Student Outcomes (SO) & Performance Indicators (PI) Prodi Teknik Industri Unand		Learning Outcomes IABEE									
		a. An ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles,	b. An ability to design components, systems, and/or processes to meet desired **needs** within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective	c. An ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment	d. An ability to identify, formulate, analyze, and solve complex engineering problems	e. An ability to apply methods, skills and modern engineering tools necessary for engineering practices	f. An ability to communicate effectively in oral and written manners	g. An ability to plan, accomplish, and evaluate tasks under given constraints	h. An ability to work in multidisciplinary and multicultural team	i. An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems	j. An ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues
Student Outcomes (SO)/Capaian Pembelajaran (CP)	**Performance Indicators (PI)**										
1. An ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science, and mathematics	Identifies engineering problem which consist of decision maker, objective, performance measure and alternative course of action	Asesmen aplikasi natural/ material sciences dan information technology, adalah: 1. Natural/material sciences: MK Mekanika Teknik 2. Teknologi informasi: MK Programa Komputer			PIs yang ada compatible						
	Formulates the problem using an appropriate model										
	Solves the problem using an appropriate method or technique					Asesmen aplikasi metode dilakukan pada mata kuliah yang diases pada PI 3 ini					
2. An ability to apply engineering design to produce solutions that meet specified needs with considerations of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	Identifies the specified design needs		1. Asesmen seperti aspek hukum, ekonomi, lingkungan, sosial, politik, kesehatan & Keselamatan dan keberlanjutan ada pada rubrik asesmen MK Proyek Perancangan. 2. Asesmen penggunaan sumber daya lokal ada pada rubrik asesmen MK Proyek Perancangan.								
	Develops alternative solutions by applying engineering design principles					Asesmen penggunaan *modern tools* ada pada rubrik asesmen MK Perancangan Tata letak Fasilitas, Proyek Perancangan, dan Perancangan Produk					
	Evaluates and selects the appropriate design solution										
3. An ability to communicate effectively with a range of audiences	Presents ideas orally in front of audiences						PIs yang ada compatible				
	Writes a report according to the academic writing standard										
	Responds to audience feedbacks										
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	Lists and explains the code of ethics of engineers and laws related to engineering situation									PIs yang ada compatible	
	Writes an engineering ethic problem report from a case study										
	Acts according to professional and ethical responsibility		Asesmen *making informed judgement…etc* dilakukan pada MK Proyek Perancangan pada tahapan memilih alternatif denganmempertimbangkan aspek-aspek yang dinilai pada SO-2								
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	Participates collaboratively in delegating and assuming responsibilities for tasks based on objectives, plan and schedule arranged							PI 1 compatible	1. PIs yang ada compatible 2. MK yang diases untuk *multidisciplinary* dan *multicultural team* adalah MK level universitas yaitu Kuliah Kerja Nyata (KKN)		
	Accommodates inputs from other teammates, shares information with them and actively listens to them										
	Completes assigned tasks to meet objectives within the agreed dates according to schedule and accomplish of tasks							PI 3 compatible			
	Responds by adapting to different backgrounds, roles and priorities of the team members										
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions	Determines responses to be measured and measurement techniques			PIs yang ada compatible							
	Identifies variables and their levels expected to have significant effect on the responses										
	Analyses experimentation results and draws conclusions using engineering judgement					Asesmen pengunaan skills dan modern tools dilakukan pada PI 3, analisis data hasil eksperimen, yaitu pengunaan ARENA pada MK Simulasi Sistem					
7. An ability to acquire and apply new knowledge as needed, using approriate learning strategies	Searches and accesses new information and knowledge from various medias										1. PIs yang ada compatible 2. Isu-isu terkini/ kontemporer berkaitan dengan Tugas Akhir tertuang pada Bab 1 TA dan diases menggunakan rubrik
	Presents the acquired new knowledge and information clearly										
	Applies the acquired new knowledge and information accordingly										
8. An ability to apply basic entrepreneurship skills	Establishes a business plan										
	Demonstrates basic entrepreneurial skills										
	Evaluate the feasibility of a business using an appropriate methods										