/** *Course Group Coordinator*	**Ketua PRODI/** *Head of Department*
		Dr. Muhammad Ahsan	Wibawati, S.Si, M.Si	Dr. Kartika Fithriasari, M.Si

Capaian Pembelajaran (CP)/ *Learning Achievement*	**CPL-PRODI yang dibebankan pada MK/** *PLO*	
	CPL.2	Mampu mengkaji dan memanfaatkan ilmu pengetahuan dan teknologi dalam rangka mengaplikasikannya pada bidang keahlian tertentu, serta mampu mengambil keputusan secara tepat dari hasil kerja sendiri maupun kerja kelompok dalam bentuk laporan tugas akhir atau bentuk kegiatan pembelajaran lain yang luarannya setara dengan Tugas Akhir melalui pemikiran logis, kritis, sistematis dan inovatif.
	CPL.7	Mampu menggunakan perangkat komputasi modern untuk menyelesaikan permasalahan statistik
	CPL.9	Mampu menerapkan metode statistika untuk menganalisis permasalahan teoritis dan rill
	CPL.10	Mampu menerapkan metode statistika Bisnis, Industri, Ekonomi, Sosial, Kesehatan, atau Lingkungan pada permasalahan riil
	PLO.2	*Able to study and utilize science and technology in order to apply it to certain areas of expertise, and be able to make appropriate decisions from the results of their own work or group work in the form of final project reports or other forms of learning activities whose output is equivalent to the Final Project through logical, critical thinking , systematic and innovative.*
	PLO.7	*Able to use modern computing devices to solve statistical problems*

	PLO.9	*Able to apply statistical methods to analyze theoretical and real problems*
	PLO.10	*Able to apply business, industrial, economic, social, health or environmental statistical methods to real problems*

Capaian Pembelajaran Mata Kuliah (CPMK)/
CLO

CPMK.1 Mampu menyusun proposal penelitian setara Tugas Akhir;

CPMK.2 Dapat mengenali gambaran penelitian dan metode statistik untuk menganalisis permasalahan di bidang bisnis dan industri, sosial dan kependudukan, lingkungan dan kesehatan, ekonomi dan finansial, dan komputasi.

CPMK.3 Mampu menuangkan ide penelitian dalam suatu tulisan ilmiah baik tertulis maupun lisan.

CLO.1 Able to compile research proposals equivalent to Final Projects;

CLO.2 Can identify research descriptions and statistical methods to analyze problems in the fields of business and industry, social and population, environment and health, economics and finance, and computing.

CLO.3 Able to express research ideas in a scientific writing, both written and oral

Matrik CPL – CPMK
PLO-CLO Matrix

CPMK	CPL-2	CPL-7	CPL-9	CPL-10
CPMK-1	V			
CPMK-2		V	V	V
CPMK-3		V	V	V

Deskripsi Singkat MK/ *Course Description*	Metodologi Penelitian merupakan mata kuliah yang menunjang capaian pembelajaran lulusan (CPL) prodi, yaitu: CPL-2, CPL-7, CPL-9, dan CPL-10. Metodologi Penelitian merupakan salah satu mata kuliah keahlian yang merupakan bagian dari bidang kajian dalam rumpun mata kuliah Pemodelan Statistik. Tujuan mempelajari Metodologi Penelitian adalah mahasiswa mampu memahami konsep dan metodologi dalam penelitian ilmiah, khususnya tahapan-tahapan dalam penelitian di bidang statistika terapan, serta dapat menerapkannya pada suatu permasalahan nyata di masyarakat. Melalui mata kuliah ini diharapkan mahasiswa akan memiliki pengalaman belajar untuk berfikir secara kritis dan mampu memberikan keputusan yang tepat tentang tahapan-tahapan dalam melakukan penelitian ilmiah yang sesuai pada suatu permasalahan dan penyelesaiannya. Strategi pembelajaran yang digunakan adalah diskusi dan latihan serta tugas membuat proposal penelitian.
	Research Methodology is a course that supports graduate learning outcomes (CPL) of study programs, namely: CPL-2, CPL-7, CPL-9, and CPL-10. Research Methodology is one of the expertise courses which is part of the field of study in the Statistical Modeling course cluster. The aim of studying Research Methodology is that students are able to understand concepts and methodologies in scientific research, especially the stages in research in the field of applied statistics, and can apply them to a real problem in society. Through

	this course it is hoped that students will have learning experience to think critically and be able to make the right decisions about the stages in conducting scientific research that are appropriate to a problem and its solution. The learning strategies used are discussions and exercises as well as assignments to make research proposals
Bahan Kajian: Materi Pembelajaran/ *Course Material*	1. Pengantar tentang Metodologi Penelitian Ilmiah, 2. Pengamatan : Mengidentifikasi Minat Bidang Penelitian Yang Luas, 3. Pengumpulan Data Awal, 4. Penyusunan laporan : Definisi Masalah,Kerangka Teoritis,Penyusunan Hipotesis,Desain Penelitian Ilmiah,Pengumpulan, Analisis, Dan Interpretasi Data,Deduksi, dan Penulisan Daftar Pustaka 5. Presentasi Laporan, 6. Pengambilan Keputusan Manajerial, 7. Implementasi Pembuatan Proposal Penelitian *1. Introduction to Scientific Research Methodology,* *2. Observation: Identifying Broad Research Field Interests,* *3. Preliminary Data Collection,* *4. Compilation of reports: Problem Definition, Theoretical Framework, Hypothesis Preparation, Scientific Research Design, Data Collection, Analysis, and Interpretation, Deduction, and Bibliography Writing* *5. Report Presentation,* *6. Managerial Decision Making,* *7. Implementation of Making Research Proposals*
Pustaka/ *References*	**Utama/**Primary**: 1. Sekaran, U, 2006. Research Methods for Business: Metodologi Penelitian untuk Bisnis, Penerbit Salemba Empat, Edisi 4, Buku 1 dan 2 2. Rakhmat, J., 2004. Metodologi Penelitian Komunikasi, Penerbit PT. Remaja Rosdakarya, Bandung.\ 3. Suyanto, B. dan Sutinah, 2005, Metode Penelitian Sosial: Berbagai Alternatif Pendekatan. Kencana Prenada Media Group, Jakarta. **Pendukung/**Secondary : 1. Nasution, A.H., 2002. Pola Induksi Seorang EKPERIMENTALIS, IPB Press, Bogor. 2. Malhotra, N.K., 2004. Riset Pemasaran: Pendekatan Terapan (terjemahan), Prentoce Hall: New Jersey, Edisi 4, Buku 1 dan 2. 3. Bungin, B., 2005. Metodologi Penelitian Kuantitatif: Komunikasi, Ekonomi, dan Kebijakan Publik, serta Ilmi-Ilmu Sosial Lainnya, Kencana Prenada Media Group, Jakarta.
Dosen Pengampu/ *Lecturers*	Dr. Ismaini Zain; Dr. Santi Wulan Purnami
Matakuliah syarat/ *Pre-requisite Course*	-

Mg Ke- *Week*	Kemampuan akhir tiap tahapan belajar (Sub-CPMK) *Final capability for each learning step*	Penilaian *Evaluation*		Bantuk Pembelajaran, Metode Pembelajaran, Penugasan Mahasiswa, [Estimasi Waktu] *Learning Format* *Learning Methods* *Assignment for Student* *[Estimated Time]*		Materi Pembelajaran [Pustaka] *Learning Material* *[References]*	Bobot Penilaian (%) *Evaluation Weight (%)*
		Indikator *Indicator*	Kriteria & Bentuk *Criteria and Format*	Luring *Offline*	Daring *Online*		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1-2	Mampu memahami konsep (definisi), manfaat, dan klasifikasi penelitian *Able to understand the concept (definition), benefits, and classification of research*	Dapat menjelaskan konsep (definisi), manfaat, dan klasifikasi penelitian *Can explain the concept (definition), benefits, and research classification*	Pretes Observasi Aktifitas di kelas Tugas 1 *Pretest* *Observation of activities in class* *Task 1*	Ceramah Interaktif Diskusi (CID) Problem Based Learning (PBL) *Discussion* *Interactive Lecture (CID)* *Problem Based Learning (PBL)* **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**		1. Konsep (definisi) penelitian 2. Manfaat penelitian 3. Klasifikasi penelitian 4. Ciri-ciri penelitian ilmiah 5. Mengenal lembaga penelitian (riset) *1. The concept (definition) of research* *2. Benefits of research* *3. Classification of research* *4. The characteristics of scientific research* *5. Get to know research institutes (research)*	10%
3-4	Mampu mengevaluasi tahapan penelitian *Able to evaluate the stages of research*	Dapat melakukan tahapan penelitian: a. mengidentifikasi masalah, b. mengidentifikasi	Observasi Aktifitas di kelas (TOA) Tugas 2 *Observation of*	Ceramah Interaktif Diskusi (CID) Problem Based Learning (PBL) *Discussion*		1. Identifikasi dan menyusun permasalahan penelitian 2. Identifikasi dan	10%

Minggu	Kemampuan Akhir	Indikator	Penilaian	Metode Pembelajaran	Materi	Bobot
		variabel, c. menyusun hipotesis *Can carry out research stages:* *a. identifies problems,* *b. identifies variables,* *c. formulates hypotheses*	*activities in class* *Task 2*	*Interactive Lecture (CID)* *Problem Based Learning (PBL)* **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**		menyusun variabel 3. Penyusunan hipotesis 1. *Identification and compiling research problems* 2. *Identification and arrangement of variables* 3. *Preparation of hypotheses*	
5-6	Mampu mengevaluasi tahapan penelitian *Able to evaluate the stages of research*	Dapat melakukan tahapan penelitian: a. mendisain penelitian b. mengumpulkan data *Can carry out research stages:* *a. design research* *b. collecting data*	Tes Observasi Aktifitas di kelas (TOA) Tugas 3 *Test* *Observation of activities in class* *Task 3*	Ceramah Interaktif Diskusi (CID) Problem Based Learning (PBL) *Discussion Interactive Lecture (CID)* *Problem Based Learning (PBL)* **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**	1. Membuat disain penelitian 2. Pengumpulan data: sumber data, teknik pengumpulan data, pembuatan kuisioner, wawancara mendalam, diskusi terfokus, simulasi data 1. *Create a research design* 2. *Data collection: data sources, data collection techniques, questionnaires, in-depth interviews, focused discussions, data simulation*	10%
7	Mampu mengevaluasi tahapan penelitian *Able to evaluate the stages of research*	Dapat melakukan tahapan penelitian yaitu menganalisis data *Can carry out research stages, namely analyzing data*	Tes Observasi Aktifitas di kelas (TOA) Tugas 4 *Test* *Observation of activities in class* *Task 4*		Ceramah Interaktif Diskusi (CID) Problem Based Learning (PBL) **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**	Pengolahan dan analisis data: kontrol kualitas data, manajemen data, metode analisis statistika yang sesuai *Data processing and analysis: data quality control, data management, appropriate statistical analysis*	15%

						methods	
8	ETS/*Midterm*						
9-10	Mampu mengevaluasi tahapan penelitian *Able to evaluate the stages of research*	Dapat melakukan tahapan penelitian: 1. menyusunan laporan penelitian dan makalah seminar/ jurnal, 2. mempresentasikan hasil penelitian *Can carry out research stages:* *1. compiling research reports and seminar/journal papers,* *2. presenting research results*	Tes Observasi Aktifitas di kelas (TOA) *Test* *Observation of activities in class*	Ceramah Interaktif Diskusi (CID) Problem Based Learning (PBL) *Discussion* *Interactive Lecture (CID)* *Problem Based Learning (PBL)* **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**		1. Penyusunan laporan: format laporan, teknik penyajian dan pembuatan ilustrasi, tata Bahasa Indonesia yang baku 2. Penyusunan materi presentasi dan teknik berpresentasi *1. Report preparation: report format, presentation techniques and illustration creation, standard Indonesian grammar* *2. Preparation of presentation materials and presentation techniques*	15%
q	Mampu memahami penelitian statistika *Able to understand statistical research*	1. Dapat mengidentifikasi permasalahan dalam penelitian statistika 2. Mengetahui tahapan-tahapan dalam penelitian statistika 3. Memahami jenis-jenis penelitian statistika *1. Can identify problems in statistical research* *2. Knowing the stages in statistical research* *3. Understand the types of statistical research*	Tes Observasi Aktifitas di kelas (TOA) *Test* *Observation of activities in class*	Ceramah Interaktif Diskusi (CID) Problem Based Learning (PBL) *Discussion* *Interactive Lecture (CID)* *Problem Based Learning (PBL)* **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**		1. Penelitian statistika 2. Penelitian statistika Bisnis 3. Penelitian Statistika Industri 4. Penelitian Statistika Komputasi *1. Statistical research* *2. Business statistical research* *3. Industrial Statistics Research* *4. Computational Statistics Research*	20%
15-16	Mampu membuat proposal yang disajikan dalam bentuk tulisan	Dapat membuat proposal penelitian dan dapat mempresentasikannya	Presentasi Observasi Aktifitas di kelas (TOA)	Ceramah Interaktif Diskusi (CID) Problem Based		1. Penyusunan proposal 2. Penyusunan materi presentasi	20%

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	dan lisan *Able to make research proposals in report and oral.*	*Can make research proposals and can present them*	*Presentation Observation of activities in class*	Learning (PBL) *Discussion Interactive Lecture (CID) Problem Based Learning (PBL)* **TM: 2x50"** **LT: 2x60"** **BM: 2x60"**		1. *Preparation of proposal* 2. *Preparation of presentation material*	