

GENERAL EDUCATION, KMITL

COURSE SYLLABUS

Course Code	96643048	Course Title	Business Computing and Visualization				
Total Credits	3(3-0-6)	Semester / Year of Study	1/2569	Section		Date- Time	
Course Description (English)	Understanding business data; Business data processing using a spreadsheet application; Writing computers programs to process business data; Visualizing business data; Use of data to support decision making in business.						
Course Coordinator	Dr. Pimprapai Thainiam						
Course Instructors	Assoc. Prof. Dr. Veera Bhatiasavi (Lecturer from MUIC, and this course is responsible by NIDA)						
Teaching Assistant (if any)	-						
Counselling Schedule	Online by appointment only			Teaching Language	☐ Thai ☒ English ☐ Others, please specify.....		
Website or Online Teaching Method (if any)							
Course Learning Outcomes							
By the end of this course, the student will be able to CLO-1. Demonstrate understanding of data analytics in business practices and organizations CLO-2. Interpret the result of business data and their implications on business operation CLO-3. Use software packages to develop appropriate models for business analysis and problem solving. CLO-4. Analyze the result of business models that produce business intelligence in a variety of settings CLO-5. Generate business insights through visualization reports and dashboards based on the features of the business data.							

General Education Learning Outcome: GE-LO		
	GE-LO	Value
☒	GE-LO-1 Analytical and Critical Thinking	5
☒	GE-LO-2 Complex Problem Solving	5
☒	GE-LO-3 Creativity	1
☐	GE-LO-4 Interpersonal Skills	0
☐	GE-LO-5 Integrity and Perseverance	0
☐	GE-LO-6 Active Learning and Learning Strategies	0
☐	GE-LO-7 Resilience, Stress Tolerance and Flexibility	0
☐	GE-LO-8 Leadership and Social Influence	0
☒	GE-LO-9 Communication	1
☐	GE-LO-10 Entrepreneurship and Startup	0
☒	GE-LO-11 Digital Quotient Literacy and Digital Media Production	3
	Total Value	<u>15</u>

Teaching Plan and Evaluation Plan

Week	Topic/Sub-topic	Activities	Notes
1	- Introduction to the course - Understanding and analyzing business data using Excel	Interactive Lecture/In class exercises	
2	- Understanding and analyzing business data using logical and lookup functions in Excel	Interactive Lecture/In class exercises	
3	- Understanding and analyzing business data using financial and forecasting tools in Excel	Interactive Lecture/In class exercises	
4	- Analyzing data with Excel - Filter - Advanced filter - SUMIF, SUMIFS - SUMPRODUCT - COUNTIF, COUNTIFS	Interactive Lecture/In class exercises	
5	- Analyzing data with Excel - Pivot tables	Interactive Lecture/In class exercises	
6	- Analyzing data using Power Pivot	Interactive Lecture/In class exercises	
7	- Data visualizations and dashboards	Interactive Lecture/In class exercises	
8	Midterm Examination	Taking Examination	

Week	Topic/Sub-topic	Activities	Notes
9	- Analyzing and visualizing data with PowerBI - Introduction to PowerBI - Importing data into the data model - Creating visualizations	Interactive Lecture/In class exercises	
10	- Analyzing and visualizing data with PowerBI - Creating visualizations (Contd.) - Understanding custom visuals	Interactive Lecture/In class exercises	
11	- Analyzing and visualizing data with PowerBI - Creating new columns and new measures - Using DAX formulas	Interactive Lecture/In class exercises	
12	- Analyzing and visualizing data with PowerBI - Understanding relationships - Using query editors	Interactive Lecture/In class exercises	
13	- Analyzing and visualizing data with Tableau - Introduction to Tableau	Interactive Lecture/In class exercises	
14	- Analyzing and visualizing data with Tableau	Interactive Lecture/In class exercises	
15	- Analyzing and visualizing data with Tableau	Interactive Lecture/In class exercises	
16	- Final presentations	Interactive Lecture/In class exercises	
17	Final Examination	Taking Examination	

Evaluation Plan

Assessment Activities	Value	Score	Week of Evaluation	Notes
Midterm Examination	4	16	8	
Final Examination	4	16	17	
Group Project	4.5	18	16	
Assignments	2.5	10	4, 12	
Total	15	60		

Evaluation criteria

☒ Group-based								
☐ Standard-based								
Grade	A	B+	B	C+	C	D+	D	F
Score (60 points)	57-60	49-56.9	41-48.9	34-40.9	27-33.9	21-26.9	15-20.9	0-14.9
☐ Satisfactory/Unsatisfactory (S/U)								
Grade	S				U			
Score (60 points)	30-60				0-29.9			

Scoring criteria according to Assessment Plan

Assessment Activities	Learning Outcomes	Value	Level			
			4 (Excellent)	3 (Good)	2 (Fair)	1 (Poor)
1. Midterm Examination	GE-LO-1	2	Got midterm score greater than 80%	Got midterm score between 70% - 80%	Got midterm score between 60% - 70%	Got midterm score lower than 60%
	GE-LO-2	2	Got midterm score greater than 80%	Got midterm score between 70% - 80%	Got midterm score between 60% - 70%	Got midterm score lower than 60%
2. Final Examination	GE-LO-1	2	Got final score greater than 80%	Got final score between 70% - 80%	Got final score between 60% - 70%	Got final score lower than 60%
	GE-LO-2	2	Got final score greater than 80%	Got final score between 70% - 80%	Got final score between 60% - 70%	Got final score lower than 60%
3. Group Project	GE-LO-1	0.5	Got group project score greater than 80%	Got group project score between 70% - 80%	Got group project score between 60% - 70%	Got group project score lower than 60%
	GE-LO-2	0.5	Got group project score greater than 80%	Got group project score between 70% - 80%	Got group project score between 60% - 70%	Got group project score lower than 60%
	GE-LO-3	0.5	Got group project score greater than 80%	Got group project score between 70% - 80%	Got group project score between 60% - 70%	Got group project score lower than 60%
	GE-LO-9	1	Messages (written/oral) are exceptionally clear, concise, and well-organized; information flows logically and is easy to understand.	Messages (written/oral) are clear and organized; minor lapses in clarity or flow but do not impede understanding.	Communication is uneven, sometimes unclear or disorganized; requires effort from the audience to understand.	Information is confusing, poorly organized, or incomplete; audience frequently struggles to understand.
	GE-LO-11	2	Demonstrates strong digital literacy: locates credible digital information, evaluates	Locates and uses appropriate digital information; evaluates sources with some	Identifies information from digital sources but shows limited evaluation of credibility; occasional	Struggles to find relevant digital information; uses unreliable sources;

Assessment Activities	Learning Outcomes	Value	Level			
			4 (Excellent)	3 (Good)	2 (Fair)	1 (Poor)
			sources critically, and applies information effectively; uses advanced research strategies.	guidance; research supports the project well.	use of unreliable or irrelevant sources.	limited understanding of digital research processes.
4. Assignments	GE-LO-1	0.5	Got assignment score greater than 80%	Got assignment score between 70% - 80%	Got assignment score between 60% - 70%	Got assignment score lower than 60%
	GE-LO-2	0.5	Got assignment score greater than 80%	Got assignment score between 70% - 80%	Got assignment score between 60% - 70%	Got assignment score lower than 60%
	GE-LO-3	0.5	Got assignment score greater than 80%	Got assignment score between 70% - 80%	Got assignment score between 60% - 70%	Got assignment score lower than 60%
	GE-LO-11	1	Demonstrates strong digital literacy: locates credible digital information, evaluates sources critically, and applies information effectively; uses advanced research strategies.	Locates and uses appropriate digital information; evaluates sources with some guidance; research supports the project well.	Identifies information from digital sources but shows limited evaluation of credibility; occasional use of unreliable or irrelevant sources.	Struggles to find relevant digital information; uses unreliable sources; limited understanding of digital research processes.