



1. General Information

Course Subject	IIMT
Course Number	3684
Course Title	Web and Social Media Technology
Academic Years	2024-2025
Grading Method	Letter

2. Instructors

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Subclasses: 2A

4. Course Description

Course Description	The World Wide Web has become a cornerstone of modern business, facilitating seamless real-time interactions that continuously generate invaluable data. A solid understanding of the essential concepts and skills related to web technologies is, therefore, crucial for business managers to effectively gather and analyze data for business analytics. This course will start from basic concepts and skills of web technologies, so prior experience in web technology is not required. Students will learn theories and practical applications of web data scraping and data analysis within the context of business analytics. Emphasizing a balance between practical skills and theoretical knowledge, this course prepares students to navigate and excel in the ever-changing digital landscape.
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5. Course Objectives

1. Equip students with a fundamental understanding of the key concepts and skills in web technologies crucial to business analytics.
2. Develop the ability to select efficient tools for scraping web data, tailored to the specific structure of the websites.
3. Cultivate the skill to choose appropriate tools for analyzing web data, based on the data structure and the analytical objectives.
4. Provide practical hands-on experience in web data scraping, processing, and analysis to solve business problems.
5. Encourage creative thinking in solving business challenges through the comprehensive use of web technologies and data analytics in a collaborative group setting.

6. Faculty Learning Goals

- Goal 1: Acquisition and internalization of knowledge of the programme discipline
- Goal 2: Application and integration of knowledge

6. Faculty Learning Goals
Goal 3: Inculcating professionalism
Goal 4: Developing global outlook
Goal 5: Mastering communication skills
Goal 6: Cultivating leadership

7. Course Learning Outcomes						
Course Teaching and Learning Activities	Aligned Faculty Learning Goals					
	1	2	3	4	5	6
CLO1. Understand key concepts and skills of web technologies and business analytics.	✓					
CLO2. Identify web and business analytics skills to address business problems at hand.	✓	✓				
CLO3. Efficiently collect web data by applying appropriate web technologies.		✓	✓			
CLO4. Effectively analyze web data by applying appropriate business analytics methods.		✓	✓	✓		
CLO5. Clearly communicate data-driven solutions to address business problems			✓	✓	✓	✓

8. Course Teaching and Learning Activities		
Course Teaching and Learning Activities #	Expected Study Hours	Study Load (% of study)
T&L1. Interactive Lectures	36	24
T&L2. Homework Assignment	24	16
T&L3. Midterm Exam	24	16
T&L4. Group Project	36	24
T&L5. Self-study	30	20
	Total: 150	Total: 100

9. Assessment Methods			
Assessment Methods	Description	Weight %	Aligned Course Learning Outcomes
A1. Participation	Attendance and discussions	10%	1,2
A2. Homework Assignments	Five take-home assignments (5% each)	25%	1,3,4
A3. Midterm Exam	One midterm exam	30%	1,2,3,4
A4. Group Project	One group project	35%	1,2,3,4,5

Assessment Rubrics

A1. Participation	
A+,A,A-	Attend nearly all classes. Actively engage in class discussions. Deliver arguments in a highly logical and insightful manner.
B+,B,B-	Regularly attend class. Frequently participate in class discussions. Deliver arguments in a logical and structured manner.
C+,C,C-	Regularly attend class. Participate in class discussions. Deliver the argument in a generally logical way.
D+,D	Seldom attend class. Occasionally participate in class discussions. Arguments show effort but lack depth or clarity.
F	Minimal or no attendance. Rarely or never participate in class discussions. Fails to deliver coherent arguments.
A2. Homework Assignments	
A+,A,A-	Demonstrate a strong understanding and application of all relevant web technologies and data analytics concepts. Solutions are highly logical, insightful, and directly address the business problems. Submitted R code is well-organized, clear, and easy to understand.
B+,B,B-	Show a good understanding and application of key web technologies and data analytics concepts. Solutions are logical and effectively address most aspects of the business problems. Submitted R code is structured clearly with minor issues.
C+,C,C-	Show a basic understanding of web technologies and data analytics concepts with some application errors. Solutions address the business problems but lack depth or insight. Submitted R code is adequate but may be somewhat unclear or disorganized.
D+,D	Limited understanding and application of web technologies and data analytics concepts. Solutions show an attempt to address the business problems but are often incomplete or flawed. Submitted R code is poorly organized and redundant.
F	Fail to demonstrate an understanding of the concepts taught. Solutions do not address the business problems or are mostly incorrect. Submitted R code is disorganized and hard to understand.
A3. Midterm Exam	
A+,A,A-	Demonstrate an excellent command in relevant web technologies and data analytics concepts, theories, and applications. Exhibit an outstanding ability to integrate multiple web technologies and data analytics concepts to solve complex business problems.
B+,B,B-	Show a good understanding and application of web technologies and data analytics concepts, theories, and applications. Effectively combine various web technologies and data analytics concepts to address business problems, with minor gaps in integration or application.
C+,C,C-	Show basic comprehension and application of web technologies and data analytics concepts. Adequately use web technologies and data analytics concepts to tackle business problems, though not always effectively.

Assessment Rubrics	
D+,D	Demonstrate limited understanding and improper application of key concepts. Struggle to integrate web technologies and data analytics concepts to address business problems effectively.
F	Fail to demonstrate an understanding of the key concepts. Fail to apply web technologies and data analytics concepts to business problems, resulting in ineffective or incorrect solutions.
A4. Group Project	
A+,A,A-	Deliver an engaging and highly compelling presentation. Handle questions in a professional and insightful manner. Comprehensively address the business problem with a sophisticated application of relevant web technologies and data analytics skills. Presentation material is exceptionally well-organized and easy to understand.
B+,B,B-	Present clearly and effectively, but may lack some engagement. Respond to questions competently, but may lack depth in explanations. Address most aspects of the business problem effectively using appropriate web technologies and data analytics skills. Presentation material is well-organized and mostly clear.
C+,C,C-	Presentation is adequate but lacks flair and may not fully engage the audience. Handle questions adequately, but response may be somewhat generic. Partially address the business problem, showing basic application of web technologies and data analytics skills. Presentation material is organized but may have areas that are unclear or confusing.
D+,D	Presentation lacks clarity and fails to engage the audience. Struggle with questions, showing a lack of preparation or understanding. Fail to effectively address key aspects of the business problem, with poor application of relevant web technologies and data analytics skills. Presentation material is poorly organized and difficult to follow.
F	Fail to deliver a coherent presentation. Fail to handle questions, demonstrating insufficient knowledge or preparation. Fail to address the business problem, showing a lack of understanding and application of necessary skills. Presentation material is disorganized and very hard to understand.

10. Course Grade Descriptors	
A+,A,A-	Demonstrate outstanding understanding and application of web technologies and business analytics. All assessment components are completed to an excellent standard.
B+,B,B-	Show a strong comprehension of the course material. Complete all assignments and project with a good standard.
C+,C,C-	Meet basic learning outcomes with basic understanding and application of concepts.
D+,D	Meet minimal course requirements with weak understanding and application of key concepts. Assignments and project show limited effort.
F	Fail to meet course requirements. Show insufficient understanding of course content and fail to complete essential assignments.

11. Course Content and Tentative Teaching Schedule			
Topic/Session	Content	Assignments	Other information

11. Course Content and Tentative Teaching Schedule

1	Course Overview; R Basics		
2	No Class – Holiday		
3	R Basics		
4	Cookies and Association Rules		
5	Online Review and Collaborative Filtering	HW 1	
6	Social Network Analysis		
7	Web Data Scraping 1: APIs	HW 2	
8	No Class - Reading Week		
9	Model-Based Learning 1: Linear Models		
10	HTML Basics for Web Data Scraping	HW 3	
11	Web Data Scraping 2: Static Webpages		Midterm Exam
12	Text Data Analysis: Topic Modeling		
13	Model-Based Learning 2: Discrete Choice Models	HW 4	
14	Web Data Scraping 3: Dynamic Webpages		
15	Course Project Presentation	HW 5	

12. Required/Recommended Readings & Online Materials

Textbook	<p>Data Mining for Business Analytics: Concepts, Techniques, and Applications in R by Galit Shmueli, Peter C. Bruce, Inbal Yahav, Nitin R. Patel, Kenneth C. Lichtendahl Jr. (2017) John Wiley & Sons (ISBN 978-1118879368)</p> <p>HTML&CSS Design and Build Websites by Jon Duckett (2011) John Wiley & Sons (ISBN 978-1118008188)</p> <p>Discrete Choice Methods with Simulation by Kenneth E. Train (2009) Cambridge University Press (ISBN 978-0511805271)</p>
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13. Means / Processes for Student feedback on Course

✓	Conducting mid-term survey in additional to SETL around the end of the semester
	Online response via Moodle site
	Others

14. Course Policy

A. Exam

There will be one midterm exam covering all material presented in class, assigned readings, and homework assignments. No make-up exams will be given unless required by university policy or approved by the instructor before the exam date.

B. Homework

Homework assignments will be given throughout the semester. They are set of questions focusing on the topics taught in class. Students need submit their answer through Moodle before the due dates. It is the students' responsibility to ensure successful submission of homework files on Moodle and that the files can be opened properly. Improperly submitted or unreadable files will be treated as if not submitted.

C. Course Project

There will be one group project. Detailed instructions will be provided on Moodle. Students will apply web technologies and data analytics skills learned during the semester to solve a real business analytics problem. Presentation materials must be submitted no later than the start of the class on the due date.

D. Late Submission Policy

Given that the due dates of the homework and the project are announced in the course schedule well in advance and students are given sufficient time to complete the assignments, late submission is strongly discouraged and heavily penalized,

- Late submission received within 2 hours after the due time will receive 90% credit;
- Late submission received during 2-48 hours after the due time will receive 70% credit;
- Late submission received after the first 48 hours past the due time but before the graded assignment is returned to class will receive 50% credit;
- No submission will be accepted after the graded assignment is returned to class.

This late submission policy applies to all students regardless of any reason or excuse.

E. Grade Discussion Policy

A student may consult with the instructor about his/her grade for each grading item, but he/she must do so within **ONE WEEK** after the day the grade is posed on Moodle. Once the one-week window has passed, the grade for the particular item is permanent.

F. Academic Dishonesty

We adhere to the HKU Business School's guidelines on academic conduct. Any form of academic dishonesty will be dealt with according to university policy. For more information, visit [HKU Plagiarism](#).

G. Communication and Official Correspondence

All course materials, including announcements, grades, lecture notes, assignments, and schedule updates, will be available on Moodle. Students are expected to regularly check the class website.

Official correspondence will be conducted via email, sent to the students' HKU email addresses. It is the responsibility of each student to keep their HKU email account active and to check it regularly. If you prefer using a personal email account, ensure your HKU emails are forwarded to it and check that they are not marked as spam.