

IE 413 INFORMATION SYSTEMS

Catalog Data: This course introduces information systems implemented and utilized in today's enterprises both as an operational and decision support systems. Topics covered will include the overview of the information systems and technologies, hardware and software used in information systems, overview of database management systems and data modeling techniques, query languages, data warehousing concepts and architectures, business intelligence, data mining techniques, use of data warehousing and business intelligence in data-driven decision making, current trends in IT such as cloud computing and big data.

Learning objectives of the course.

- Grasp the importance of information systems and technology in achieving both corporate objectives and competitive advantages
- Gain insight on the transactional and analytical processing used in business applications and decision-making processes
- Understand the fundamentals of data warehousing and business intelligence
- Get familiar with the MS Excel, MS Access, Power BI, and related constructs for performing data analytics

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TA: Mutlu İpek Tanıl

Schedule:

Wednesday: 13:40-16:30 Fac.of Arts and Social Sci. 1076-1078

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practice/recitation hours

- Tuesday: 16:40-17:30 A (Fac. of Engin. and Nat. Sci. G035)
- Tuesday: 17:40-18:30 B (Fac. of Engin. and Nat. Sci. G032)

Requirements:

- None. MS-Excel, and MS-Access, Power BI skills will be achieved in the course

Textbooks:

- Business Driven Technology, Paige Batzan, 9e., e-book from Mc Graw Hill Connect.

Online Training:

- Certificate from EXCEL at Work - Complete MS Excel Mastery Beginner to Pro, Udemy
<https://www.udemy.com/course/how-to-use-microsoft-excel-beginning-to-advanced-tutorials/>
- Certificate from Excel to Access: Intro to Microsoft Access for Excel Users, Udemy
<https://www.udemy.com/course/import-excel-into-access/>
- Certificate from Microsoft Power BI - A Complete Introduction [2022 EDITION], Udemy
<https://www.udemy.com/course/powerbi-complete-introduction/>

Grading:**Lab HWs** 30%**Midterm1** 20%**Certificates** 30%

10% - Certificate from course Introduction to Data Analysis Using Excel by Rice University, Coursera

10% - Certificate from Excel to Access: Intro to Microsoft Access for Excel Users, Udemy

10% - Certificate from Microsoft Power BI - A Complete Introduction [2022 EDITION], Udemy

Final 30%**Tentative Course Outline:**

Week	Topic	Lab.
Week 1	B1: Business Basics B2: Business Processes B3: Hardware and Software Basics B5: Networks and Telecommunications B6, B7, Chap.5: Information Security, Ethics	Setting up and getting used to online learning tools. Coursera Introduction to Data Analysis Using Excel Week1 Introduction to Spreadsheets
Week 2	Chap. 1: Business Driven Technology, Chap. 2: Identifying Competitive Advantages Chap. 3: Strategic Initiatives for Implementing Competitive Advantages	Coursera Introduction to Data Analysis Using Excel Week2 Spreadsheet Functions to Organize Data Week3 Introduction to Filtering, Pivot Tables and Charts
Week 3	Chap. 4: Measuring the Success of Strategic Initiatives Chap. 6: Valuing and Storing Organizational Information Chap. 7: Accessing Organizational Information – Data Warehouses	Coursera Introduction to Data Analysis Using Excel Week4 Advanced Graphing and Charting Submit Certificate
Week 4	Databases	Udemy Excel to Access: Intro to Microsoft Access for Excel Users Section 1,2,3,4
Week 5	Dimensional Databases	Udemy Excel to Access: Intro to Microsoft Access for Excel Users

Week	Topic	Lab.
		Section 5,6,7,8
Week 6	Dimensional Databases	Udemy Excel to Access: Intro to Microsoft Access for Excel Users Section 9,10,11,12
Week 7	MidTerm	Udemy Excel to Access: Intro to Microsoft Access for Excel Users Section 13,14,15,16
Week 8	Power BI	Udemy Excel to Access: Intro to Microsoft Access for Excel Users Section 17,18,19,20 Submit Certificate
Week 9	Chap. 8: Understanding Data's Impact on Business Chap. 9: Enabling the Organization – Decision Making	Udemy Microsoft Power BI - A Complete Introduction Section 1,2,3,4
Week 10	Chap. 10: Extending the Organization – Supply Chain Management Chap. 11: Building a customer-centric Organization – Customer Relationship Management Chap. 12: Integrating the Organization from End to End – Enterprise Resource Planning	Udemy Microsoft Power BI - A Complete Introduction Section 1,2,3,4
Week 11	Chap. 13: Creating Innovative Organizations Chap. 14: E-business Chap. 15: Creating Collaborative Partnerships	Udemy Microsoft Power BI - A Complete Introduction Section 5,6,7,8
Week 12	Chap. 16 Integrating Wireless Technology in Business Chap. 17: Developing Software to Streamline Operations Chap. 18: Managing Organizational Projects	Udemy Microsoft Power BI - A Complete Introduction Section 9,10,11,12
Week 13	Case Studies	Udemy Microsoft Power BI - A Complete Introduction Section 13,14,15,
Week 14	Case Studies	Udemy Microsoft Power BI - A Complete

Week	Topic	Lab.
		Introduction Section 16,17,18 Submit Certificate