# 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

**Instructor:** Yasemin Turkan, turkan.yasemin@gmail.com or yaseminturkan@sabanciuniv.edu

**TA:** Mutlu İpek Tanıl

**Schedule:**

* Wednesday: 10:40-13:30 Online

**practice/recitation hours**

* Wednesday: 14:40-15:30 A (Online)
* Monday: 11:40-12:30 B (Online)

# Requirements:

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

# Textbooks:

* Business Driven Technology, Paige Batzan, 9e., e-book from Mc Graw Hill Connect.
* [https://www.homerbooks.com/urun/business-driven-technology-connect-code](https://www.homerbooks.com/urun/business-driven-technology-connect-code%22%20%5Ct%20%22_blank)

# Online Training:

* Introduction to Data Analysis Using Excel by Rice University, Coursera
* Certificate from Excel to Access: Intro to Microsoft Access for Excel Users, Udemy
* Certificate from Microsoft Power BI - A Complete Introduction [2022 EDITION], Udemy

# Zoom ID: <https://sabanciuniv.zoom.us/j/5152631935>

**Grading:**

**Lab HWs 20%**

Lab work will be opened at the lab session, and you will have to complete and submit before the end of lab hour.

**Course HWs & Activities 20%**

**Project 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 (take home) 30%**

* Proposal 5%
* Report and Work 20%
* Presentation 5%

# Tentative Course Outline:

| Week | Topic | Lab. |
| --- | --- | --- |
| Week 1 | B1: Business Basics B2: Business ProcessesB3: Hardware and Software BasicsB5: Networks and TelecommunicationsB6, 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 AdvantagesChap. 3: Strategic Initiatives for Implementing Competitive Advantages | Coursera Introduction to Data Analysis Using Excel Week2Spreadsheet Functions to Organize DataWeek3Introduction to Filtering, Pivot Tables and Charts  |
| Week 3 | Chap. 4: Measuring the Success of Strategic InitiativesChap. 6: Valuing and Storing Organizational InformationChap. 7: Accessing Organizational Information – Data Warehouses | Coursera Introduction to Data Analysis Using Excel Week4Advanced Graphing and ChartingSubmit Certificate |
| Week 4 | Databases | UdemyExcel to Access: Intro to Microsoft Access for Excel Users Section 1,2,3,4 |
| Week 5 | Dimensional Databases | UdemyExcel to Access: Intro to Microsoft Access for Excel Users Section 5,6,7,8 |
| Week 6 | Dimensional Databases | UdemyExcel to Access: Intro to Microsoft Access for Excel Users Section 9,10,11,12 |
| Week 7 | Dimensional Databases | UdemyExcel to Access: Intro to Microsoft Access for Excel Users Section 13,14,15,16 |
| Week 8 | Power BI | UdemyExcel to Access: Intro to Microsoft Access for Excel Users Section 17,18,19,20Submit Certificate |
| Week 9 | Chap. 8: Understanding Data’s Impact on BusinessChap. 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 ManagementChap. 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 OrganizationsChap. 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 BusinessChap. 17: Developing Software to Streamline OperationsChap. 18: Managing Organizational Projects | Udemy Microsoft Power BI - A Complete Introduction Section 9,10,11,12 |
| Week 13 | Final Presentations | Udemy Microsoft Power BI - A Complete Introduction Section 13,14,15, |
| Week 14 | Final Presentations | Udemy Microsoft Power BI - A Complete Introduction Section 16,17,18Submit Certificate |