M.A. PROGRAM IN BUSINESS MANAGEMENT (WITH THESIS)
COURSE SYLLABUS FORM

Course Details				
Code	**Academic Year**			**Semester**
BM052	1			Elective
Title	**T**	**A**	**L**	**ECTS**
Introduction to Algorithms and Programming	3	0	0	6

Language	English					
Level	**Undergraduate**		**Graduate**	**X**	**Postgraduate**	
Department / Program	Business Management					
Forms of Teaching and Learning	Face to face					
Course Type	**Compulsory**		**Elective**	**X**		
Objectives	Imparting basic knowledge about the algorithms and programming logic					
Content	Design of algorithms and programming					
Prerequisites	-					
Coordinator	Assoc. Prof. Dr. Müge KLEIN					
Lecturer(s)	-					
Assistant(s)	-					
Work Placement	-					

Recommended or Required Reading	
Books / Lecture Notes	-
Other Sources	- Sedgewick, R., & Wayne, K. (2011). *Algorithms*. Addison-Wesley professional. - Felleisen, M., Findler, R. B., Flatt, M., & Krishnamurthi, S. (2018). *How to design programs: an introduction to programming and computing*. MIT Press.

Additional Course Material	
Documents	-
Assignments	-
Exams	-

Course Composition		
Mathematics und Basic Sciences		40%
Engineering		10%
Engineering Design		%
Social Sciences		%

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Educational Sciences		%
Natural Sciences		%
Health Sciences		%
Expert Knowledge		50%

Assessment

Activity	Count	Percentage (%)
Midterm Exam	1	40
Quiz		
Assignments		
Attendance		
Recitations		
Projects		
Final Exam	1	60
	Total	**100**

ECTS Points and Work Load

Activity	Count	Duration	Work Load (Hours)
Lectures	14	3	42
Self-Study	14	3	42
Assignments	1	12	12
Presentation / Seminar Preparation			
Midterm Exam	1	36	36
Recitations			
Laboratory			
Projects			
Final Exam	1	48	48
		Total Work Load	**180**
		ECTS Points (Total Work Load / Hour)	**6**

Learning Outcomes

1	Students learn the logic of algorithms
2	Students learn to write prototype-based programs
3	Students learn to understand computer programs written in any language

Weekly Content

1	Introduction
2	Algorithmic thinking
3	İşlemler ve Operatörler

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4	Loops and Conditionals
5	Data Types
6	Data Structures
7	Functions
8	Strings
9	Sorting: Insertion Sort, Merge Sort, Quick Sort
10	Sorting: Heap Sort
11	Searching: Binary Search Trees
12	Searching: Hash Tables
13	Graphs
14	Dynamic Programming
15	Dynamic Programming

Contribution of Learning Outcomes to Program Objectives (1-5)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
1	1	2	3	1	1	5	5	2	1	1	2	1	1
2	1	2	3	1	1	5	5	2	1	1	2	1	1
3	1	2	3	1	1	5	5	2	1	1	2	1	1

Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High
Compiled by:	Assoc. Prof. Dr. Müge KLEIN (Head of Sub-Department Management and Organization)
Date of Compilation:	04.06.2020