

Mode: **Online - Synchronous**  
 Course Single Point of Contact: **Dinko Bačić, [dbacic@luc.edu](mailto:dbacic@luc.edu)**  
 Office Hours: **Virtual office hours by Appointment**  
 Facilitator Delivery: **Team-based**



**Nenad Jukić**  
 Module 1  
 14-4-2021



**Faruk Guder**  
 Module 2  
 27-4-2021



**Dinko Bačić**  
 Module 3  
 4-5-2021



**Carolyn Tang Kmet**  
 Module 4  
 11-5-2021

## COURSE INFORMATION

**Course Description:** This course focuses on introducing you to the foundational concepts in business analytics. Students will gain knowledge in five critical areas of business analytics, focused on processes to (i) design databases and store data for analytical tasks (ii) conduct analytical tasks such as descriptive, predictive, and prescriptive analytics (iii) explore and tell stories with data using data visualization best practices, (iv) deploy optimization models to analyze business problems, and (v) explore critical ethical issues in the context of the data-driven decision-making. Students will have a chance to work hands-on with data diagramming (ERDPlus), analytical programming (R), data visualization (Tableau) tools, and business optimization (MS Excel) techniques.

**Course Overview:** This course includes lectures, quizzes, homework, lab, and simulation

**Course Objectives and Learning Outcomes** – after completing this course you will:

- Understand fundamental database, data warehouse, and big data concepts
- Understand fundamental business analytics (BA) concepts and BA types
- Be able to critique and design visual displays of quantitative data
- Be able to define, build and leverage optimization models to analyze common business problems
- Discuss ethical concerns in the context of data-driven decision making

**Textbooks/Materials:** All materials and software will be provided for free and made available via Moodle

**Class Format:** This class will be delivered on-line, synchronous formats (MS Teams). The class will meet four times: 14.4 (Wed), 27.4 (Tue), 4.5 (Tue), 11.5 (Tue). All classes will meet from 16:00 to 20:00 Central European Time

## COURSE REQUIREMENTS AND GRADING CRITERIA:

Quizzes & Lab	80 pts	<b>Course Grading Scale</b>	
Homework & Simulation	100 pts	A	Min 90% pts
Participation/Attendance	20 pts	B	Min 80% pts
<b>Total</b>	<b>200 pts</b>	C	Min 70% pts
		F	< 70% pts

**Quizzes:** There are three (3) quizzes (multiple choice format, 20 points each).

**Homework:** There are three (3) homework assignments (20 points each)

HW assignments and Quizzes are due before midnight on the due date, and they must be submitted via Moodle. One **lab** (20 points) & one **simulation** (20 points) activity will be conducted in class (Week 4).

## TECHNOLOGY INFORMATION:

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**Moodle** - You will use Moodle to access instructional materials, submit HW assignments, quizzes, and participate in any weekly activities.

**Microsoft Teams** – We will use Microsoft Teams as the video platform for the online course delivery. MS Teams link will be provided on Moodle.

**ERDPlus, RStudio, Tableau, MS Excel, MIT Moral Machine** - You will have a chance to work with these tools during the course. Free access will be provided or is already available through the university (MS Excel). Additional information will be provided on Moodle.

## SCHOOL OF BUSINESS POLICIES

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**Attendance:** Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of students. **Waiting to hear back from Loyola Andalucía**

**Class Recording** – Syllabus Statement: **Waiting to hear back from Loyola Andalucía**

**University Privacy Statement:** TBD. **Waiting to hear back from Loyola Andalucía**

**Academic Integrity:** All students shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehood. **Waiting to hear back from Loyola Andalucía**

## COURSE OUTLINE (TENTATIVE)

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Module	Session	Facilitator	Topics & Tools	Due
Module 1	14-04-2021	Nenad Jukić	Databases, Data Warehouses, Data Lakes, and Big Data ( <i>ERDPlus – tool</i> )	Quiz 1, HW 1 – <b>26-04-2021</b>
Module 2	27-04-2021	Faruk Guder	Business Analytics, Descriptive Analytics, Predictive Analytics, Analytic Programming ( <i>RStudio – tool; R programming language</i> )	Quiz 2, HW 2 – <b>03-05-2021</b>
Module 3	04-05-2021	Dinko Bačić	Data Visualization, Perception & Cognition, Design Principles & Practices, Dashboarding, ( <i>Tableau – tool</i> )	Quiz 3, HW 3 – <b>10-05-2021</b>
Module 4	11-05-2021	Carolyn Tang Kmet	Data-driven Decision Making - Optimization Techniques, Ethics – Data and Privacy ( <i>Excel – tool; MIT Moral Machine – simulation</i> )	Lab, Simulation <b>11-05-2021</b> (In class)

Notes: This class may occasionally deviate from the stated course outline below. The instructor reserves the right to make changes as needed to the course syllabus. Any issue that is not described in this syllabus will be resolved at the sole discretion of the instructor.

### **Nenad Jukić – Loyola University Chicago**



Dr. Nenad Jukić has been teaching undergraduate, graduate, and executive and professional education classes at the Quinlan School of Business since 1999 in the areas of databases, data warehousing, business intelligence, computer programming, business computer applications, and health care information systems. Dr. Jukić was named Loyola’s Faculty Member of the Year in 2014. He was also named Quinlan’s Outstanding Undergraduate Teacher of the Year for 2014 and has twice been recognized as Quinlan’s top researcher. Dr. Jukić conducts research in various information management–related areas, including database modeling and management, data warehousing, business intelligence, data mining,

business analytics, Big Data, e-business, and IT strategy. More here: <https://www.luc.edu/quinlan/faculty/nenadjuki.shtml>

### **Faruk Guder – Loyola University Chicago**



Dr. Guder is a Professor of Supply Chain Management in Loyola University Chicago’s Quinlan School of Business. He teaches courses in Business Analytics, Managerial Statistics, and Operations Management. Dr. Guder was named Quinlan’s Outstanding Teacher of the Year for both graduate and undergraduate programs. His research is in the areas of large-scale transportation systems and inventory management. He has published in leading journals such as Management Science, Mathematical Programming, Transportation Science, European Journal of the Operational Research, and Journal of the Operational Research Society.

More here: <https://www.luc.edu/quinlan/faculty/farukguder.shtml>

### **Dinko Bačić – Loyola University Chicago**



Dr. Bačić is an Assistant Professor of Information Systems in Loyola University Chicago’s Quinlan School of Business. His research interests include information visualization, human-computer interaction, biometrics, cognition, neuro IS, and pedagogy. He has taught courses such as Business Information Systems, Data Visualization and BI, Information Visualization & Dashboarding, ERP, Management Information Systems, Applied Software Development, and Business Requirements Analysis. He has papers published in leading IS outlets such as Decision Support Systems, Communications of the Association for Information Systems, AIS Transactions on Human-Computer Interaction, Springer Computer

Science Lecture Notes. He has over fifteen years of corporate and consulting experience in business intelligence, finance, project management, and HR. More here: <https://www.luc.edu/quinlan/faculty/dinkobai.shtml>

### **Carolyn Tang Kmet – Loyola University Chicago**



Carolyn Tang Kmet is a senior lecturer at the Quinlan School of Business at Loyola University Chicago. She teaches courses in both marketing and information systems. Prior to this role, she was the CMO with All Inclusive Marketing, a full-service e-commerce agency that provides analytics, marketing and site optimization services for clients such as Southwest Vacations, Julep, and Fire Mountain Gems. Carolyn was previously the director of affiliate marketing for Groupon, where she helped shape global affiliate marketing strategy. In this role, she was honored with the Affiliate Summit Pinnacle Award for Affiliate Manager of the Year 2010, and the New Advertiser of the Year 2011 award from Commission Junction. In 2018, Carolyn was honored with the Affiliate Summit Pinnacle Legend award for her contributions to the performance marketing industry. Carolyn earned an M.B.A. from Loyola University Chicago, an M.S. in Journalism from Northwestern University, and a B.A. from University of California, Berkeley. More here:

<https://www.luc.edu/quinlan/faculty/carolyntangkmet.shtml>