GENEL TANIM / GENERAL DESCRIPTION

Ders Adı / Course Name	Production Systems / Production Systems	
Ders Kodu / Course Code	EISL503	
Ders Türü / Course Type		
Ders Seviyesi / Course Level	Master with Thesis / Master with Thesis	
Ders Akts Kredi / ECTS	6.00	
Haftalık Ders Saati (Kuramsal) / Course Hours For Week (Theoretical)	3.00	
Haftalık Uygulama Saati / Course Hours For Week (Objected)	0.00	
Haftalık Laboratuar Saati / Course Hours For Week (Laboratory)	0.00	
Dersin Verildiği Yıl / Year	1	
Öğretim Sistemi / Teaching System	Daytime Class / Daytime Class	
Eğitim Dili / Education Language	English / English	
Ön Koşulu Olan Ders(ler) / Precondition Courses	none	None
Amacı / Purpose	The aim of this course is to provide students with an understanding of the fundamental principles and operations of production systems, teach production planning and control techniques, and equip students with the ability to design and manage effective production systems.	The aim of this course is to provide students with an understanding of the fundamental principles and operations of production systems, teach production planning and control techniques, and equip students with the ability to design and manage effective production systems.
İçeriği / Content	The aim of this course is to provide students with an understanding of the fundamental principles and operations of production systems, teach production planning and control techniques, and equip students with the ability to design and manage effective production systems.	The aim of this course is to provide students with an understanding of the fundamental principles and operations of production systems, teach production planning and control techniques, and equip students with the ability to design and manage effective production systems.
Önerilen Diğer Hususlar / Recommended Other Considerations	none	
Staj Durumu / Internship Status	none	None
Kitabı / Malzemesi / Önerilen Kaynaklar / Books / Materials / Recommended Reading	Groover, M.P. (2015). Fundamentals of Modern Manufacturing: Materials, Processes, and Systems, 5th Edition. Wiley. Nahmias, S. (2015). Production and Operations Analysis, 7th Edition. McGraw-Hill Education.	Groover, M.P. (2015). Fundamentals of Modern Manufacturing: Materials, Processes, and Systems, 5th Edition. Wiley. Nahmias, S. (2015). Production and Operations Analysis, 7th Edition. McGraw-Hill Education.
Öğretim Üyesi (Üyeleri) / Faculty Member (Members)		

ÖĞRENME ÇIKTILARI / LEARNING OUTCOMES

1	Understand the basic principles and components of production systems.	Understand the basic principles and components of production systems.
2	Develop the ability to analyze and improve production processes.	Develop the ability to analyze and improve production processes.
3	Apply production planning and control methods.	Apply production planning and control methods.
4	Understand and apply productivity, quality, and sustainability issues in production systems.	Understand and apply productivity, quality, and sustainability issues in production systems.
5	Evaluate and optimize the alignment of production systems with business strategies.	Evaluate and optimize the alignment of production systems with business strategies.

HAFTALIK DERS İÇERİĞİ / DETAILED COURSE OUTLINE

Hafta / Week					
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
1	Introduction to Production Systems				
	Introduction to Production Systems				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
2	Production Processes and Models				
	Production Processes and Models				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
3	Production Planning and Control				
	Production Planning and Control				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
4	Production Strategies and Decisions				
	Production Strategies and Decisions				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
5	Production Cell Design and Optimization				
	Production Cell Design and Optimization				

6	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
	Quality Management and Control				
	Quality Management and Control				
7	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
	Productivity Measurement and Improvement				
	Productivity Measurement and Improvement				
8	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
	Supply Chain Management				
	Supply Chain Management				
9	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
	Flexibility and Innovation in Production Systems				
	Flexibility and Innovation in Production Systems				
10	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
	Production Planning Software and Tools				
	Production Planning Software and Tools				
11	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
	Waste Management and Sustainable Production				
	Waste Management and Sustainable Production				

	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
12	Occupational Health and Safety				
	Occupational Health and Safety				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
13	Production Cost Analysis				
	Production Cost Analysis				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
14	Process Improvement and Innovation in Production Systems				
	Process Improvement and Innovation in Production Systems				
	Teorik Dersler / Theoretical	Uygulama	Lab	Öğretim Yöntem ve Teknikleri/Teaching Methods Techniques	Ön Hazırlık / Preliminary
15	Final Exam				
	Final Exam				

DEĞERLENDİRME / EVALUATION

Yarıyıl (Yıl) İçi Etkinlikleri / Term (or Year) Learning Activities	Sayı / Number	Katkı Yüzdesi / Percentage of Contribution (%)
Ara Sınav / Midterm Examination	1	100
Toplam / Total:	1	100
Başarı Notuna Katkı Yüzdesi / Contribution to Success Grade(%):		40

Yarıyıl (Yıl) Sonu Etkinlikleri / End Of Term (or Year) Learning Activities	Sayı / Number	Katkı Yüzdesi / Percentage of Contribution (%)
Final Sınavı / Final Examination	1	100
Toplam / Total:	1	100
Başarı Notuna Katkı Yüzdesi / Contribution to Success Grade(%):		60

Etkinliklerinin Başarı Notuna Katkı Yüzdesi(%) Toplamı / Total Percentage of Contribution (%) to Success Grade:	100
Değerlendirme Tipi / Evaluation Type:	

İŞ YÜKÜ / WORKLOADS

Etkinlikler / Workloads	Sayı / Number	Süresi (Saat) / Duration (Hours)	Toplam İş Yükü (Saat) / Total Work Load (Hour)
Ara Sınav / Midterm Examination	1	75.00	75.00
Final Sınavı / Final Examination	1	75.00	75.00
Toplam / Total:	2	150.00	150.00

Dersin AKTS Kredisi = Toplam İş Yükü (Saat) / 25.00 (Saat/AKTS) = 150.00/25.00 = 6.00 ~ 6.00 / Course ECTS Credit = Total Workload (Hour) / 25.00 (Hour / ECTS) = 150.00 / 25.00 = 6.00 ~ 6.00

PROGRAM VE ÖĞRENME ÇIKTISI / PROGRAM LEARNING OUTCOMES

Öğrenme Çıktıları / Learning Outcomes	Program Çıktıları / Program Outcomes														
	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.1.9	1.1.10	1.1.11	1.1.12	1.1.13	1.1.14	1.1.15
1.Understand the basic principles and components of production systems. / Understand the basic principles and components of production systems.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2.Develop the ability to analyze and improve production processes. / Develop the ability to analyze and improve production processes.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3.Apply production planning and control methods. / Apply production planning and control methods.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4.Understand and apply productivity, quality, and sustainability issues in production systems. / Understand and apply productivity, quality, and sustainability issues in production systems.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5.Evaluate and optimize the alignment of production systems with business strategies. / Evaluate and optimize the alignment of production systems with business strategies.	4	4	4	5	5	5	5	5	4	5	5	4	4	5	5

Katkı Düzeyi / Contribution Level : 1-Çok Düşük / Very low, 2-Düşük / Low, 3-Orta / Moderate, 4-Yüksek / High, 5-Çok Yüksek / Very high