# 

# 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, and related constructs for performing data analytics

**Instructor:** Yasemin Turkan, [turkan.yasemin@gmail.com](mailto:turkan.yasemin@gmail.com) or [yaseminturkan@sabanciuniv.edu](mailto:yaseminturkan@sabanciuniv.edu)

**TA:** Mutlu İpek Tanıl

**Schedule:**

* Tuesday: 10:40-11:30 Online
* Thursday: 10:40-12:30 Class (Fac.of Arts and Social Sci. G018)

**practice/recitation hours**

* Tuesday: 14:40-15:30 A (Online)
* Wednesday: 17:40-18:30 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.

# MS-Excel Training:

* Introduction to Data Analysis Using Excel by Rice University, Coursera

(on line self-training in audit mode.)

# Additional Resources:

* Information Systems for Business and Beyond by David T. Bourgeois, James L. Smith, Shouhong Wang, Joseph Mortati, Biola University. Free On line <https://digitalcommons.biola.edu/open-textbooks/1/>
* MS Access and MS Excel online tutorials:

<https://support.microsoft.com/en-us/training>

<https://support.microsoft.com/en-us/office/access-video-training-a5ffb1ef-4cc4-4d79-a862-e2dda6ef38e6>

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

**Grading:**

Lab HWs 20%

Course HWs & Activities 30%

Midterm 20%

Final 30%

# Tentative Course Outline:

| Week | Topic | Lab. |
| --- | --- | --- |
| Week 1 | B1: Business BasicsB2: Business Processes | Setting up and getting used to online learning tools. |
| Week 2 | B3: Hardware and Software BasicsB5: Networks and TelecommunicationsB6, B7, Chap.5: Information Security, Ethics | CourseraIntroduction to Data Analysis Using Excel Week1Introduction to Spreadsheets |
| Week 3 | Chap. 1: Business Driven Technology,Chap. 2: Identifying Competitive Advantages | CourseraIntroduction to Data Analysis Using Excel Week2Spreadsheet Functions to Organize Data |
| Week 4 | Chap. 3: Strategic Initiatives for Implementing Competitive Advantages | CourseraIntroduction to Data Analysis Using Excel Week3Introduction to Filtering, Pivot Tables and Charts |
| Week 5 | Chap. 4: Measuring the Success of Strategic InitiativesChap. 6: Valuing and Storing Organizational Information – Databases | CourseraIntroduction to Data Analysis Using Excel Week4Advanced Graphing and Charting |
| Week 6 | Dimensional Databases | Access video trainingQuick start, Intro to Access, Create an Access database, Add tablesHW will be announced later! |
| Week 7 | Dimensional DatabasesMidterm Exam | Access video trainingUse relationshipsHW will be announced later! |
| Week 8 | Chap. 7: Accessing Organizational Information – Data WarehousesChap. 8: Understanding Data’s Impact on BusinessChap. 9: Enabling the Organization – Decision Making | Access video trainingAdd and edit dataHW will be announced later! |
| Week 9 | Chap. 10: Extending the Organization – Supply Chain Management | Access video trainingManage data with queriesHW will be announced later! |
| Week 10 | Chap. 11: Building a customer-centric Organization – Customer Relationship Management | Access video trainingCreate formsHW will be announced later! |
| Week 11 | Chap. 12: Integrating the Organization from End to End – Enterprise Resource Planning | Access video trainingCreate reportsHW will be announced later! |
| Week 12 | Chap. 13: Creating Innovative OrganizationsChap. 14: E-business | Access video trainingCreate charts |
| Week 13 | Chap. 15: Creating Collaborative PartnershipsChap. 16 Integrating Wireless Technology in Business | Access video trainingProtect databases |
| Week 14 | Chap. 17: Developing Software to Streamline OperationsChap. 18: Managing Organizational Projects | MS-Access Project |