PORTOFOLIO MATA KULIAH

	INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) **FAKULTAS TEKNOLOGI INDUSTRI DAN REKAYASA SISTEM** **DEPARTEMEN TEKNIK SISTEM DAN INDUSTRI**

Mata Kuliah (MK) ***Course Name***	**Kode** ***Code***	**RMK Course Group**	**Bobot (sks) Credits**	**Semester**	**Last Review**
Manajemen Transportasi Udara *Air Transportation Management*	TI141464	LSCM	2	1	24 Februari 2018

Pengesahan ***Otoritation***	**Koordinator MK** ***Course Coordinator***	**Ketua RMK** ***Course Group Coordinator***	**Kadep / Kaprodi** ***Head of Study Program***
	Ahmad Rusdiansyah	Niniet IndahArvitrida	Nurhadi Siswanto
Team Teaching			

Capaian Pembelajaran Lulusan (CPL) / *Program Learning Outcomes (PLO)*

Kode / *code*	Deskripsi CPL / *PLO description*
(a)	An ability to apply knowledge of mathematics, science, and engineering
(b)	An ability to design and conduct experiments, as well as to analyze and interpret data
(c)	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
(d)	An ability to function on multidisciplinary teams
(e)	An ability to identify, formulate, and solve engineering problems
(f)	An understanding of professional and ethical responsibility
(g)	An ability to communicate effectively
(h)	The broad education necessary to understand the impact of engineering solutions in a global economic, environmental, and societal context
(i)	A recognition of the need for, and an ability to engage in life-long learning
(j)	A knowledge of contemporary issues
(k)	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

RENCANA PEMBELAJARAN SEMESTER (RPS) - *COURSE PLANNING*

	INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) **FAKULTAS TEKNOLOGI INDUSTRI DAN REKAYASA** **SISTEMDEPARTEMEN TEKNIK SISTEM DAN INDUSTRI**

Mata Kuliah (MK)	Kode	RMK	Bobot (sks)	Semester	Waktu Review
Manajemen Transportasi Udara *Air Transportation Management*	TI141464	LSCM	2	1	24 Februari 2018

1. Deskripsi Mata Kuliah (*Course Description*)

This course gives a comprehensive understanding to Industrial Engineering Undergraduate Students about the decision making process in air transportation management. This course focuses in the development of planning optimization models along with the best exact also heuristic solutions for flight scheduling, flight routes and operational flight execution that covers revenue management, crew scheduling and fleet assignment.

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

Dengan berakhirnya kuliah, diharapkan mahasiswa:
By the end of this course, students will be able to:

Kode	Uraian CPMK / *Description of CLO*
TP1	Students are able to understand and explain about the scope of Air Transportation Management including Airline Business and its competition.
TP2	Students are able to understand and develop airline management system basic models : Airline Planning and Operations in different decision levels
TP3	Students are able to understand and develop man power planning related to air transportation : cabin crew and pilots, and maintenance and ground handling officers
TP4	Students are able to analyze the roles of Revenue Management in Airlines including pricing and seat inventory strategy
TP5	Students are able to analyze the problems occurred in Airport Operations and Planning
TP6	Students are able to apply air transportation models for practical cases with specific algorithm and conduct an analysis of the application
TP7	students can develop the ability to form a simple heuristic algorithm in solving problems

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

CPMK / CLO	CPL Program Studi / *CLO based on IABEE*										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
TP1	***				***		**				
TP2	**				***		***				
TP3	***				***		***				**
TP4	***				***		***				**
TP5					**		***				
TP6						*	***				
TP7	**				*		***				***

Content Rating Legend	
*	General Awareness, and not part of grade
**	15-30 minutes discussion or lecture for the term, and may be included as part of grade
***	More than 30 minutes discussion plus significant exercises and/or assignments, and it is included as part of grade

4. Mata Kuliah Prasyarat / Prerequisites

- Operational Research I, Operational Research II

5. Referensi / References

- Bazargan, Massoud (2010). Airline Operation and Scheduling, 1st Edition., Ashgate Publishing Limited
- Norman J Ashford, Pierre Coutu , John R. Beasley (2013). Airport Operations (Third Edition), McGrawHill.

6. Jadwal Perkuliahan / Learning Schedule

Week	Topic	Learning Method									Learning Facility								
		B1	B2	B3	B4	B5	B6	B7	B8	B9	S1	S2	S3	S4	S5	S6	S7	S8	S9
1	Introduction to Air Transportation Management	√			√		√				√	√			√				
2	Airline Strategy and Business Competition	√	√		√		√				√					√			
3	Airline Planning : Passenger Choice and Demand Forecasting		√	√	√		√				√	√	√			√			
4	Airline Planning : Flight Scheduling	√	√		√		√				√					√			
5	Airline Planning: Fleet Assignment Models	√	√	√	√		√				√					√			
6	Airline Planning: Aircraft Routing,	√	√		√		√				√					√			
7	Airline Operations: Irregular Operations and Delay Management	√					√				√					√			
8	Mid Exams					√									√				
7	Manpower Planning; Crew Planning and Scheduling,	√	√				√				√					√			
8	Manpower Planning; Maintenance and Ground Handling Officer Scheduling,																		
9	Revenue Management: Pricing Strategy	√	√								√					√			
10	Revenue Management: Seat Inventory and Overbooking Strategy	√	√				√				√					√			
11	Airport Management: Aircraft Boarding Strategy	√					√					√	√			√			
13	Airport Management: Runway Capacity Planning and Scheduling						√				√	√							
14	Airport Management: Gate Assignment Planning	√	√								√								
15	Special Topics & Guest Lecture	√	√		√						√								
16	Final Examination					√									√				

Note: "√" sign indicates the learning method and the learning facility needed to deliver the topic.

Remark:

Learning Method		Learning Facility	
B1	Lecture	S1	Book
B2	Discussion/Presentation	S2	Power point
B3	Practicum	S3	Study guide
B4	Exercises	S4	Video
B5	Written Test	S5	Prototype (Props)
B6	Individual Learning/Assignment	S6	Problem/Case Study
B7**	Company visit	S7**	Clipping

**Please add if not listed in the list!

RENCANA TUGAS (RT) – *ASSIGNMENT PLANNING*

	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
Manajemen Transportasi Udara *Air Transportation Management*	TI141464	LSCM	2	1	24 Februari 2018

Assessment Method and Its Relationship with Course's Learning Outcomes

No.	Type of Evaluation	Weight (%)	Evaluated Learning Outcomes						
			TP1	TP2	TP3	TP4	TP5	TP6	TP7
1	Class Activities	10%	√				√	√	
2	Weekly Assignment	15%	√		√	√			
3	Mid Examination	20%	√	√	√	√			
4	Case Study Assignment	15%	√		√	√	√		√
5	Final Examination	30%	√	√	√	√			

Note: Check on the evaluated learning outcomes

RENCANA ASSESSMENT (RA) – *ASSESSMENT PLANNING*

	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
Manajemen Transportasi Udara *Air Transportation Management*	TI141464	LSCM	2	1	24 Februari 2018

1. Matrix of Assessment Criteria

The following is some examples of assessment criteria for some types of evaluation

Assessment Method and Its Relationship with Course's Learning Outcomes

No.	Type of Evaluation	Weight (%)	Evaluated Learning Outcomes						
			TP1	TP2	TP3	TP4	TP5	TP6	TP7
1	Class Activities	10%	√				√	√	
2	Weekly Assignment	15%	√		√	√			
3	Mid Examination	20%	√	√	√	√			
4	Case Study Assignment	15%	√		√	√	√		√
5	Final Examination	30%	√	√	√	√			

Note: Check on the evaluated learning outcomes

Lampiran: Capaian pembelajaran program studi

Rincian capaian pembelajaran program studi		
Kemampuan Kerja	1.1.1	Mampu mengidentifikasi, memformulasikan dan menganalisis masalah rekayasa kompleks pada sistem terintegrasi (meliputi manusia, material, peralatan, energi, dan informasi) baik pada industri jasa atau manufaktur, berdasarkan pertimbangan dan prinsip-prinsip rekayasa
	1.1.2	Mampu menyelidiki dan memberikan kesimpulan yang valid atas permasalahan yang kompleks pada sistem terintegrasi pada industri jasa atau manufaktur menggunakan dasar prinsip-prinsip rekayasa dan dengan melaksanakan riset (analisis, interpretasi data dan sintesa informasi)
	1.1.3	Mampu merumuskan solusi untuk penyelesaian masalah yang kompleks pada sistem terintegrasi baik pada industri jasa atau manufaktur,dengan memperhatikan faktor-faktor ekonomi, kesehatan dan keselamatan publik, kultural, sosial dan lingkungan (environmental consideration)
	1.1.4	Mampu merencanakan, merancang dan mengendalikan rancangan sistem terintegrasi pada industri jasa atau manufaktur sesuai standar yang berlaku dengan mempertimbangkan aspek kinerja dan keandalan, kemudahan penerapan dan keberlanjutan, serta memperhatikan faktor-faktor ekonomi, kesehatan dan keselamatan publik, kultural, sosial dan lingkungan (environmental consideration)
	1.1.5	Mampu memilih sumberdaya dan menerapkan "alat-alat perancangan dan analisis rekayasa" terkini yang sesuai untuk melakukan aktivitas rekayasa sistem dengan mempertimbangkan keterbatasan yang dimiliki
Pengetahuan yang dikuasai	2.1.1	Menguasai ilmu-ilmu dasar kuantitatif terutama matematika dan statistika
	2.1.2	Menguasai dasar-dasar ilmu keteknikan yang menunjang pemahaman terhadap industri
	2.1.3	Menguasai dasar-dasar ilmu manajemen dan ekonomi
	2.2.1	Menguasai secara mendalam bidang ilmu teknik industri
	2.2.2	Menguasai teori sistem (mencakup: analisa, desain, dinamika, rekayasa, metodologi dan

Rincian capaian pembelajaran program studi		
		pengendalian sistem) dan aplikasi matematika rekayasa terkini
Kemampuan Managerial	3.1.1	Bisa bekerjasama lintas fungsi dalam organisasi maupun lintas organisasi dalam jaringan bisnis atau rantai pasokan
	3.1.2	Mampu membuat rencana, melakukan eksekusi, dan melakukan pengendalian terhadap rencana tersebut pada situasi dengan keterbatasan sumber daya yang ada
	3.2.1	Mampu mengambil keputusan atau memberi petunjuk dalam mengambil keputusan secara tepat berdasarkan data / informasi
	3.2.2	Bisa melaporkan hasil kerja kelompok untuk digunakan sebagai informasi bagi hirarki organisasi yang lebih tinggi atau bagi pemangku kepentingan lainnya
Sikap dan Tata nilai	4	Memiliki sikap dan perilaku profesional baik sebagai individu dan / atau anggota tim dalam lingkungan kerja
	4.1.1	Mampu mengelola diri dan bersikap professional dalam lingkungan kerja
	4.2.1	Kemampuan bekerjasama dalam tim secara proporsional sesuai dengan tuntutan pekerjaan
	4.2.2	Mampu mengkomunikasikan gagasan secara sistematis baik lisan maupun tulisan dengan Bahasa Indonesia maupun Bahasa Inggris yang baik
	4.3.1	Kepekaan terhadap isu lingkungan dan keberlanjutan serta mengakomodasikan isu tersebut dalam melakukan analisis, perancangan, dan pengembilan keputusan
	4.4.1	Kemampuan untuk kreatif dan inovatif dalam berbagai aspek kehidupan terutama yang terkait dengan profesi atau bidang kerja yang ditekuni