

## Content

| Course Code | Course Name                                       | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|---------------------------------------------------|----------|--------|----------|-----|--------|------|
| IND459      | Digital Company Management and Business Analytics | 7        | 3      | 0        | 0   | 3      | 5    |

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| Prerequisites          |  |
| Admission Requirements |  |

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| Language of Instruction | French          |
| Course Type             | Compulsory      |
| Course Level            | Bachelor Degree |

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| Objective | <p>The survival of companies today is directly related to their ability to use digital technologies and systems. In this course, digital transformation, industry 4.0, digital business management, and data/business analytics will be introduced, and industrial applications in digital business management and data/business analytics will be examined. In this context, the objectives of the course are determined as follows:</p> <ul style="list-style-type: none"><li>- To provide students with basic knowledge of digital company management and basic approaches to the strategic role of digital transformation in management</li><li>- To enable students to develop basic skills in planning, designing, and managing digital transformation in different businesses</li><li>- To provide students with an overview of how to use industrial engineering-based solution methods for potential problems that digital companies may face</li><li>- To provide students with basic knowledge of data/business analytics, business intelligence, and data science</li><li>- To provide students with a perspective on data/business analytics applications in businesses</li><li>- Enable students to learn and use a data/business analytics tool</li></ul> |
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| Content | <p>Week 1: Digital company management, digital technologies, and systems, organizations and strategies in a globalized business world</p> <p>Week 2: Planning and development for digital companies - Digital technologies infrastructure and current technologies</p> <p>Week 3: Industry 4.0, digital transformation and digital technologies</p> <p>Week 4: E-business and e-commerce; mobile business and mobile commerce; digital business</p> <p>Week 5: Improving decision-making for digital companies - Decision support systems</p> <p>Week 6: Digital transformation case studies</p> <p>Week 7: Seminar - Digital transformation</p> <p>Week 8: Seminar - Fundamentals of data/business analytics</p> <p>Week 9: Midterm Exam</p> <p>Week 10: Data/business analytics with Tableau</p> <p>Week 11: Data/business analytics with Tableau</p> <p>Week 12: Data/business analytics with Tableau</p> <p>Week 13: Data/business analytics case studies</p> <p>Week 14: Project presentations</p> |
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| References | <p>1. Management Information Systems: Managing the Digital Firm (15th Edition), Kenneth C. Laudon &amp; Jane P. Laudon. Pearson Education 2017.</p> <p>2. Analytics: Data Analysis &amp; Decision Making (5th Edition), S. Christian Albright &amp; Wayne L. Winston. Cengage Learning 2014.</p> <p>Software to be used in the course:</p> <ul style="list-style-type: none"><li>• Tableau: <a href="https://www.tableau.com/">https://www.tableau.com/</a></li></ul> <p>Important web addresses:</p> <ul style="list-style-type: none"><li>• Türkiye Bilişim Derneği: <a href="http://www.tbd.org.tr/">http://www.tbd.org.tr/</a></li><li>• Türkiye Bilişim Vakfı: <a href="http://www.tbv.org.tr/">http://www.tbv.org.tr/</a></li><li>• Bilgi Toplumu - E-Devlet Türkiye: <a href="http://www.bilgitolumu.gov.tr/">http://www.bilgitolumu.gov.tr/</a></li></ul> <p>Scientific journals that can be utilized:</p> <ul style="list-style-type: none"><li>• Information &amp; Management, <a href="http://www.sciencedirect.com">www.sciencedirect.com</a></li><li>• Journal of Strategic Information Systems, <a href="http://www.sciencedirect.com">www.sciencedirect.com</a></li><li>• Electronic Commerce Research and Applications, <a href="http://www.sciencedirect.com">www.sciencedirect.com</a></li></ul> |
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## Theory Topics

| Week | Weekly Contents                                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------------|
| 1    | Digital company management, digital technologies and systems, organizations and strategies in a globalized business world |
| 2    | Planning and development for digital companies - Digital technologies infrastructure and current technologies             |
| 3    | Industry 4.0, digital transformation and digital technologies                                                             |
| 4    | E-business and e-commerce; mobile business and mobile commerce; digital business                                          |
| 5    | Improving decision making for digital companies - Decision support systems                                                |
| 6    | Digital transformation case studies                                                                                       |
| 7    | Seminar - Digital transformation                                                                                          |
| 8    | Seminar - Fundamentals of data/business analytics                                                                         |
| 9    | Midterm Exam                                                                                                              |
| 10   | Data/business analytics with Tableau                                                                                      |
| 11   | Data/business analytics with Tableau                                                                                      |
| 12   | Data/business analytics with Tableau                                                                                      |
| 13   | Data/business analytics case studies                                                                                      |
| 14   | Project presentations                                                                                                     |