

## PORTOFOLIO MATA KULIAH


		<b>INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS)</b> <b>FAKULTAS TEKNOLOGI INDUSTRI DAN REKAYASA SISTEM</b> <b>DEPARTEMEN TEKNIK SISTEM DAN INDUSTRI</b>				
		<b>Mata Kuliah (MK)</b>	<b>Kode</b>	<b>RMK</b>	<b>Bobot (sks)</b>	<b>Semester</b>
Klaster Industri <i>Industrial Cluster</i>		TI184980	PSMI	3	8 - Pilihan	September 2020
<b>Otorisasi / Pengesahan</b>		<b>Dosen MK / Koordinator MK</b>		<b>Ketua RMK</b>	<b>Kadep / Kaprodi</b>	
		Sri Gunani Partiw		Lantip Trisunarno	Nurhadi Siswanto	
<b>Team Teaching</b>						

**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. <i>The ability to apply knowledge of mathematics, natural sciences and/or materials, information technology, and engineering to obtain a comprehensive understanding of engineering principles.</i>
(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. <i>The ability to design components, systems, and/or processes to meet expected needs within realistic constraints, such as laws, economics, environment, social, political, health and safety, sustainability, and to recognize and/or utilize the potential of local and national resources with global insight.</i>
(c)	Kemampuan mendesain dan melaksanakan eksperimen laboratorium dan/atau lapangan serta menganalisis dan mengartikan data untuk memperkuat penilaian teknik. <i>The ability to design and conduct laboratory and/or field experiments and to analyze and interpret data to strengthen engineering assessments.</i>
(d)	Kemampuan mengidentifikasi, merumuskan, menganalisis dan menyelesaikan permasalahan teknik. <i>The ability to identify, formulate, analyze, and solve engineering problems.</i>
(e)	Kemampuan menerapkan metode, keterampilan dan piranti teknik yang modern yang diperlukan untuk praktek keteknikan. <i>The ability to apply modern engineering methods, skills, and tools required for engineering practice.</i>
(f)	Kemampuan berkomunikasi secara efektif baik lisan maupun tulisan. <i>The ability to communicate effectively both orally and in writing.</i>
(g)	Kemampuan merencanakan, menyelesaikan dan mengevaluasi tugas didalam batasan-batasan yang ada.

	<i>The ability to plan, execute, and evaluate tasks within existing constraints.</i>
(h)	Kemampuan bekerja dalam tim lintas disiplin dan lintas budaya. <i>The ability to work in interdisciplinary and cross-cultural teams.</i>
(i)	Kemampuan untuk bertanggung jawab kepada masyarakat dan mematuhi etika profesi dalam menyelesaikan permasalahan teknik. <i>The ability to be accountable to society and adhere to professional ethics in addressing engineering problems.</i>
(j)	Kemampuan memahami kebutuhan akan pembelajaran sepanjang hayat, termasuk akses terhadap pengetahuan terkait isu-isu kinian yang relevan. <i>The ability to understand the need for lifelong learning, including access to knowledge related to relevant contemporary issues.</i>

## RENCANA PEMBELAJARAN SEMESTER (RPS) - COURSE PLANNING

	<b>INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS)</b> <b>FAKULTAS TEKNOLOGI INDUSTRI DAN REKAYASA SISTEM</b> <b>DEPARTEMEN TEKNIK SISTEM DAN INDUSTRI</b>				
Mata Kuliah (MK)	Kode	RMK	Bobot (sks)	Semester	Waktu Review
Klaster Industri <i>Industrial Cluster</i>	TI184980	PSMI	3	8 - Pilihan	September 2020

### 1. Deskripsi Mata Kuliah (*Course Description*)

Matakuliah Klaster Industri merupakan sebuah matakuliah yang fokus memberikan pengetahuan tentang salah satu strategi pengembangan industri yang efektif digunakan untuk meningkatkan kinerja industri dan memberikan dampak positif pada perekonomian wilayah baik lokal, regional, maupun nasional. Matakuliah ini didisain untuk mampu memberikan pemahaman tentang konsep klaster industri dan dasar pemikiran serta berbagai pendekatan yang digunakan dalam pengembangannya. Beberapa metode yang relevan untuk menganalisis efektivitas sebuah klaster industri juga akan diberikan. Pada akhir perkuliahan diharapkan mahasiswa memiliki kemampuan merancang sebuah model pengembangan klaster industri yang aplikatif dan memiliki kemampuan untuk menjadi fasilitator klaster industri di wilayah minimal untuk skala usaha mikro kecil dan menengah.

*The Industrial Cluster Course is a subject that focuses on providing knowledge about an effective industrial development strategy used to improve industrial performance and to have a positive impact on the regional economy, both locally, regionally and nationally. This course is designed to be able to provide an understanding of the concept of industrial clusters and the rationale as well as various approaches used in its development. Several methods relevant to analyzing the effectiveness of an industrial cluster will also be given. At the end of the lecture, it is hoped that students will have the ability to design an applicable industrial cluster development model and have the ability to become industrial cluster facilitators in minimal areas for micro, small and medium scale enterprises.*

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

Dengan berakhirnya kuliah, diharapkan mahasiswa:

Kode	Uraian CPMK
<b>CPMK 1</b>	Mampu membuat peta rantai produksi dan mengidentifikasi stakeholder klaster industri tertentu
<b>CPMK 2</b>	Mampu mengidentifikasi kebutuhan stakeholder dalam klaster industri
<b>CPMK 3</b>	Mampu mengelaborasi informasi dan data untuk menganalisis kelengkapan komponen dan efektivitas fungsional sebuah klaster industri
<b>CPMK 4</b>	Mendesain model pengembangan klaster industri yang telah ditetapkan dengan memperhatikan sustainabilitas daya saing
<b>CPMK 5</b>	Mampu menggunakan software yang relevan untuk menganalisis dinamika sebuah klaster industri
<b>CPMK 6</b>	Mampu menjadi fasilitator dalam pengembangan klaster industri minimal pada skala industry kecil dan menengah

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

Code	Description of CLO
<b>CLO 1</b>	<i>Able to create a production chain map and identify specific industrial cluster stakeholders</i>
<b>CLO 2</b>	<i>Able to identify stakeholder needs in an industrial cluster</i>

Code	Description of CLO
CLO 3	<i>Able to elaborate information and data to analyze the completeness of components and functional effectiveness of an industrial cluster</i>
CLO 4	<i>Designing a predetermined industrial cluster development model with regard to the sustainability of competitiveness</i>
CLO 5	<i>Able to use relevant software to analyze the dynamics of an industrial cluster</i>
CLO 6	<i>Able to become a facilitator in the development of industrial clusters at least on a small and medium industrial scale</i>

### 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		*	***	***						
CPMK 5					***					
CPMK 6						***	***	**	**	***

Note :

- hubungan antara CPL dan CPMK (PLO – CLO Matrix) :
  - \* low relationship
  - \*\* medium relationship
  - \*\*\* strong relationship

### 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. Porter M.E. 1998. Clusters and the New Economic of Competetion. Harvard Business Review
2. Porter, M. 1980. Competitive Strategy: Techniques for Analyzing Industries and Competitors: With a New Introduction: The Free Press

#### b. Referensi Pendukung / Additional references

1. Porter, Michael. 1990. What Is National Competitiveness? Harvard Business Review, 68(2): 84-85
2. Pujawan, N. 2005. Supply Chain Management
3. Dokumen Rencana Pengembangan Industri Pemkot, Pemprov dan Kemenperind terbaru

## 6. Jadwal Perkuliahan /Learning Schedule

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Aesement
1	CPMK 1 dan 2	Introduction and definition of industrial clusters, historical background and developments	<ol style="list-style-type: none"> <li>1. The Concept of Industrial Clusters</li> <li>2. Best practises of Industrial Cluster in Developing countries including Indonesia</li> </ol>	<p>Able to create a production chain map and identify specific industrial cluster stakeholders</p> <p>Able to identify stakeholder needs in an industrial cluster</p>	Lecturing Discussion	Text Book References	Written Assessment
2	CPMK 1 dan 2	The concept of Industrial clusters, systems approach in industrial clusters	<ol style="list-style-type: none"> <li>1. System thinking and system approach</li> <li>2. Stakeholder Model in industrial cluster</li> </ol>	<p>Able to create a production chain map and identify specific industrial cluster stakeholders</p> <p>Able to identify stakeholder needs in an industrial cluster</p>	Discovery Learning	Text Book References	Written Assessment
3	CPMK 1 dan 2	Development of industrial clusters in other countries	<ol style="list-style-type: none"> <li>1. Types of Industrial Clusters</li> <li>2. Industrial Cluster Benchmarking</li> </ol>	<p>Able to create a production chain map and identify specific industrial cluster stakeholders</p> <p>Able to identify stakeholder needs in an industrial cluster</p>	Student Centered Learning  Grup Discussion	Text Book References	Quiz Written Assessment
4	CPMK 2	Value Chain Concept in Industrial Clusters	<ol style="list-style-type: none"> <li>1. Industrial tree of the leading commodities in Indonesia</li> </ol>	<p>Able to identify stakeholder needs in an industrial cluster</p>	Student Centered Learning  Discovery Learning	Text Book References	Written Assessment Individual assignment

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Aesment
			2. Value chain concept				
5	CPMK 2 dan 3	Identification of industrial cluster components through production chain analysis and value added	1. Cluster diagnostics 2. Value chain analysis 3. Value added	Able to identify stakeholder needs in an industrial cluster	Lecturing Discussion	Text Book References	Written Assessment
6	CPMK 4	Defining the cluster stakeholder model Case study: 5 IKM clusters in the world	1. Industrial cluster development model 2. Case study	Designing a predetermined industrial cluster development model with regard to the sustainability of competitiveness	Lecturing Student Centered Learning Discovery Learning Grup Discussion	Case studies Journal and others relevant articles  Case study	Written Assessment Exercise
7	CPMK 4	Analyze the completeness and functional effectiveness of the cluster components / actors	1. Completeness of components 2. Functional effectiveness of industrial clusters	Designing a predetermined industrial cluster development model with regard to the sustainability of competitiveness	Student Centered Learning Discovery Learning	Text Book References	Written Assessment Exercise
8	CPMK 1 sd 4	Mid Exam					Written Assessment
9	CPMK 4	Diamond porter concept Case: 10 National Leading Industries + 10 Regional	1. Diamond porter concept 2. Some examples of diamond porter	Designing a predetermined industrial cluster development model with regard to the sustainability of competitiveness	Discovery learning Grup Discussion	Text Book References  Case Study	Exercise Written Assessment

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asesment
10	CPMK 4	Industrial cluster development stages	<ol style="list-style-type: none"> <li>1. Stages of Developing Industrial Cluster</li> <li>2. Life Cycle Clusters</li> <li>3. Maturity clusters</li> </ol>	Designing a predetermined industrial cluster development model with regard to the sustainability of competitiveness	<p>Lecturing</p> <p>Grup Discussion</p>	Text Book References	Quiz Written Assessment
11	CPMK 5	Industrial cluster system modeling	<ol style="list-style-type: none"> <li>1. dynamic systems concept</li> <li>2. problems example</li> </ol>	Able to use relevant software to analyze the dynamics of an industrial cluster	Student Centered Learning	Text Book References	Exercise Written Assessment
12	CPMK 6	Strategy formulation of an industrial cluster (1)	<ol style="list-style-type: none"> <li>1. Basic Concept of Strategic Management (review)</li> <li>2. How to formulate strategy</li> </ol>	Able to become a facilitator in the development of industrial clusters at least on a small and medium industrial scale	<p>Student Centered Learning</p> <p>Discovery Learning</p>	Text Book References	Written Assessment
13	CPMK 6	Strategy formulation of an industrial cluster (2) Case Study: Surabaya-East Java IKM Cluster	<ol style="list-style-type: none"> <li>1. Internal and External Evaluation</li> <li>2. Discussion of some case studies</li> </ol>	Able to become a facilitator in the development of industrial clusters at least on a small and medium industrial scale	<p>Student Centered Learning</p> <p>Grup Discussion</p>	<p>Case Based Text Book References</p> <p>Case Study</p>	Exercise Written Assessment
14	CPMK 5 dan 6	Dynamic systems approach for policy effectiveness analysis in industrial cluster development	<ol style="list-style-type: none"> <li>1. Dynamic System Conceptual</li> <li>2. Policy effectiveness analysis usin dynamic system</li> </ol>	<p>Able to use relevant software to analyze the dynamics of an industrial cluster</p> <p>Able to become a facilitator in the development of industrial</p>	Student Centered Learning	Text Book References	Written Assessment

Minggu	CPMK	Topik	Sub Topik (pustaka)	Capaian pembelajaran (sub CPMK)	Metode Pembelajaran	Sarana Pembelajaran	Bentuk Asesment
				clusters at least on a small and medium industrial scale			
15	CPMK 5 dan 6	Designing a comprehensive performance measurement model for industrial clusters	<ol style="list-style-type: none"> <li>1. Performance Management System</li> <li>2. Some Performance measurement models</li> <li>3. Key performance Indicator of Industrial Cluster</li> </ol>	<p>Able to use relevant software to analyze the dynamics of an industrial cluster</p> <p>Able to become a facilitator in the development of industrial clusters at least on a small and medium industrial scale</p>	<p>Student Centered Learning</p> <p>Grup Discussion</p>	Text Book References	Exercise Written Assessment
16		Final Exam/Project based assignment					Presentation and discussion



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

No.	CPMK	Bobot CPMK	Bentuk Assessment	Bobot setiap assessment
1	CPMK 1	15%	Quiz	5%
			Mid Term Exam	10%
2	CPMK 2	15%	Exercise	5%
			Individual assignment	5%
			Mid Term Exam	5%
3	CPMK 3	20%	Exercise	5%
			Mid Term Exam	15%
4	CPMK 4	15%	Quiz	5%
			Project	10%
5	CPMK 5	15%	Exercise	5%
			Project	10%
6	CPMK 6	20%	Exercise	5%
			Project based	15%