ASIA School of Business
in collaboration with MIT Sloan Management

ACE@ASB
AGILE CONTINUOUS EDUCATION

MICRO-CREDENTIAL IN QUANTITATIVE METHODS

DATA-DRIVEN DECISIONS, POWERED BY AI

(HRDCorp Course Series No: 10001539795)

Faculty Professor Sam Flanders

Videos are available beginning September 1, 2025

After watching the required videos, live sessions are on:

- September 14, 2025
- September 21, 2025
- September 28, 2025
- October 5, 2025
- October 12, 2025

Course Credits:
2 Credits

HRD CORP CLAIMABLE

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Course Overview

Data-driven strategies encourage business growth and efficiency while promoting a competitive edge for organisations to thrive with incisive insights based on empirical evidence.

Business analysis requires skill sets to identify business needs, business environments, markets and competitors which will enable students to find corresponding solutions that may affect the growth of the business. Quantitative business analysis takes a deeper dive by employing statistical methods to analyse, identify and draw conclusions on the relationships between existing and future variables. This enables organisations to study and understand prevailing trends and patterns, predict future ones and comprehend how different factors can affect the outcome for a more profitable business.

The goal of this course is to give students the quantitative tools and analytical rigour they will need for business analytics. In this course, students will strengthen their understanding of foundational statistical methods like confidence intervals, hypothesis testing, and stochastic modeling. They will also learn how quantitative techniques can turn seemingly difficult and ambiguous problems into clearly defined and easily answered questions. Additionally, students will learn how AI can act as a force multiplier for analytics.

Course Outline

1. **Asynchronous 1 - Topics**
   Math review, The Normal Distribution, Algebra of Random Variables, The Normal CDF

2. **Class 1 - Topics**
   Activity: Competing with Probability Distributions,
   Activity: Understanding Histograms, The Inverse Normal CDF,
   Activity: Finding the Limits of The Central Limit Theorem

3. **Asynchronous 2 - Topics**
   Hypothesis testing, The T-Distribution, Difference-in-means-tests, Using Google Colab

4. **Class 2 - Topics**
   Hypothesis Testing Projects: Choosing Thresholds for Fraud Detection, Avoiding False Positives in A/B Testing

5. **Asynchronous 3 - Topics**
   One-tailed tests, Confidence Intervals, Bootstrapping, Using AI for Analytics

6. **Class 3 - Topics**
   Activities: Data Viz and Analytics with AI

7. **Asynchronous 4 - Topics**
   More Algebra for Random Variables , Correlation and Covariance, The Binomial Distribution

8. **Class 4 - Topics**
   Activity: More AI Analytics, Project: Correlation and Product Bundling

9. **Asynchronous 5 - Topics**
   Dimensionality Reduction

10. **Class 5 - Topics**
    Project: Making Big Data Manageable with Dimensionality Reduction

Course Learning Outcomes

At the end of the course, you will be able to:

Solve
foundational mathematical problems in topics like probability and statistics, using both classic spreadsheets and AI tools.

Apply
statistical techniques and quantitative analysis to business problems management.

Propose
rational decisions in a variety of business contexts.

Assessment

Learners must undergo the various assessment categories below and achieve minimum stipulated grades in order to receive the Micro-Credential in Quantitative Methods:

1. Reflections 10%
2. Class Participation
   - In-class Discussion 5%
   - In-video Quizzes 5%
4. Problem Sets 40%
5. Final Exam 40%

Course Structure

Asynchronous

Before the first live session and between sessions, students will watch short video lectures and complete brief homework assignments to strengthen their classroom learnings.

Live Sessions

There will be a review discussion of the asynchronous content at the beginning of each class. Following this, students will work on in-class analytics projects and participate in interactive simulations.

Who Should Take This Course

Anyone without a background in analytics but wants to develop their skills and knowledge in analytics.

Academic Requirements/Prerequisites
Quantitative Preparation course (for those with limited background in Math). Please note that a link to this course will be shared to ACE learners upon registration.

Duration
Total 8 weeks (this includes time for students to view videos before the first live session).

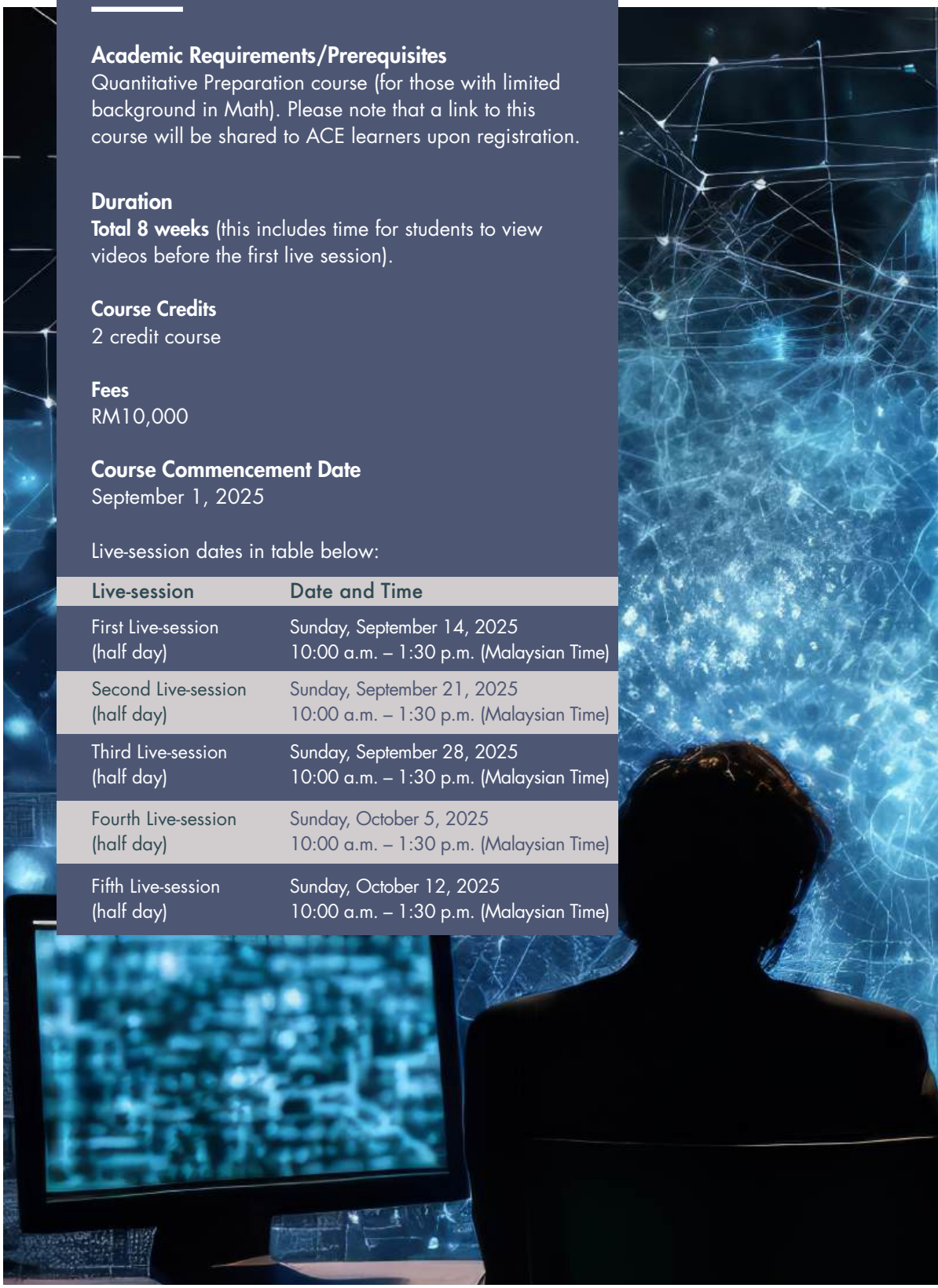
Course Credits
2 credit course

Fees
RM10,000

Course Commencement Date
September 1, 2025

Live-session dates in table below:

Live-session	Date and Time
First Live-session (half day)	Sunday, September 14, 2025 10:00 a.m. – 1:30 p.m. (Malaysian Time)
Second Live-session (half day)	Sunday, September 21, 2025 10:00 a.m. – 1:30 p.m. (Malaysian Time)
Third Live-session (half day)	Sunday, September 28, 2025 10:00 a.m. – 1:30 p.m. (Malaysian Time)
Fourth Live-session (half day)	Sunday, October 5, 2025 10:00 a.m. – 1:30 p.m. (Malaysian Time)
Fifth Live-session (half day)	Sunday, October 12, 2025 10:00 a.m. – 1:30 p.m. (Malaysian Time)



Faculty

Professor Sam Flanders is an Associate Professor II of Economics at the Asia School of Business and an International Faculty Fellow at MIT. His research interests include applied microeconomic theory, industrial organisation, and empirical microeconomics.

His research focuses on matching theory – the study of how firms and workers, schools and students, and romantic partners, among others, match to one another.

Professor Flanders received his PhD in Economics from The University of North Carolina, Chapel Hill, where he is a member of the Royster Society of Fellows. Previously, he was an Assistant Professor at the Mihaylo College of Business and Economics, CSUF.

RM10,000 or approx USD 2,200*

*This ACE course, which is part of ASB's accredited degree program, is exempted from Malaysian SST.

The ACE courses are:

• Stackable to degrees. They can be combined to gain eligibility to apply for comprehensive qualifications, culminating in the ASB Master of Business Administration (full-time 12 months) or Executive Master of Business Administration degrees (part-time 16 months).

Register now for this course:

Asia School of Business, ASB Academic,
11 Jalan Dato' Onn, 50480 Kuala Lumpur

Ministry of Higher Education Malaysia
Registration No: DU046(W)

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