AMDM400 – Data Analytics and Business Intelligence

Course Title	Data Analytics and Business Intelligence				
Course Code	AMDM400				
Course Type	Elective				
Level	BSc (Level 1)				
Year / Semester	4th Year, 7th Semester				
Teacher's Name	Dr Christos Markides				
ECTS	6	Lectures / week	3	Laboratories/week	N/A
Course Purpose	The aim of the course is to provide an overview of web analytics and the associated legal responsibilities and best practices concerning data collection, consent, and privacy that enable a digital marketer to draw actionable conclusions from website or marketing channel data. The course demonstrates the use of Google Analytics to obtain insights about the website's traffic and audience. The course covers setting campaign goals to analyse performance, analyse customer conversion, monitor and analyse digital campaigns. The course introduces students to business intelligence and the use of appropriate tools such as interfaces, dashboards, and the potential benefits and pitfalls in business intelligence.				
Learning Outcomes	By the end of the course students should be able to: 1. To recognize the key components of effective web design and the importance of website optimization for a digital marketing strategy 2. To set goals to analyse digital campaign performance and analyse the customer conversion journey using Google Analytics. 3. To monitor digital marketing campaigns and derive insights to optimize campaign performance using Google Analytics reports. 4. To track live data and use Google Analytics custom reporting features to record and analyse campaign data. 5. Construct efficient and effective business intelligence interfaces such as dashboards or pivot tables, using appropriate tools 6. Explain and argue on the potential benefits and pitfalls from the use of concepts in business intelligence, including what-if analysis and data mining.				
Prerequisites	Marketing, Business subjects		Co-requisites:		None
Course Content	• **Introduction to Data Analytics:** Analytics involves the collection, measurement, and analysis of data. Analytics tools, benefits and limitations. Web analytics, information, origin of website traffic, navigation,				

	interaction, time spent, content and page clicks, optimise performance, measuring and acting on data trends, using analytics, setting goals, conversion rate, transactions, and revenue. Legal implications of data analytics. • **Introduction to Google Analytics:** Google account, tracking code, Google Tag Assist and Google Tag Manager, properties and settings, sessions and views, analysing traffic and using filters, sharing information and risks, linking to other tools and Google Ads. • **Setting Goals with Google Analytics:** Defining goals and measuring conversion, types of goals and templates, add goal conditions, creating session duration goals, engagement goals, event-tracking goals, and non-standard goals, and 'smart-goals' with Google Ads, and setting up goal funnels. • **Monitoring Campaigns:** Using GA key reports and dashboards for monitoring, producing audience reports, acquisition report, Geo report, GA report, behaviour report, events report, conversion report, and multi-channel report. • **Analysing and Recording Data:** Analysing data using GA, custom reports, annotations and segments, tracking data effectively, using KPIs and monitoring information, Identifying and establishing appropriate indicators, monitoring performance, and early warning systems. • **Introduction to Business Intelligence:** Building appropriate BI interfaces, productivity tools such as Microsoft Excel to build pivot tables, score cards, and dashboards, analysing information and extracting important information. Using BI interfaces for what-if analysis. Data aggregation and disaggregation mechanisms – writebacks. Use of Data Mining in BI.
Teaching Methodology	The taught part of course is delivered to the students by means of lectures, conducted with the help of computer presentations. Lecture notes and presentations are available through the e-learning platform and the web for students to use in combination with the textbooks. Lectures supported by power point presentations, application demonstrations (based on Google Analytics, Google Ads, and MS Excel) and class discussions. Class demonstrations will focus mainly on the use of Microsoft Excel for data analysis provided existing data sources.
Bibliography	<u>Textbooks:</u> • Sharda R., Delen D., Turban E., "***Business Intelligence, Analytics, and Data Science: A Managerial Perspective***", 4th Edition, Pearson, 2019, ISBN: 978-9353067021. • Hemann C., Burbary K. "***Digital Marketing Analytics: Making Sense of Consumer Data in a Digital World***", 2nd Edition, Que Publishing, 2018, ISBN: 9780134998657. <u>References:</u>

	• Blokdyk G., "***Google Analytics A Complete Guide***", 1st Edition, 5STARCooks, 2020, ISBN: 978-0655913849. • Sherman R., " ***Business Intelligence Guidebook: From Data Integration to Analytics***", 1st Edition, Morgan Kaufmann, 2014, ISBN: 978-0124114616.
Assessment	The Students are assessed via continuous assessment throughout the duration of the semester, which forms the Coursework grade and the final written exam. The coursework and the final exam grades are weighted 40% and 60%, respectively, and compose the final grade of the course. Students are assessed through continuous assessment, through tests, case-study discussion, and class participation. <u>Weights:</u> • Class Participation: 5% • Midterm: 10% • Project: 15% • Final Exam (3-hour closed book): 60% Students are prepared for final exam, by revision on the material taught, the case-studies discussed in class. The final assessment of the students is formative and summative and is assured to comply with the subject's expected learning outcomes and the quality of the course.
Language	English