



BURSA ULUDAĞ UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
2022-2023 ACADEMIC YEAR COURSE PLAN

FR 1.1.1_02

DEPARTMENT OF

INDUSTRIAL ENGINEERING

DEPARTMENT / PROGRAM

INDUSTRIAL ENGINEERING / Integrated Doctoral Program

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING									
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS		
	END5101	MATHEMATICAL PROGRAMMING	C	3	0	0	3	7.5	END5	ELECTIVE COURSE	E	3	0	0	3	7.5		
	END5	ELECTIVE COURSE	E	3	0	0	3	7.5	END5	ELECTIVE COURSE	E	3	0	0	3	7.5		
	END5	ELECTIVE COURSE	E	3	0	0	3	7.5	END5	ELECTIVE COURSE	E	3	0	0	3	7.5		
		ELECTIVE COURSE *	E	3	0	0	3	7.5		ELECTIVE COURSE *	E	3	0	0	3	7.5		
Total Credits/ECTS							12	30	Total Credits/ECTS							12	30	
III. TERM / FALL								IV. TERM / SPRING										
END6101	LINEAR PROGRAMMING	C	3	0	0	3	7.5	END6102	INTEGER PROGRAMMING	C	3	0	0	3	7.5			
END6	ELECTIVE COURSE	E	3	0	0	3	7.5	END6112	ADVANCED SIMULATION TECHNIQUES	C	3	0	0	3	7.5			
END6	ELECTIVE COURSE	E	3	0	0	3	7.5	END6	ELECTIVE COURSE	E	3	0	0	3	7.5			
	ELECTIVE COURSE *	E	3	0	0	3	7.5		ELECTIVE COURSE *	E	3	0	0	3	7.5			
Total Credits/ECTS							12	30	Total Credits/ECTS							12	30	
STAGE THESIS	V. TERM / FALL								VI. TERM / SPRING									
	END6171	SEMINAR	C	0	0	0	0	5	FEN6002	TECHNOLOGY TRANSFER, RESEARCH-DEVELOPMENT AND INNOVATION	C	2	0	0	2	2		
	YET6177	PHD PROFICIENCY EXAMINATION **	C	0	0	0	0	23	END6182	ADVANCED TOPICS IN PHD THESIS I	C	4	0	0	0	5		
	END5000	RESEARCH TECHNIQUES AND PUBLICATION ETHICS IN INDUSTRIAL ENGINEERING***	C	2	0	0	2	2	END6192	PHD THESIS I	C	0	0	0	0	23		
	Total Credits/ECTS							2	30	Total Credits/ECTS							2	30
	VII. TERM / FALL								VIII. TERM / SPRING									
	END6183	ADVANCED TOPICS IN PHD THESIS II	C	4	0	0	0	5	END6184	ADVANCED TOPICS IN PHD THESIS III	C	4	0	0	0	5		
	END6193	PHD THESIS II	C	0	0	0	0	25	END6194	PHD THESIS III	C	0	0	0	0	25		
	Total Credits/ECTS							0	30	Total Credits/ECTS							0	30
	IX. TERM / FALL								X. TERM / SPRING									
END6185	ADVANCED TOPICS IN PHD THESIS IV	C	4	0	0	0	5	END6186	ADVANCED TOPICS IN PHD THESIS V	C	4	0	0	0	5			
END6195	PHD THESIS IV	C	0	0	0	0	25	END6196	PHD THESIS V	C	0	0	0	0	25			
Total Credits/ECTS							0	30	Total Credits/ECTS							0	30	

TOTAL CREDITS: 52 - TOTAL ECTS: 300

Note: The student is expected to take a total of 12 credits (30 ECTS) compulsory and elective courses per term, in terms I-IV. The prerequisites of the courses in terms III and IV are the C and E group courses in terms I and II or their equivalents. The consents of the student's supervisor and the course instructor are taken for satisfying the prerequisites of the courses in terms III and IV.

(*) The student has the option of choosing at most two elective courses from other Master programs to be counted as E group courses in terms I and II with the approval of the supervisor and Head of Department.

(**) Success in Ph.D. proficiency exam is a prerequisite for registering the courses specified in the 5th term and the following terms.

(***) Students who have taken FEN5000 or equivalent can be exempted from this course.



BURSA ULUDAĞ UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
2022-2023 ACADEMIC YEAR COURSE PLAN (ELECTIVE COURSES)

FR 1.1.1_02

DEPARTMENT OF

INDUSTRIAL ENGINEERING

DEPARTMENT / PROGRAM

INDUSTRIAL ENGINEERING / Integrated Doctoral Program

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	END5113	COMPUTER AND MANUFACTURING	E	3	0	0	3	7.5	END5110	PRODUCTION SYSTEMS	E	3	0	0	3	7.5
	END5115	SIMULATION ANALYSIS	E	3	0	0	3	7.5	END5112	JOB SEQUENCING AND SCHEDULING	E	3	0	0	3	7.5
	END5121	DESIGN AND ANALYSIS OF ALGORITHMS	E	3	0	0	3	7.5	END5114	ANALYSIS OF INVENTORY SYSTEMS	E	3	0	0	3	7.5
	END5123	HEURISTIC ALGORITHMS	E	3	0	0	3	7.5	END5116	FACILITY LOCATION AND LAYOUT	E	3	0	0	3	7.5
	END5131	TOTAL QUALITY MANAGEMENT	E	3	0	0	3	7.5	END5132	ENGINEERING ECONOMY	E	3	0	0	3	7.5
	END5151	STATISTICAL DATA ANALYSIS	E	3	0	0	3	7.5	END5134	TECHNOLOGY MANAGEMENT	E	3	0	0	3	7.5
	END5153	EXPERIMENTAL DESIGN	E	3	0	0	3	7.5	END5136	STRATEGIC DECISION SUPPORT SYSTEMS	E	3	0	0	3	7.5
	END5155	STOCHASTIC PROCESSES	E	3	0	0	3	7.5	END5156	RELIABILITY ENGINEERING	E	3	0	0	3	7.5
	END5117	MANUFACTURING PROCESSES CONTROL	E	3	0	0	3	7.5	END5140	NOISE IMPACT ENGINEERING	E	3	0	0	3	7.5
	END5119	SUSTAINABLE ENGINEERING	E	3	0	0	3	7.5	END5138	MULTICRITERIA DECISION MAKING	E	3	0	0	3	7.5
	END5161	DATA MINING	E	3	0	0	3	7.5	END5122	EMBEDDED OPTIMIZATION TECHNIQUES	E	3	0	0	3	7.5
								END5124	CONSTRAINT PROGRAMMING	E	3	0	0	3	7.5	
								END5162	APPLIED MACHINE LEARNING	E	2	0	1	3	7.5	
III. TERM / FALL								IV. TERM / SPRING								
END6105	DYNAMIC PROGRAMMING	E	3	0	0	3	7.5	END6104	NONLINEAR PROGRAMMING	E	3	0	0	3	7.5	
END6113	SUPPLY CHAIN MANAGEMENT	E	3	0	0	3	7.5	END6108	COMPLEXITY ANALYSIS	E	3	0	0	3	7.5	
END6115	MANAGEMENT OF INTEGRATED MANUFACTURING SYSTEMS	E	3	0	0	3	7.5	END6114	DESIGN OF INTEGRATED MANUFACTURING SYSTEMS	E	3	0	0	3	7.5	
END6117	MANAGEMENT OF PRODUCT DESIGN	E	3	0	0	3	7.5	END6116	ADVANCED TOPICS IN QUALITY CONTROL	E	3	0	0	3	7.5	
END6123	DEEP NEURAL NETWORKS	E	3	0	0	3	7.5	END6122	ARTIFICIAL INTELLIGENCE	E	3	0	0	3	7.5	
END6131	FINANCIAL ENGINEERING	E	3	0	0	3	7.5	END6142	PHYSIOLOGY AND PSYCHOLOGY IN ERGONOMICS	E	3	0	0	3	7.5	
END6141	HUMAN-MACHINE SYSTEMS	E	3	0	0	3	7.5	END6144	ERGONOMICS IN PRODUCT DESIGN	E	3	0	0	3	7.5	
END6107	MULTI-OBJECTIVE OPTIMIZATION	E	3	0	0	3	7.5	END6126	ADVANCED DATA MINING	E	3	0	0	3	7.5	

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