PORTOFOLIO MATA KULIAH

	INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) **FAKULTAS TEKNOLOGI INDUSTRI DAN REKAYASA SISTEM** **DEPARTEMEN TEKNIK SISTEM DAN INDUSTRI**				
Mata Kuliah (MK)	**Kode**	**RMK**	**Bobot (sks)**	**Semester**	**Waktu Review**
Analisis dan Estimasi Biaya *Cost Analysis and Estimation*	TI184307	PSMI	3	3	Agustus 2020
Otorisasi / Pengesahan	**Dosen MK / Koordinator MK**		**Ketua RMK**	**Kadep / Kaprodi**	
	Naning Aranti Wessiani		Lantip Trisunarno	Nurhadi Siswanto	
Team Teaching	I Ketut Gunarta, Ibnu Hisyam, Atikah Aghdhi Pratiwi				

Capaian Pembelajaran Lulusan (CPL) sesuai dengan IABEE / *Program Learning Outcomes (PLO) based on IABEE criteria*

Kode / *code*	Deskripsi CPL / *PLO description*
(a)	Kemampuan menerapkan pengetahuan matematika, ilmu pengetahuan alam dan/atau material, teknologi informasi dan keteknikan untuk mendapatkan pemahaman menyeluruh tentang prinsip-prinsip keteknikan.
(b)	Kemampuan mendesain komponen, system dan/atau proses untuk memenuhi kebutuhan yang diharapkan didalam batasan-batasan realistis, misalnya hukum, ekonomi, lingkungan, sosial, politik, kesehatan dan keselamatan, keberlanjutan serta untuk mengenali dan/atau memanfaatkan potensi sumber daya lokal dan nasional dengan wawasan global.
(c)	Kemampuan mendesain dan melaksanakan eksperimen laboratorium dan/atau lapangan serta menganalisis dan mengartikan data untuk memperkuat penilaian teknik.
(d)	Kemampuan mengidentifikasi, merumuskan, menganalisis dan menyelesaikan permasalahan teknik.
(e)	Kemampuan menerapkan metode, keterampilan dan piranti teknik yang modern yang diperlukan untuk praktek keteknikan
(f)	Kemampuan berkomunikasi secara efektif baik lisan maupun tulisan
(g)	Kemampuan merencanakan, menyelesaikan dan mengevaluasi tugas didalam batasan-batasan yang ada.
(h)	Kemampuan bekerja dalam tim lintas disiplin dan lintas budaya.
(i)	Kemampuan untuk bertanggung jawab kepada masyarakat dan mematuhi etika profesi dalam menyelesaikan permasalahan teknik.
(j)	Kemampuan memahami kebutuhan akan pembelajaran sepanjang hayat, termasuk akses terhadap pengetahuan terkait isu-isuke kinian yang relevan.

RENCANA PEMBELAJARAN SEMESTER

	INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) **FAKULTAS TEKNOLOGI INDUSTRI DAN REKAYASA SISTEM** **DEPARTEMEN TEKNIK SISTEM DAN INDUSTRI**				
Mata Kuliah (MK)	**Kode**	**RMK**	**Bobot (sks)**	**Semester**	**Waktu Review**
Analisis dan Estimasi Biaya *Cost Analysis and Estimation*	TI	PSMI	3	3	Agustus 2020

1. Deskripsi Mata Kuliah (*Course Description*)

Mata kuliah Analisis dan Estimasi Biaya akan membekali mahasiswa untuk memiliki kemampuan di dalam memahami konsep – konsep biaya yang dibutuhkan di dalam pengambilan keputusan. Mata kuliah ini terbagi ke dalam dua topik utama. Topik pertama berfokus pada akuntasi keuangan. Pada topik pertama ini, mahasiswa akan mendapatkan pengetahuan dan pemahaman mengenai siklus proses akuntansi yang terjadi di berbagai tipe bisnis perusahaan. Dan di ujung dari topik ini, mahasiswa dapat menyusun laporan keuangan dan melakukan analisa kinerja keuangan perusahaan berbasis pada laporan keuangan tersebut. Topik kedua berkaitan dengan konsep akuntansi manajerial dan biaya. Pada topik kedua, mahasiswa akan dibekali kemampuan untuk memahami biaya produk, alokasi dan estimasi biaya, dan melakukan analisis biaya. Di penghujung semester diharapkan mahasiswa memiliki pemahaman yang menyeluruh mengenai bagaimana melakukan analisis dan estimasi biaya yang banyak dibutuhkan di dalam berbagai pengambilan keputusan utama.

Cost estimation and analysis course will equip the students with the ability to understand cost concepts that important for many decisions making. This course is divided into two main topics. The first topic will be focus on financial accounting. This topic will provide the student with the knowledge and ability to understand the accounting process cycle that occur in many types of business. Based on this knowledge, at the end, the students will be able to make financial statements and do financial performance analysis based on those statements. The second topic will discuss about cost and managerial accounting concepts. The second topics will equip student with the ability to understand product cost, cost allocation and estimation method, and conducting cost analysis. It is expected that students at the end of the semester will have a holistic understanding on how to conduct cost analysis and estimation that is needed in some major decisions making.

2. Capaian Pembelajaran Mata Kuliah (CPMK) / *Course Learning Outcomes (CLO)*

Dengan berakhirnya kuliah, diharapkan mahasiswa

Kode	Uraian CPMK
CPMK 1	Mahasiswa mampu memahami siklus kegiatan industri dan kaitannya dengan proses akuntansi sehingga dapat menggunakan persamaan akuntansi dasar untuk menjelaskan keterkaitannya
CPMK 2	Mahasiswa mampu melakukan pencatatan, penyusunan, penyesuaian, pelaporan dan interpretasi laporan keuangan untuk berbagai jenis industri
CPMK 3	Mahasiswa mampu mendefinisikan dan menggambarkan berbagai istilah dan konsep biaya dan mengevaluasi relevansinya dan melakukan estimasi biaya untuk tujuan pengambilan keputusan yang berbeda
CPMK 4	Mahasiswa mampu mendeskripsikan dan menggunakan sistem penentuan biaya produk seperti biaya berbasis pesanan (*job-order*) dan biaya berbasis proses (*process costing*) serta pengalokasian biaya overhead dengan menggunakan metode *single plant wide*, *multiple production department rate*, dan metode *Activity Based Costing* (ABC)

By the end of this course, students will be able to

Code	*Description of CLO*
CLO 1	*Students will be able to comprehend the cycle of industrial activity and its relation to the accounting process thus able to use basic accounting equation to explain the relevance between them*
CLO 2	*Students will be able to do the recording, preparation, adjusting, reporting and interpretation of financial statements for various types of industries*
CLO 3	*Students will be able to define and illustrate various cost terms and concepts and evaluate their relevancy and conducting cost estimation for different decision-making purposes*
CLO 4	*Students will be able to describe and use product costing systems such as job-order and process costing method and describe the use of overhead allocation method such as single plant wide, multiple production department rate, and Activity Based Costing (ABC) method*

3. CPL yang dibebankan kepada Mata Kuliah (Matriks CPL-CPMK / *PLO-CLO Matrix*)

CPMK	**CPL Program Studi berbasis IABEE / *CLO based on IABEE***									
	(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**
CPMK 1	***	**								
CPMK 2	***	***	***							
CPMK 3	*	**								
CPMK 4	***	**	***							

4. Mata Kuliah Prasyarat / *Prerequisites*

- Pengantar Teknik Sistem dan Industri/*Introduction to Industrial and System Engineering*

5. Referensi / *References*

a. Referensi utama / Main reference

1. Warren, Carl S., James M. Reeve, Jonathan E. Duchac. 2018. Financial and Managerial Accounting. 14th Edition. USA: Cengage Learning

b. Referensi Pendukung / Additional references

2. Warren, Carl S., James M. Reeve, Jonathan E. Duchac. 2009. Managerial Accounting. 10th Edition. USA: South Western College Publishing
3. Warren, Carl S., James M. Reeve, Jonathan E. Duchac. 2011. Financial Accounting. 12th Edition. USA: South Western College Publishing

6. Jadwal Perkuliahan / *Learning Schedule*

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
1	CPMK 1	Introduction to Cost Analysis & Estimation	1. The scope of Cost Analysis & Estimation course 2. Describe the nature of business and the role of accounting 3. Describe generally accepted accounting principles, including the underlying assumptions and principles	Students able to describe the nature of business in any type of industry and the accounting's role in the business	SGD DL	(1) Warren et al – Chapter 1	Written asessment (Mid term test)
2	CPMK 1	Accounting Cycle & Business Transaction	1. State the accounting equation and define each element of the equation 2. Describe business transactions	Students understand the basic equation of accounting and how the business' transactions affect the accounting	SGD DL	(1) Warren et al – Chapter 1	Quiz Exercise Written asessment (Mid term test)

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
			can be recorded in terms of the resulting change in the elements of the accounting equation.	equation elements			
3	CPMK 2	Analyzing Business Transaction #1	1. Describe the characteristics of an account and a chart of accounts 2. Describe and illustrate journalizing transactions using the double-entry accounting system	Students able to understand the cycle of accounting and recording business transaction into the journal	SGD DL Responsi	(1) Warren et al – Chapter 2	Quiz Exercise Written asessment (Mid term test)
4	CPMK 2	Analyzing Business Transaction #2	1. Describe and illustrate the journalizing and posting of transactions to accounts 2. Prepare an unadjusted trial balance and	Students able to post the business transaction into account and analyze error that might happened	SGD DL Responsi	(1) Warren et al – Chapter 2	Quiz Exercise Written asessment (Mid term test)

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
			explain how it can be used to discover errors				
5	CPMK 2	Adjusting Concept	1. Describe the nature of the adjusting process 2. Prepare adjusting entries for accruals 3. Prepare adjusting entries for deferrals 4. Prepare adjusting entries for depreciation 5. Summarize the adjusting process 6. Prepare an adjusted trial balance	Students able to conduct adjusting process as one of the accounting cycle	SGD DL Responsi	(1) Warren et al – Chapter 3	Quiz Exercise Written asessment (Mid term test)
6	CPMK 2	Completing the Accounting Cycle	1. Describe the flow of accounting information from the	Students able to complete the accounting cycle by preparing the	SGD DL CI Responsi	(1) Warren et al – Chapter 4	Quiz Exercise Written asessment (Mid term test)

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asesment
			unadjusted trial balance into the adjusted trial balance and financial statements 2. Prepare financial statements from adjusted account balances 3. Prepare closing entries 4. Describe the accounting cycle 5. Illustrate the accounting cycle for one period 6. Explain what is meant by the fiscal year and the natural business year	financial statements			
7	CPMK 1 & 2	Quiz Project Presentation #1			Responsi		Quiz Presentation

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
8		Mid Term Exam					Written asessment
9	CPMK 3	Cost Concept and Behavior	1. Describe managerial accounting, including its differences with financial accounting, its place in the organization, and its uses 2. Describe and illustrate the nature of manufacturing operations, including different types and classifications of costs 3. Describe sustainable business activities and eco-efficiency measures 4. Describe and illustrate financial	Students able to understand many types of cost that occurred in any business' type	SGD DL	(1) Warren et al – Chapter 15 (2) Warren et al – Chapter 1	Quiz Exercise Written asessment (Mid term test)

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
			statements for a manufacturing business, including the balance sheet, statement of cost of goods manufactured, and income statement				
10	CPMK 4	Job Order Costing	1. Describe cost accounting systems used by manufacturing businesses 2. Describe and illustrate a job order cost accounting system for a manufacturing business	Students able to understand product costing method and define the product cost using job order costing method	SGD DL Responsi	(1) Warren et al – Chapter 16 (2) Warren et al – Chapter 2	Quiz Exercise Written asessment (Mid term test)
11	CPMK 4	Process Costing	1. Describe process cost systems 2. Prepare a cost of production report	Students able to describe cost that occurred in process manufacturing and define the	SGD DL Responsi	(1) Warren et al – Chapter 17 (2) Warren et al – Chapter 3	Exercise Written asessment (Mid term test)

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
			3. Describe and illustrate the analysis of unit cost changes between periods	product cost using process costing method			
12	CPMK 4	Activity Based Costing	1. Describe three methods used for allocating factory overhead costs to products 2. Illustrate the use of a single plantwide factory overhead rate for product costing 3. Use multiple production department factory overhead rates for product costing 4. Use activity-based costing for product costing	Students able to describe overhead allocation method and using Activity Based Costing for product costing	SGD DL Responsi	(1) Warren et al – Chapter 18 (2) Warren et al – Chapter 4	Exercise Written asessment (Mid term test)

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asessment
13	CPMK 3	Cost Estimation	1. Classify costs as variable costs, fixed costs, or mixed costs 2. Describe cost estimation methods	Students able to describe and using cost estimation methods	SGD DL Responsi	(1) Warren et al – Chapter 19 (2) Warren et al – Chapter 4	Exercise Written assessment (Mid term test)
14	CPMK 3	Cost Volume Profit Analysis	Determine the break-even point and sales necessary to achieve a target profit	Students able to describe and conducting cost volume profit analysis	SGD DL Responsi	(1) Warren et al – Chapter 19 (2) Warren et al – Chapter 4	Exercise Written assessment (Mid term test)
15	CPMK 3&4	Quiz Project Presentation #2	Designing job order or process costing system		Responsi		Presentation
16		Final Exam					Written asessment

7. Bentuk assessment dan keterkaitannya dengan CPMK (*Assessment Method and CLO*)

No.	CPMK	Bobot CPMK	Bentuk Assessment	Bobot setiap assessment
1	CPMK 1	10%	Lab Assignment	5%
			Quiz	1%
			Mid Term Exam	8%
2	CPMK 2	30%	Lab Assignment	5%
			Quiz	3%
			Project #1	7%
			Mid Term Exam	15%
3	CPMK 3	30%	Lab Assignment	10%
			Quiz	5%

No.	CPMK	Bobot CPMK	Bentuk Assessment	Bobot setiap assessment
			Final Exam	15%
4	CPMK 4	30%	Lab Assignment	3%
			Quiz	2%
			Project	10%
			Final Exam	15%