ATENEO DE MANILA UNIVERSITY
Loyola Schools

SYLLABUS FOR UNDERGRADUATE COURSES
MAJOR, CORE CURRICULUM and ELECTIVES

A. COURSE INFORMATION

COURSE NUMBER	CSCI 113i			**NO. OF UNITS**	3
COURSE TITLE	Business Intelligence				
PREREQUISITE/S					
DEPARTMENT/ PROGRAM	DISCS			**SCHOOL**	Science and Engineering
SCHOOL YEAR	2022-2023			**SEMESTER**	2nd
INSTRUCTOR/S	F: Renzo Tan G/O: Raphael B. Alampay J: Gabriel Lorenzo I. Santos M: Jose Alfredo A. de Vera III W/X: Eduardo F. Valdez				
VENUE/PLATFORM	W/X: Fully Online Others: Onsite	**SECTION**	F G J M O W X	**SCHEDULE**	MTH 1530-1700 MTH 1700-1830 TF 0800-0930 TF 1230-1400 TF 1530-1700 S 0900-1200 S 1200-1500

B. COURSE DESCRIPTION

This course introduces students to the field of business intelligence, and its value to organizations today. Business intelligence is taught as extracting, modeling, and presenting information to support decision-making across different business domains.

The course focuses on more than just the computational methods of business intelligence techniques. Attention is given to the domains where datasets are acquired, such as management information systems, health informatics, enterprise systems, and related fields across different disciplines. Students are taught the different approaches toward various types of datasets from interdisciplinary areas, in the context of descriptive and predictive analytics.

WHERE IS THE COURSE SITUATED WITHIN THE FORMATION STAGES IN THE FRAMEWORK OF THE LOYOLA SCHOOLS CURRICULA	
	FOUNDATIONS: Exploring and Equipping the Self
✓	ROOTEDNESS: Investigating and Knowing the World
	DEEPENING: Defining the Self in the World
	LEADERSHIP: Engaging and Transforming the World

C. COURSE LEARNING OUTCOMES

By the end of this course, students should be able to:

COURSE LEARNING OUTCOMES
CLO1: Identify data mining opportunities from the understanding of business goals and challenges
CLO2: Apply data warehousing concepts to different scenarios across different disciplines
CLO3: Design solutions to business challenges using data mining techniques and business intelligence infrastructure
CLO4: Communicate the business value and technical concepts of data analytics to an audience with varying technical expertise
CLO5: Student should be able to work with classmates in a collaborative manner.

D. COURSE OUTLINE and LEARNING HOURS

Course Outline	CLOs	Estimated Contact or Learning Hours
Intro to Business Intelligence and Data Mining Process (Week 1: January 16 – January 21)	CLO 1, 2, 5, 6	3
Business Understanding (Week 2: January 23 – January 28)	CLO 1, 2, 6	3
Data Warehousing and Online Analytical Processing (Week 3-4: January 30 – February 11) * February 6 (Monday): President's Day (University Holiday) * February 10 (Friday): 2nd Semester Faculty Day	CLO 1, 3, 4, 6, 7	10
Long Test # 1 (February 7/11)		5
Data Understanding – Getting to Know Your Data (Week 4-5: February 13 – February 25) * February 25 (Saturday): EDSA People Power Revolution Anniversary	CLO 1, 4, 6	10
Data Preparation – Data Preprocessing (Week 6-7: February 27 – March 11)	CLO 1, 4, 6	10
Long Test # 2 (March 10/11)		5
Modeling – Cluster Analysis (Week 8: March 13 – March 18)	CLO 1, 4, 5, 6	5
Modeling – Classification (Week 9-10: March 20 – April 1)	CLO 1, 4, 5, 6	10
Holy Week / Academic Break (Week 11: April 3 – April 8)		-
Modeling – Market Basket Analysis (Week 12-13: April 10 – April 22) * May 3: Eid'l Fitr (tentative)	CLO 1, 4, 5, 6	10
Long Test # 3 (April 21/22)		5
Project Consultation Weeks (Week 14-15: April 24 – May 6)	CLO 6, 7	9
Study Days / Final Assessment Period (Week 16-17: May 8 – May 20)	All	5

E. ASSESSMENTS AND RUBRICS

Assessment Tasks	Assessment Weight	CLOs
Quizzes/HW/Exercises (Individual)	15%	CLO 1, 2, 3, 4, 5, 6
Long Exams (Individual)	35%	CLO 1, 2, 3, 4, 5, 6
Lab (Pair)	50%	ALL
Project (Group)		ALL

G. TEACHING and LEARNING METHODS

TEACHING & LEARNING METHODS and ACTIVITIES	CLOs
Asynchronous Modules (Lecture Slides, Recorded Lectures)	CLO 1, 2, 3, 4, 5, 6
Online Consultation	CLO 1, 2, 3, 4, 5, 6
Check-up Quizzes	CLO 1, 2, 3, 4, 5, 6
Coursework & Project	CLO 1, 2, 3, 4, 5, 6

H. REQUIRED READINGS

- Downloadable course materials are available on the designated course page.
- Jiawei Han, et al. 2011. Data Mining Concepts and Techniques. 3rd Ed. Morgan Kaufmann

I. SUGGESTED READINGS

- Drew Bentley. 2017. Intelligence and Analytics. Larsen and Keller Education
- Gregory P. Steffine. 2015. Hyper: Changing the way you think about, plan, and execute business intelligence for real results, real fast!. Sanderson Press
- Mariya Yao, Adelyn Zhou, et al. 2018. Applied Artificial Intelligence: An Introduction for Business Leaders. Amazon LLC
- Nir Kaldero. 2018. Data Science for Executives: Leveraging Machine Intelligence to Drive Business ROI. Amazon LLC
- Przemek Chojecki. 2020. Artificial Intelligence Business: How you can profit from AI. Amazon LLC
- Rick Sherman. 2014. Business Intelligence Guidebook: From Data Integration to Analytics 1st Edition. Morgan Kaufmann
- Sharda Ramesh, Delen Dursun, et al. 2016. Business Intelligence, Analytics, and Data Science: A Managerial Perspective. Pearson Education
- Wilfried Grossman, Stefanie Rinderle-Ma. 2015. Fundamentals of Business Intelligence (Data-Centric Systems and Applications) 5th Ed. Springer

J. GRADING SYSTEM

93-100	A	Excellent
87-92	B+	Very Good
81-86	B	Good
75-80	C+	Satisfactory
69-74	C	Sufficient
60-68	D	Passing
<60	F	Failure

Notes:

1. Rounding off grades is at the discretion of the instructor. Rounding off is not automatic.
2. No exemptions will be given for the final exam.
3. Grades reflected on Canvas are not necessarily the official grades for the class.

K. CLASS POLICIES

1) Communication Channels
   a) Official announcements will be posted on Canvas (https://canvas.ateneo.edu/). It is the student's responsibility to visit the course page for the latest updates regarding the class.
   b) Other communication channels deemed necessary for better class engagement are supplementary only to the official Canvas course page.
   c) Synchronous sessions for fully online sections will be conducted via Zoom. Official links will be shared on your Google OBF calendars.
2) Submissions and Academic Integrity
   a) Submission of deliverables will also be made on Canvas unless stated otherwise. Late submissions may incur penalties unless stated otherwise.
   b) Cheating will not be tolerated. Cheating in any requirement will result in a minimum penalty of a grade of 0 for that requirement and will be reported to the appropriate authorities, as provided for by the Student Handbook. Duplicate work will merit penalties for both the student who copied and the student from whom the work was copied.
   c) Students are expected to comply with the DISCS Academic Integrity Policy. With each submission, students must include a certification that their work is substantially their own and not copied from others. In addition, students must acknowledge and specify any help from outside sources such as other classmates, the Web, books, etc., that they received while doing their projects. Failure to acknowledge such may be interpreted as intellectual dishonesty. Consult the course website for details on these policies.
3) Sessions and Attendance
   a) Except for fully online sections, this course is designed for onsite delivery, which means that at least 50% of the classes will be held face-to-face with online components that may be synchronous or asynchronous. Lectures and materials are uploaded on the course page for the students to access during their own time.
   b) See the section-specific schedule and mode of delivery below:

Faculty and Section	**Schedule and Mode of Delivery**
F: Renzo Tan	
G: Raphael B. Alampay	Onsite
J: Gabriel Lorenzo I. Santos	Refer to class Google Calendar for latest updates
M: Jose Alfredo A. de Vera III	Tuesdays (Onsite) Fridays (Asynchronous)

O: Raphael B. Alampay	
W: Eduardo F. Valdez	
X: Eduardo F. Valdez	

c) Should there be any cancellations, or if the onsite class for that day needs to be converted to online (asynchronous), the class will be notified in advance.
d) Unless the situation requires, online (asynchronous) days may be used for onsite classes.
e) If onsite classes are to be held on Friday, the class will be notified on the Monday of that same week.
f) Attendance at the onsite classes will be checked. Having more than 3 unexcused absences will automatically result in a grade of W.

4) Loyola Schools policies apply in this course, including those stipulated in the student handbook and the gender policy. Please refer to the Memo to the Loyola Schools on Academic Policies Adapted to Fully Online and Flex Learning, First Semester SY 2022-2023 emailed by the Associate Dean for Academic Affairs.
   a) Ateneo de Manila University does not discriminate based on sex, gender, marital or parental status, sexual orientation, or gender identity or expression. Please refer to the following links for more information on the Loyola Schools Gender Policy, and Code of Decorum and Administrative Rules on Sexual Harassment and other forms of Sexual Misconduct, and Inappropriate Behavior:
      - ❖ LS Gender Policy
      - ❖ Code of Decorum and Administrative Rules on Sexual Harassment, Other Forms of Sexual Misconduct, and Inappropriate Behavior
   b) Students are expected to visit the LS-One site regularly for updated information on Loyola Schools policies and services.
5) Additional Notes
   a) Additional policies, with due consultation with the students, may be implemented by the instructor to adapt to the class environment.
   b) If any current or emergent circumstances make online learning difficult for you, I would appreciate it if you could inform me immediately.

L. CONSULTATION HOURS

NAME OF FACULTY	EMAIL	DAY/S	TIME
Gabriel Lorenzo I. Santos	gsantos@ateneo.edu	By appointment	By appointment
Eduardo Valdez	efvaldez@ateneo.edu	Saturday	By appointment
Raphael B. Alampay	ralampay@ateneo.edu	TF	By appointment
Jose Alfredo A. De Vera III	jdevera@ateneo.edu	TF	12:00 – 14:00
Renzo Ran	rrtan@ateneo.edu	By appointment	By appointment