1.Course Identity

Course name (*Nama mata kuliah*)	Life Insurance 2		
Faculty (*Fakultas*)	Mathematic and Natural Science	**Study Program (*Program Studi*)**	Statistics
Code (*Kode*)	SST-512	**Credit poin Sks (*Bobot Sks*)**	3
Group (*Grup*)	Study Program	**Enrollment obligatory (*Sifat pengambilan*)**	~~mandatory~~/ optional*
Semester(s) in which the course is taught (*Semester*)	5	**Availability (*Ketersediaan*)**	Limited
Learning method (*Bentuk pembelajaran*)	blended learning/~~online learning*~~	**Media (*Media*)**	Blended
Course category (*Rumpun mata kuliah/blok*)	~~university compulsory course~~/ ~~SSP compulsory course~~/ ~~practicum/~~ compulsory of scientific interest/ ~~elective course*~~	**Requirements (*Prasyarat*)**	Life Insurance 1
Lecture (*Dosen pengampu*)	Abdullah Ahmad Dzikrullah, M.Sc.	**Semester/ Academic year (*Semester/ Tahun Akademik*)**	Odd Semester 2020/2021

*) cross the unnecessary ones

2a. PROGRAM LEARNING OUTCOME (*CAPAIAN PEMBELAJARAN LULUSAN*)

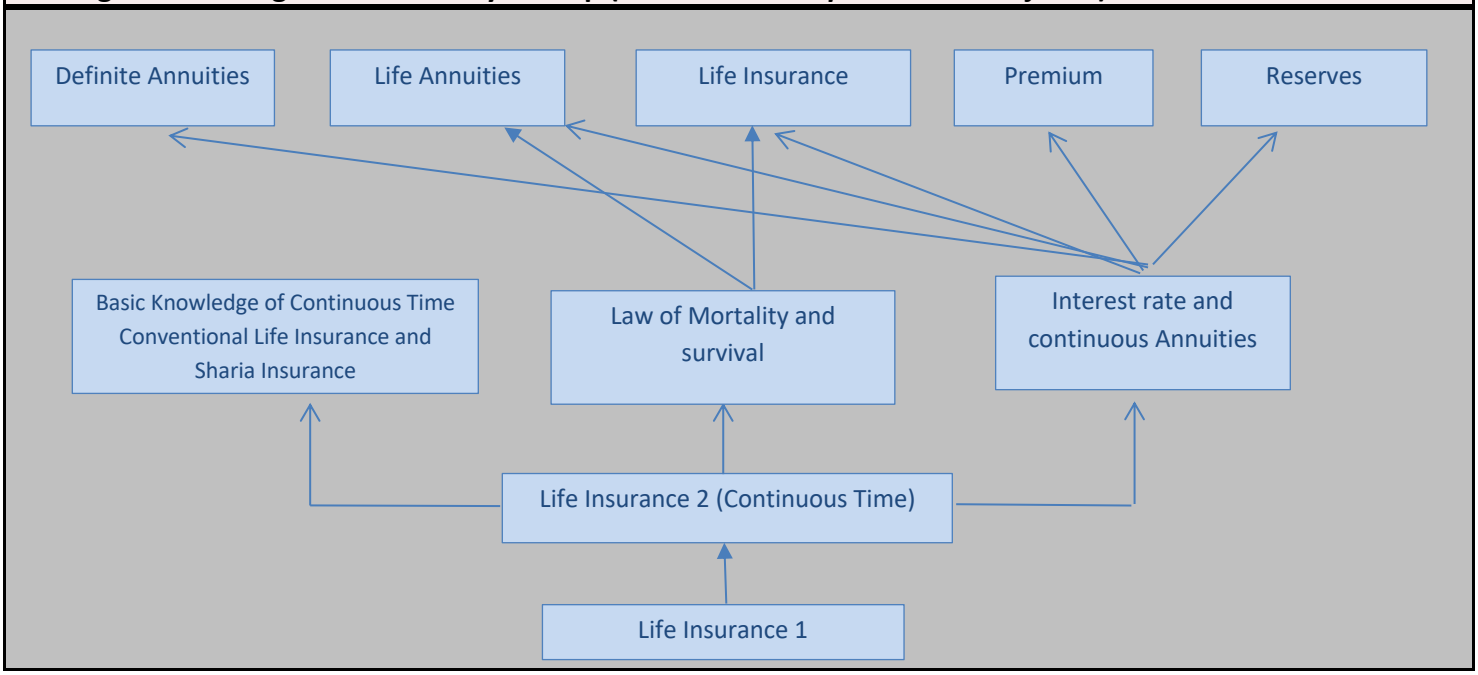
LO Code (*Kode CPL*)	LO Description (*Rumusan CPL*)
PP(a) Intellegence	Mastering the concepts of probability theory and expected value, integral calculus, continuous-time actuarial distribution, statistical analysis methods, and computer programming related to actuarial science
PP(b) Science	Mastering several actuarial methodologies (methods and models) to be used in solving insurance problems, especially those related to continuous time.

2b. COURSE OUTCOME (*CAPAIAN PEMBELAJARAN MATA KULIAH*)

Supported PLO Code (*Kode CPL yang didu-kung*)	CO Code (*Kode CPMK*)	CO Descriptions and Indicators (*Rumusan CPMK dan Indikator*)	Learning Experience (*Pengalaman Pembelajaran*)	Assessment (*Asesmen/penilaian*)	Weight (*Bo-bot*)
Intelleg ence	PPa1	Students can explain the concept of continuous time life insurance,	At the end of each learning sub-chapter, students will be given assignments in the form of problems to measure students	Written Test/case study: essay, individual and group task	20 %

		sharia-based insurance, and life expectancy. Indicator : 1. students can classify the basic concepts of conventional life insurance with sharia life insurance 2. students can calculate integrals of course so that they can measure a person's life expectancy.	understanding of the material presented. After the final material will be given an assignment in the form of a case study.		
	PPa2	Students can explain the concept of interest and annuity life at continuous time. Indicator : 1. students can calculate and classify the concept of interest and continuous time annuities 2. students can analyze life annuity problems based on continuous time definite annuities	At the end of each learning sub-chapter, students will be given assignments in the form of problems to measure students understanding of the material presented. After the final material will be given an assignment in the form of a case study.	Written Test/case study: essay, individual and group task	25 %
Science	PPb1	Students can explain the various types of life insurance, single premium, and annual premium in continuous time distribution. Indicator : 1. students can distinguish various types life insurance on a continuous time distribution 2. student can calculate net single premium and annual premium	At the end of each learning sub-chapter, students will be given assignments in the form of problems to measure students understanding of the material presented. After the final material will be given an assignment in the form of a case study..	Written Test/case study: essay, individual and group task	35 %
	PPb2	Students can explain the concept of reserves in continuous life insurance Indicator : 1. Students can distinguish between prospective and retrospective continuous-time life insurance reserves 2. students can calculate life insurance reserves correctly	At the end of each learning sub-chapter, students will be given assignments in the form of problems to measure students understanding of the material presented. After the final material will be given an assignment in the form of a case study.	Written Test/case study: essay, individual and group task	20 %

3. Program Learning Outcome Analysis Map (*Peta Analisis Capaian Pembelajaran*)



4. Reference (*Referensi*)

1. Bowers, N.L., dkk. 1997. *Actuarial Mathematics*. The Society of Actuaries.
2. Rakhman,A. Effendie.A.R. 2015. *Matematika Aktuaria*. Jakarta: Penerbit Universitas Terbuka
3. Anshori, H. Abdul Ghofur.2007. *Asuransi Syariah di Indonesia (Regulasi dan Operasionalisasinya di dalam Kerangka Hukum Positif di Indonesia).* Yogyakarta : UII Press

5. Detail of Learning Activities (*Rincian Aktivitas Pembelajaran*)

Session (sesi)	LOC/Sub-LOC/Criterion (*CPMK/Sub-CPMK/ Kriteria*)	Study Material (*Bahan Kajian*)	Activity Design and Duration (*Rancangan Aktivitas dan Durasi*)	Mode	Learning Media/ Reference (*Media Pembelajaran/ Referensi*)
1	PPa1	Learning Contract and Basic Concept of Continuous Life Insurance	the lecturer explains about the contract agreement: attendance, reference books, materials, exams, scores (100 minutes) Lecturer explains about related material (50 minutes)	FF/ FFO	Book Zoom Google Classroom
2	PPa1	Survival function, survival probability and its application in continuous time life insurance	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
3	PPa1	Knowledge of multiple continuous time survival distributions with explanation of their parameters	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom

4	PPa1	Complete life expectancy and variance of multiple survival distributions	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
5	PPa2	Compound interest rates and fixed-time annuities	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
6	PPa2	Continuous time life annuity based on probability distribution of survival	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
7	PPa2	Continuous time annuity analysis using software	Lecturer explains about related material (100 minutes) Lecturer gives case study as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
	MIDTERM EXAM				
8	PPb1	basic concept of calculating the cash value of life insurance and continuous time life insurance benefits	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
9	PPb1	Continuous time life insurance model with variations in insurance contract time (lifetime, term, pending, and endowment)	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
10	PPb1	Continuous time life insurance analysis using software	Lecturer explains about related material (100 minutes) Lecturer gives case study as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
11	PPb1	method of calculating annual/monthly premium value based on life insurance and life annuity models.	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
12	PPb2	The method of calculating reserve funds that the insurance company needs to prepare	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
13	PPb2	Analysis of the calculation of reserve funds that insurance companies need to prepare using Software	Lecturer explains about related material (100 minutes) Lecturer gives case study as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom

14	PPa1	The basic concept of sharia-based insurance calculation	Students study the book then a short presentation in class (30 minutes) Lecturer explains about related material (70 minutes) Lecturer gives written questions as material for student discussion (50 minutes)	FF/ FFO	Book Zoom Google Classroom
	FINAL EXAM				

Information:

For mode, enter one of the following codes

• FF = activities that require **face-to-face** meetings in class (*aktivitas yang memerlukan tatap muka (TM) langsung di kel*as);

• FFO = activities that require **face to face online** (*aktivitas yang memerlukan tatap muka secara daring (tatap maya/TMD)*);

• SAA = standalone asynchronous online activity (*aktivitas daring asinkron mandiri/ASM*);

• CAA = collaborative asynchronous online activities (*aktivitas daring asinkron kolaborasi/ASK*);

Learning / reference media can be in the form of (1) self-produced results, (2) curated results: media sourced from the internet or other sources chosen by the lecturer, and / or (3) students' own exploration results.

6. Assessment and Evaluation System (*Sistem Penilaian dan Evaluasi*)	
Assessment System (*Sistem Penilaian*)	Benchmark Reference Assessment (PAP) is an assessment using absolute study program value standards.
Evaluation System (*Sistem Evaluasi*)	each student must achieve a minimum grade/predicate of C for each CO. If it does not meet then the student is obliged to take an examination/assignment of repair for the related CO.

Date:	Date:	Date: 30 August 2020
Validated by (*Disyahkan oleh*)	Examined by (*Diperiksa oleh*)	Prepared by (*Disiapkan oleh*)
Dr. Edy Widodo, S.Si., M.Sc.	Achmad Fauzan, M.Si.	Abdullah Ahmad Dzikrullah, S.Si., M.Sc.