

# RAILWAYS

1	Course Title:	RAILWAYS	
2	Course Code:	INS4086	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	8	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	1.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç.Dr. TURAN ARSLAN	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	arsltur@uludag.edu.tr 0 224 294 2639	
17	Website:	<a href="http://insaat.uludag.edu.tr/">http://insaat.uludag.edu.tr/</a>	
18	Objective of the Course:	To provide basic understanding of railroads and methods for conducting railway design	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To be able to understand railroad components
		2	To be able to understand rolling stocks and their characteristics
		3	To be able to define technologies used in railroad transportation
		4	To be able to calculate traction power, motion and speed regimes
		5	To be able to apply vertical and horizontal design principles on railroads
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21	Course Content:		
		<b>Course Content:</b>	
Week	Theoretical	Practice	
1	Transportation Systems and Railroad Transportation		
2	Railroad History in World and Turkey		
3	Railroad Components		
4	Rolling Stocks Types and Characteristics		

<b>5</b>	Traction Power	Solving application problems
<b>6</b>	Motion and Speed Regimes	Solving application problems
<b>7</b>	Railroad Geometrics	Solving application problems
<b>8</b>	Vertical Alignments and Curve Radius	Solving application problems
<b>9</b>	Railroad Types and Characteristics	
<b>10</b>	Rails and Ties	
<b>11</b>	Cross Sections and Ballasts	
<b>12</b>	Rapid Railroad Applications	
<b>13</b>	Railroad Practices in World and Turkey	
<b>14</b>	Railroad Applications for Urban Transportation	

22	Textbooks, References and/or Other Materials:	<ul style="list-style-type: none"> <li>- Toprak İşleri ve Demiryolu, İnal Seçkin, Çağlayan Kitabevi, 2003</li> <li>- Demiryolu, Güngör Evren, Birsen Yayınevi, 2002</li> <li>- W.W. Hay, Railroad Engineering, John Wiley &amp; Sons</li> </ul>
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	20.00
Quiz	0	0.00
Home work-project	8	20.00

Activites	Number	Duration (hour)	Total Work Load (hour)
Contribution of Term (Year) Learning Activities to Theoretical Success Grade	40.00 14	2.00	28.00
Practicals/Labs	14	1.00	14.00
Self study and preparation	14	2.00	28.00
Total	100.00		
Homeworks	8	2.00	16.00
Measurement and Evaluation Techniques Used in the Course	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			92.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

[illegible]

ÖK5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives   PQ: Program Qualifications																
Contrib ution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							