| Course number and name | END 357 / Management Informations Systems |
|---|---|
| Credits, contact hours, categorization of credits | 3 credits / 42 hours / Engineering topic |
| Instructor or course coordinator | Ufuk CEBECİ |
| Text book and other supplemental materials | • *Management Information Systems: Managing the Digital Firm*, Jane Laudon, Kanneth Laudon, Prentice Hall, 2018. |

| Course information | |
|---|---|
| Content | Basic terminology, data, information, knowledge, Information Systems in Global Business Today, Global E-Business: How Businesses Use Information Systems , Information System, Organisations, and Strategy, Enterprise Information Systems : MRP, MRP II, ERP, MRP, MRP II, ERP, CRM, SCM, Electronic Commerce, Knowledge Management, Databases and data warehouse, Enhancing Decision Making, Enterprise Reporting, Decision Support Systems, Building Information Systems, Ethical and Social Issues in Information Systems. |
| Prerequisites | END 211 / END 215 System Thinking and Analysis and END 213 Data Processing in Industrial Systems |
| Type | Selected elective |

| Course learning outcomes |
|---|
| Students who pass the course will:<br>   I.    Know the main concepts about Information systems<br>  II.    Have knowledge about basic MIS applications<br> III.    Have insight about reports and decision supports systems<br> IV.    Be able to define MIS needs using system analysis<br>  V.    Be able to design databases based on defined requirements<br> VI.    Have insight about applications from different sectors<br>VII.    Have insight about upcoming topics and applications |

| Student outcomes | Level of contribution |
|---|---|
| SO1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. | Partial |
| SO2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. | High |
| SO3. An ability to communicate effectively with a range of audiences. | Partial |
| SO4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. | High |
| SO5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. | High |
| SO6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. | Partial |
| SO7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies. | High |

| Week | Topics | Learning outcome(s) |
|---|---|---|
| 1 | Course Introduction, basic terminology, data, information, knowledge | I, II |
| 2 | Information Systems in Global Business Today | I, IV |
| 3 | Global E-Business: How Businesses Use Information Systems | I, II |
| 4 | Information System, Organisations, and Strategy | IV, V |
| 5 | Enterprise Information Systems : MRP, MRP II, ERP | IV, V |
| 6 | Enterprise Information Systems : CRM, SCM | IV, V |
| 7 | Electronic Commerce | IV |
| 8 | Knowledge Management | III, IV |
| 9 | Databases and data warehouse | III, VI |
| 10 | Enhancing Decision Making | VI, VII |
| 11 | Enterprise Reporting | VI, VII |
| 12 | Decision Support Systems | VII |
| 13 | Building Information Systems | VII |
| 14 | Ethical and Social Issue in Information Systems | VII |