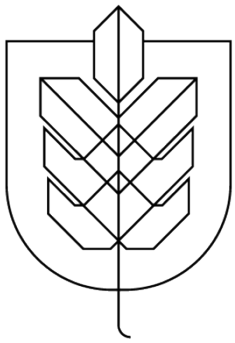

HULT
INTERNATIONAL
BUSINESS SCHOOL

MBAN DD
PROGRAM CATALOG
2024-25

CONTENTS

INTRODUCTION & PURPOSE

The purpose of this *Program Catalog* is to provide detailed information on the structure and content of the academic program. It is designed to be read in conjunction with the *Student Handbook* and the *Academic Regulations.*

SUMMARY OF RELATED DOCUMENTS

Document Name	Purpose	Versions
Student Handbook	The primary reference for all policies and procedures relating to the Hult student experience	Single School version
Program Catalog	Detailed information on the structure and content of the academic program	One for each degree program (e.g. MBA)
Academic Regulations	The central framework of the School's policies, around which all other documents are framed.	Single School version

YOUR QUALIFICATION

The MBAN is a postgraduate qualification. The full title of the award is Master of Science in Business Analytics (MS Business Analytics). Once you successfully complete all parts of the program you will receive a US degree, awarded by Hult International Business School. Students who attend the London campus in-person for a full core academic year (Fall & Spring) will receive a joint US/UK degree awarded by Hult International Business School.

The MBAN operates an academic credit system that combines both US and UK currencies, where 1 US credit = 5 UK credits. The MBAN consists of 36 US credits or 180 UK credits. The agreed Bologna Accord conversion between UK credits and ECTS is 2 UK = 1 ECTS, making the Hult MBAN the equivalent of 90 ECTS. The default credit currency used in Hult publications is US credits.

Further information on NECHE, the regional accreditation body covering Hult's US degrees, can be found at https://www.neche.org. Further information on UK higher education qualifications and their quality assurance can be found at http://www.qaa.ac.uk and https://www.officeforstudents.org.uk.

PROGRAM CHANGES

The School may make changes to elements of your program and its delivery, such as the timetable, syllabus content, and assessment. Such change may be due to enhancing or updating the quality and content of your program; responding to student feedback; academic staffing changes; a lack of student demand for certain courses; or factors beyond the School's reasonable control, which could include meeting the latest requirements of an accrediting body.

In the event that the School is required to make amendments to your program, we will endeavor to notify you as soon as reasonably possible. Where the School is proposing to make a change to your program that materially changes the outcomes of, or a large part of, your program, we will undertake consultation with students prior to making the change.

PROGRAM LEARNING OUTCOMES

On completion of the program, students are expected to be able to:

PLO1	Conceptual	Critically evaluate key data analytic and statistical concepts, frameworks, and models that impact business performance
PLO2	Applied	Utilize tools to creatively design and execute approaches to translate business data into decision guiding insights
PLO3	Global	Critically appraise the global business environment, including strategies for dealing with cultural difference, to maximize the value and impact of data analytic solutions
PLO4	Interpersonal	Combine and apply the interpersonal skills and communication skills needed to be a high performing team leader or member.
PLO5	Ethical	Integrate effective and culturally sensitive strategies to address the broader social and ethical consequences of business decisions.

TEACHING, LEARNING, AND ASSESSMENT

LEARNING:
You will be provided the opportunity to acquire practical business knowledge with a focus on international and cross-cultural understanding of the marketplace. Consistent with the five pillars of the program learning outcomes, we are committed to facilitating a learning environment that develops graduates who are:

- Adept at applying business concepts, frameworks, and models to real-world challenges.
- Capable of thinking and acting creatively and with executive foresight, by identifying problems, anticipating changes, navigating ambiguity, shaping opportunities, and crafting solutions.
- Comfortable with cultural difference, and capable of operating across cultures and borders.
- Proficient influencers and collaborators, with high personal resilience, and the adaptability to contribute within diverse teams and to lead them.
- Aware of the sensitive social and ethical consequences of business decisions.

TEACHING:
Our strategy is driven by a desire to hire the best possible teachers, who balance academic credentials and real-world experience to provide what is best for Hult students. As such, we seek to nurture an academic culture built on relevant research that can be directly applied to teaching and student engagement. Classes typically include a mixture of lectures, general discussion, case-study analysis, and student presentations. Additionally, we seek to foster constructive links with employers, as a vehicle to bring the real world into the classroom, and also to provide opportunities for Hult students to showcase their abilities and develop their self-confidence. An example of our approach is the capstone of the program, the Business Challenge, where students test their knowledge and skills by solving a corporate challenge or establishing their own business.

ASSESSMENT:
Student performance is evaluated and assessed according to the course learning outcomes and assessment criteria set out in each course. Means of assessment include a variety of individual and team-based assessment methods, including written assignments, presentations, and quizzes/exams. We make extensive use of grading rubrics for assessments, to assure consistent and transparent grading and feedback to students. Furthermore, we apply an assessment tariff to each course, to assure that assessment criteria and volume of assessment is weighted appropriately according to the academic level and number of credits awarded. As such, while assessments vary between courses, there is consistency with regards to comparative assessed workload.

The assessment tariff for common forms of postgraduate-level assessment is shown below:

Assessment Type	**Credits**	**Recommended Assessment Weighting**				
		100%	**60%**	**40%**	**20%**	**10%**
Written Assessment (Individual) [Measure: Word Count]	2	n/a	1250-2000	1000-1250	500-750	250-350
Written Assessment (Group) [Measure: Word Count]	2	n/a	2000-3000	1250-2000	750-1000	500-750
Presentation (Individual) [Measure: Time + Slides/Outline]	2	n/a	8-10 mins	5-7 mins	3-4 mins	1-2 mins
Presentation (Group) [Measure: Time + Slides/Outline]	2	n/a	13-20 mins	10-12 mins	5-7 mins	4-5 mins
Quiz / Timed Assessment [Measure: Time]	2	n/a	80-120 mins	60-80 mins	40 mins	20 mins
Other Forms of Assessment	Numeric Assessments will be expected to require an equivalent amount of work as the written assessments shown above.					
	Assessments that do not conform to the above tariff must be approved by the Teaching & Learning Committee.					

METHOD & WEIGHTING OF ASSESSMENT
The method and weighting of assessment varies by course, within the following parameters:

	Method of Assessment	Weight	CLO(s) Assessed	Length or Equivalent	Due Date
A1	*Specific assignment listed from one of the following types:* • Written Assessment (Individual) • Written Assessment (Group)* • Presentation (Individual) • Presentation (Group)*	30-50%	*Listed as appropriate e.g.* CLO1		
A2	• Written Assessment (Individual) • Presentation (Individual) • Exam(s)	30-50%			
A3	• Discretionary Assessment(s)	0-30%			

*Group assessments will normally make up no more than 30% of the overall course assessment.

Detailed assessment information for a specific course is provided in *myCourses*, including:

- Actual percentage weight of each assessment
- Actual length or equivalent
- Description of each assessment
- Course Learning Outcome(s) assessed
- Rubric used to grade each assessment, signposting performance expectations for each grade category

GRADES
The program applies the following grade scale to assessments and to final course grades:

Letter Grade	**Grade Points**	**In-Course Percentage**	**Quality Indicator**
A	4	90-100%	Excellent; significant strengths & few weaknesses
B	3	80-89%	Good; strengths outweigh weaknesses
C	2	70-79%	Adequate; balanced strengths and weaknesses
D	1	60-69%	Inadequate; weaknesses outweigh strengths
F	0	Below 60%	Fail; significant weaknesses & few strengths

Instructors will set more specific evaluation criteria for each assignment, within this framework, as appropriate to the assignment.

Detailed information on the grade scale and grading policy, including graduation requirements and graduation with Distinction, is provided in the *Student Handbook*.

ASSESSMENT BOARD AND EXTERNAL EXAMINERS
To assure the quality of both the provision and student outcomes on the program, Hult operates a robust system of external review. As such, all course grades awarded are provisional pending review by External Examiners and subsequent Assessment Board, which takes place after the end of each Module. Detailed information on the School's quality assurance procedures, including Assessment Boards and External Examiners, is provided in the *Academic Regulations*.

RESOURCES
Required and recommended readings and other materials for each course are detailed in the *myCourses* site.

PROGRAM STRUCTURE

The degree program is broken down into two distinct phases, each of which must be completed to be awarded the degree.

CORE COURSES
Core courses occur in the Fall and Spring Terms. These courses are required for completion of the degree and call upon students to develop analytical and cognitive skills across a range of disciplines.

ELECTIVE COURSES
Elective courses occur in the Summer Term. Electives are offered across a wide range of disciplines and subjects and vary by campus. A proposed list of elective courses for the academic year is available during the Fall Term. Final elective offerings and schedules are available prior to elective registration during Spring Term. Students may choose to take electives at their home campus or rotate to other Hult campuses. During the academic year, electives are subject to change based on student demand and faculty availability. Certain electives are open to students from multiple degree programs and Hult alumni.

MODE OF STUDY
The program is offered in a single mode of study: **Full-Time**, taught in-person at a Hult campus across one academic year.

LOCATION OF STUDY
The program is offered at the following Hult campuses: **Boston** and **San Francisco**.

PROGRAM MAP: COURSES AND CREDITS

DUAL-DEGREE

Block	Course Title	Credits
Fall	Dual Degree Immersion	1
	Business Statistics	2
	Python for Analysts	2
	Data Management	2
	Business Analysis with Structured Data	2
	Business Challenge I - Data Analysis Challenge	1
Spring	Computational Analytics with Python	2
	Business Modeling & Optimization	2
	Visualizing & Analyzing Data with R: Methods & Tools	2
	Business Challenge II - Coding Challenge	1
	Business Analysis with Unstructured Data	2
	Introduction to Machine Learning & AI	2
	DD Core Selective Course or DD Internship (if applicable)	2
	Business Challenge III - Analytics & AI Impact Challenge	1
	TOTAL MS DD CREDITS	**24**

COURSE DESCRIPTIONS

The following section provides detailed information on each required course, under the following headings:

- Course Title
- Course Description
- Course Learning Outcomes
- Course Topics

COURSE CODE: DAT-7470
COURSE TITLE: Business Analysis with Structured Data
CREDITS: 2.0

COURSE DESCRIPTION:
This course engages students to analyze complex business scenarios and create a data model. Students are introduced to SQL syntax and the rules for constructing valid SQL statements are reviewed.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Understand relational data model, understanding entities and relationships, designing logical data models and database design.
CLO 2: Understand how to program and report with SQL.

REQUIRED COURSE TOPICS:
1. SDLC and Agile methodologies
2. Flow of Analysis and documentation: BRD, HLD (System Design), Pseudo Code
3. Database design and the entity-relationship model
4. Designing data models
5. Creating reports from SQL queries
6. Creating and Implement Store Procedures

COURSE CODE: DAT-7471
COURSE TITLE: Business Analysis with Unstructured Data
CREDITS: 2.0

COURSE DESCRIPTION:
This course is designed to equip students with advanced skills (including programming/coding skills) in analyzing unstructured data to extract valuable insights and make informed business decisions. Unstructured data, such as text, images, audio, and video, poses unique challenges and opportunities for organizations. Through a combination of concepts, practical tools, and hands-on exercises, students will learn the principles and techniques of extracting unstructured data and transforming the data to gain business value. This course will also incorporate elements of text analytics, and how to effectively manage unstructured data.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Develop skills in extracting and handling unstructured data for business decision-making purposes.
CLO 2: Apply data structuring techniques, statistical models, and text analytics to real-world business decisions.

REQUIRED COURSE TOPICS:
1. Understanding Unstructured Data
2. Exploring different data management systems for unstructured data
3. Extracting unstructured data using Python and/or R.
4. Methods for structuring the unstructured data.
5. Text analytics and visualization.
6. Image, Video Analysis

COURSE CODE: BCH-7810
COURSE TITLE: Business Challenge #1

CREDITS: 1.0

COURSE DESCRIPTION:
The business challenge for each block is a practical team challenge that integrates the learning and skills from the previous courses. Capabilities demonstrated in each business challenge will include knowledge gained from prior courses, technical skills, and communication & collaboration skills. Teams will address a practical and relevant business challenge. Challenge activities may include simulations, executive pitch presentations, innovation hackathons, real company challenges, designing new business models, or other similar activities. The scope of each business challenge is presented based on content, themes, and skills from previous courses in each block.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO1: Learn to integrate disciplinary content to achieve performance objectives in a challenging, dynamic business context while applying newly acquired capabilities to solve practical, real-life issues, identify new business opportunities, and create impact that matters.

REQUIRED COURSE TOPICS:
1. Cross Functional Strategic Decision Making, Planning & Coordination
2. Analyzing Real and Simulated Business Cases
3. Team Leadership & Dynamics

COURSE CODE: BCH-7812
COURSE TITLE: Business Challenge #2
CREDITS: 1.0

COURSE DESCRIPTION:
The business challenge for each block is a practical team challenge that integrates the learning and skills from the previous courses. Capabilities demonstrated in each business challenge will include knowledge gained from prior courses, technical skills, and communication & collaboration skills. Teams will address a practical and relevant business challenge. Challenge activities may include simulations, executive pitch presentations, innovation hackathons, real company challenges, designing new business models, or other similar activities. The scope of each business challenge is presented based on content, themes, and skills from previous courses in each block.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO1: Learn to integrate disciplinary content to achieve performance objectives in a challenging, dynamic business context while applying newly acquired capabilities to solve practical, real-life issues, identify new business opportunities, and create impact that matters.

REQUIRED COURSE TOPICS:
1. Cross Functional Strategic Decision Making, Planning & Coordination
2. Analyzing Real and Simulated Business Cases
3. Team Leadership & Dynamics

COURSE CODE: BCH-7815
COURSE TITLE: Business Challenge #3
CREDITS: 1.0

COURSE DESCRIPTION:
The business challenge for each block is a practical team challenge that integrates the learning and skills from the previous courses. Capabilities demonstrated in each business challenge will include knowledge gained from prior courses, technical skills, and communication & collaboration skills. Teams will address a practical and relevant business challenge. Challenge activities may include simulations, executive pitch presentations, innovation hackathons, real company challenges, designing new business models, or other similar activities. The scope of each business challenge is presented based on content, themes, and skills from previous courses in each block.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO1: Learn to integrate disciplinary content to achieve performance objectives in a challenging, dynamic business context while applying newly acquired capabilities to solve practical, real-life issues, identify new business opportunities, and create impact that matters.

REQUIRED COURSE TOPICS:
1. Cross Functional Strategic Decision Making, Planning & Coordination
2. Analyzing Real and Simulated Business Cases
3. Team Leadership & Dynamics

COURSE CODE: DAT-3659
COURSE TITLE: Business Modeling & Optimization
CREDITS: 2.0

COURSE DESCRIPTION:
In today's age of big data, it's vital to design efficient and scalable algorithms that address wide-ranging optimization problems. Get an introduction to a variety of theory and applications in optimization and connect them to research and applications in large-scale optimization and machine learning.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Apply techniques for Business modeling and Optimization.
CLO 2: Demonstrate business modeling skills in Excel.

REQUIRED COURSE TOPICS:
1. Introduction to Business Models
2. Linear Programming Models
3. Advanced Network Design
4. Non-linear Models and business applications
5. Simulation

COURSE CODE: DAT-8565
COURSE TITLE: Business Statistics
CREDITS: 2.0

COURSE DESCRIPTION:
The course covers descriptive statistics, probability, random variables, with emphasis on inferential statistics, hypothesis testing, regression analysis. The course emphasizes statistics to solve business problems.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Describe data and make evidence-based decisions using inferential statistics that are based on well-reasoned statistical arguments.
CLO 2: Understand advanced quantitative statistical techniques to make better-informed business decisions.

REQUIRED COURSE TOPICS:
1. Probability and Inference
2. Sample Variability
3. Statistical Tests
4. Simple Regression
5. Multiple Regression

COURSE CODE: DAT-5390
COURSE TITLE: Computational Data Analytics with Python
CREDITS: 2.0

COURSE DESCRIPTION:
This course will introduce Python and Pandas to different types of data and bring insights from it. Learn how to prepare data for analysis, perform simple statistical analysis, run and interpret regression.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Collect and analyze data using Pandas and Dataframes.
CLO 2: Create functions using statistical analysis in Python

REQUIRED COURSE TOPICS:
1. Introduction to Pandas
2. Data Anomaly Detection and Treatment
3. Linear Correlation
4. Automated Variable Selection Techniques
5. Logistic Regression and classification

COURSE CODE: DAT-7467
COURSE TITLE: Data Management
CREDITS: 2.0

COURSE DESCRIPTION:
Business decisions need data. In order for you to unearth those decisions, you need to know how to manage data in a relational database system and translate it into purposeful information. In this course, you'll evaluate relational databases and methodologies as well as developing basic applied proficiency in SQL.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Acquire the tools to perform structured data analysis & create entity-relationship-diagrams.
CLO 2: Perform basic and advanced SQL queries.

REQUIRED COURSE TOPICS:
1. Relational database structure, tables, keys, indexes
2. Structure of a query, and executing basic queries
3. Conditional search, Organizing and Grouping queries
4. Using aggregate functions
5. Table and Column alias, nested queries

COURSE CODE: LEAD-6003
COURSE TITLE: Dual Degree Immersion
CREDITS: 1.0

COURSE DESCRIPTION:
Begin your Dual Degree program with an immersion experience to the technical and business skills required to succeed in your program and industry. Through this course, students will practice essential business skills to prepare for the program, assess readiness on commonly used concepts and tools for industry and career preparation, continue to develop communication and teamwork skills, reflect on one's personal journey, and build a strong foundation for future program and professional success.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Develop business, academic, and industry fundamental skills to assess readiness & growth for program and professional success.

REQUIRED COURSE TOPICS:
1. Business & Academic Fundamentals
2. Program & Technical Skills
3. Working with Artificial Intelligence (AI)
4. Impact of Sustainability and ESG in the Industry

COURSE CODE: DAT-5329
COURSE TITLE: Introduction to Machine Learning & AI
CREDITS: 2.0

COURSE DESCRIPTION:
As Machine Learning and AI drive transformative advancements across industries, understanding the principles of ML and AI is crucial for professionals aiming to harness data-driven insights, automate processes, and create intelligent systems. Using tools available in Python, R, and through AI tools, this course also provides a broad introduction to machine learning, data-mining, and statistical pattern recognition.The course will also draw from numerous case studies, tools, and applications, so that students will gain experience with application of the theory to key predictive and descriptive analytics problems in business intelligence.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Evaluate the relative strengths and weaknesses of different machine learning methods.
CLO 2: Apply machine learning and AI techniques to business intelligence challenges.

REQUIRED COURSE TOPICS:
1. Machine Learning & AI Fundamentals
2. Applying Machine Learning Algorithms
3. Supervised & Unsupervised Learning
4. Design and Analysis of Machine Learning and AI Experiments
5. Business Applications of Machine Learning and AI
6. Social and Ethical Issues of Machine Learning and AI

COURSE CODE: DAT-7466
COURSE TITLE: Python for Data Analysts: Methods & Tools
CREDITS: 2.0

COURSE DESCRIPTION:
As an analyst, you're expected to drive meaning from messy data using statistics, programming, and domain knowledge. This course will help you learn the tools and techniques required to drive meaning from large datasets using Python as a foundation and applying statistical methods. You'll also learn programming design principles.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Understand programming and problem solving in Python.
CLO 2: Apply Python constructs of static and dynamic printing, lists, conditional statements, iterable structures, and accessing libraries.

REQUIRED COURSE TOPICS:
1. Fundamental Programming in Python
2. Code Review (debugging and feedback)
3. Nested loops and logical structures
4. Dictionaries, lists
5. Functions

COURSE CODE: DAT-5323
COURSE TITLE: Visualizing & Analyzing Data with R: Methods & Tools
CREDITS: 2.0

COURSE DESCRIPTION:
Inform yourself on the principles and techniques of computer programming using R as well as a variety of numerical and computational problems. You'll also learn how to program and use R for effective data analysis for large datasets. Explore real examples of practical issues in statistical computing, including programming in R.

COURSE LEARNING OUTCOMES:
On completion of this course, students are expected to be able to:

CLO 1: Understand programming and problem solving in R.
CLO 2: Perform data cleaning, data visualization in R, and design a data science process.

REQUIRED COURSE TOPICS:
1. Intro to R, R environment, installing libraries and loading packages
2. Basic objects in R, different data types, testing and changing types, importing data into the R environment
3. Basic data mining in R
4. Creating Frequency histograms, analyzing different distributions, visualizing data
5. Creating automated reports using R markdown, report streamlining