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| Course Title                  | Analytics in Accounting and Finance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                         |                     |      |
| Course Code                   | AED650                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |                         |                     |      |
| Course Type                   | Compulsory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                         |                     |      |
| Level                         | Master (2 <sup>nd</sup> Cycle)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |                         |                     |      |
| Year / Semester               | 1 <sup>st</sup> Year / 2 <sup>nd</sup> Semester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                         |                     |      |
| Teacher's Name                | TBA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                         |                     |      |
| ECTS                          | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Lectures / week | Up to 6 Teleconferences | Laboratories / week | None |
| Course Purpose and Objectives | <p>This course introduces students to the basic concepts, methods and approaches of data analytics in Accounting and Finance. The students will program and test business intelligence software, such as Google data studio or/and Tableau or/and Alteryx or/and Power BI. Through the software, the students will learn to prepare, clean, analyse and summarize the accounting and financial data and create visualizations. Moreover, students will be familiarized with relevant conceptual IT frameworks in order to evaluate the functionality and effectiveness of Accounting Information Systems (AIS), and to analyze the contemporary security and control aspects of such systems.</p>                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                         |                     |      |
| Learning Outcomes             | <p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> <li>• Collect (using EIKON database of Thomson Reuters / S&amp;P Capital IQ Platform) , clean and transform accounting and financial data;</li> <li>• Summarize, visualize and present accounting and financial data;</li> <li>• Analyze accounting and financial data with basic analytical approaches;</li> <li>• Obtain the knowledge required to function as a systems accountant;</li> <li>• Evaluate and apply the knowledge of management support systems to accounting and related areas;</li> <li>• Analyse and critically evaluate the current development of enterprise-wide systems and their contribution to business process reengineering;</li> <li>• Apply and test well-known systems development methodologies for AIS implementations;</li> <li>• Program and test business intelligence software, such as Google data studio or/and Tableau or/and Alteryx or/and Power BI.</li> <li>• Critically evaluate the accounting controls and security measures in AIS.</li> </ul> |                 |                         |                     |      |
| Prerequisites                 | Successful completion of 1 <sup>st</sup> and 2 <sup>nd</sup> semester courses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Co-requisites   |                         | None                |      |
| Course Content                | <p>Basic Concepts and Methods of Data Analytics.</p> <p>Data preparation and cleaning; Data analytics approaches; Data visualization and summarization.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |                         |                     |      |

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|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|---------------------------------|-----|--|------|
|                                 | <p>Diagnostic, predictive and prescriptive analytics in managerial and financial accounting.</p> <p>Fundamental concepts of Accounting Information Systems (AIS)</p> <p>Contemporary Enterprise Resource Planning systems (ERP).</p> <p>AIS application to major transaction cycles. The Revenue Cycle. The Expenditure Cycle. The Financial Reporting Systems.</p> <p>Management decision support systems and Business Intelligence (BI)</p> <p>Contemporary systems development methodologies for AIS. Software development life cycle. Prototyping. End-user Development.</p> <p>Ethics, Fraud and IT controls.</p> <p>Hands-on EIKON database / S&amp;P Capital IQ Platform.</p> <p>Hands-on visualisation software – Google data studio or/and Tableau or/and Alteryx or/and Power BI.</p> |              |     |                                 |     |  |      |
| Teaching Methodology            | E - Learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |     |                                 |     |  |      |
| Bibliography                    | <p>Richardson, Teeter and Terrell. Data Analytics for Accounting, Latest Edition, McGraw-Hill.</p> <p>J.A. Hall, Accounting Information Systems, latest edition, Cengage Learning.</p> <p>J.A. Hall, Information Technology Auditing, latest edition, Cengage Learning.</p> <p>M.B. Romney and P.J. Steinbart, Accounting Information Systems, latest edition, Pearson.</p> <p>K.C. Laudon and J.P. Laudon, MIS: Managing the Digital Firm, Global Edition, latest edition, Pearson.</p>                                                                                                                                                                                                                                                                                                        |              |     |                                 |     |  |      |
| Assessment                      | <table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Examinations</td> <td style="text-align: center;">50%</td> </tr> <tr> <td>Assignments/On-going evaluation</td> <td style="text-align: center;">50%</td> </tr> <tr> <td></td> <td style="text-align: center;">100%</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Examinations | 50% | Assignments/On-going evaluation | 50% |  | 100% |
| Examinations                    | 50%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |     |                                 |     |  |      |
| Assignments/On-going evaluation | 50%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |     |                                 |     |  |      |
|                                 | 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |     |                                 |     |  |      |
| Language                        | English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |     |                                 |     |  |      |