

Jointly organised with

NUS-SAA Professional Certificate in Data Proficiency for Aviation Professionals

Data underpins the success of organisations in mining assets to develop strategies, optimise efficiency and profitability. This course provides you with the competencies to participate in a data analytic process to solve business problems applicable to the aviation industry. You will be equipped with the fundamentals of data analytics, data processing and visualisation techniques for big data sense-making, to derive data-driven business decisions. This course will explore the application of data analytics in effective Airport-Collaborative Decision Making (A-CDM), key principles and useful tools. This course combines the expertise from the National University of Singapore's School of Continuing and Lifelong Education (NUS SCALE) in data analytics, and CAAS's knowledge on regulatory and industry best practices. This course is delivered via eLearning.

WHAT YOU WILL LEARN

Upon completion of this course, you will be able to:

- Recognise the characteristics of advanced analytics that are key to Industry 4.0
- Create visualisations to effectively communicate data insights
- Apply basic data analytics process and concepts and build simple models for classification and prediction
- Understand and apply concepts of Design Thinking to innovation projects
- Gain insights to design and implement effective A-CDM

WHAT IS COVERED

- Analytics in Industry 4.0
- Smart factories and transformations brought by the Internet of Thing (IoT) and the Industrial Internet of Things (IIoT)
- Cloud computing
- Predictive and prescriptive analytics
- Human-machine collaborative efforts, augmented intelligence, future of work and skills needed in Industry 4.0 and Smart Economy
- Data analytics begins with me
- Big data and data analytics
- The data analytics process
- Introduction to machine learning
- A primer on artificial intelligence
- Introduction to statistical concepts
- Logistic regression
- Data visualisation begins with me
- Introduction to data visualisation using Qlik Sense
- Application of visualisation to data
- Effective communication of analysis with data visualisation
- Data analytics for managers
- Stages in analytics projects / building the Data Science Team
- Open source and innovation
- Privacy, ethics and biases
- Sentiment analysis of survey data

WHAT IS COVERED (CONT'D)

- Design thinking bootcamp
 - Core principles of design thinking and innovation
 - User insight research methods, data collection and analytics
 - Identify latent need and innovation opportunities
 - Develop, test and communicate concept prototyping
- Data-driven customer experience
 - Customer experience and customer journey
 - Customer research methods, survey questionnaire design
 - Online customer experience
 - Customer data analytics methods
 - Factor analysis and predictive modelling (regression analysis)
- A-CDM
 - Key principles of A-CDM
 - Understand A-CDM's best practices
 - Implementation methods of A-CDM
 - Application of data sharing, automation and decision-support tools in A-CDM
 - Benefits and implementation challenges of A-CDM

WHO SHOULD ATTEND

This course is beneficial for middle and senior management personnel from civil aviation administrations, airport authorities, airport companies and government agencies.

LEARNING LEVEL

Fundamental 

LEARNING ACTIVITIES

- Lectures
- Workshop
- Case studies

NUS-SAA Professional Certificate in Data Proficiency for Aviation Professionals

DURATION

8 Days
0830 hrs – 1730hrs* (SGT/GMT+8)
*subject to change

MODE OF DELIVERY

Live virtual classroom via Zoom 5.0

Details on how to access the online course will be provided to participants who have been accepted for the course.

ASSESSMENT AND CERTIFICATION

A Professional Certificate will be awarded to participants who achieve at least 75% attendance and pass the assessment(s) with a minimum score of 50%.

APPLICATION

Please apply through the following links:

- Individuals eligible for SSG's ETSP Funding: <https://go.gov.sg/nus-fcdp-appl>
- For corporate applications, please contact Mr Steven Loo (steven.loo@nus.edu.sg).
- Others: <https://go.gov.sg/nus-fcdp>

For course enquiries, please email saa@caas.gov.sg

FEE

S\$7,100

Fees may also be paid in USD. Participants from Singapore are required to add GST to the course fee.

FUNDING

SkillsFuture Singapore (SSG)'s Enhanced Training Support Package (ETSP) is available for eligible companies in the air transport sector.

Singaporeans/ PR participants will receive 90% funding support, and up to \$10 per hour absentee payroll (absentee payroll claims are only applicable to employers) for training hours completed, if they meet the funding criteria.

For enquiries on funding for this course, please contact **Mr Steven Loo** (steven.loo@nus.edu.sg).

Air Transport Community Enrichment (ACE) Programme

A blended learning programme

This 3-week modular programme provides you with a broad overview of the aviation ecosystem including fundamentals of airport operations, air traffic control, Safety Management Systems (SMS) and Airport Emergency Services (AES). It is designed to impart knowledge on how airport operations is of paramount importance in facilitating the passenger service chain experience. **ACE** is delivered as an online course for Airport Operations (module 1) and Safety Management (module 2), and as a blended learning for Airport Emergency (module 3). Participants are encouraged to attend the full programme to gain an appreciation of the aviation ecosystem and its various components.

YOU WILL LEARN

Upon completion of this programme, you will be able to:

- Gain an appreciation of the aviation ecosystem
- Understand the fundamentals, key concepts and aspects of airport operations, aerodrome control, SMS and AES
- Comprehend how airport operations facilitate the passenger service chain experience

WHAT IS COVERED

Module 1: Airport Operations (online)

- Aviation eco-system
- Terminal planning
- Ramp operations
- Ground handling agents
- Quality service management
- Low cost carriers handling
- Crisis management
- Airport-Collaborative Decision Making (A-CDM)
- Air cargo operations
- Appreciation of air traffic control

Module 2: Safety Management (online)

- Cabin safety oversight
- Fundamentals of SMS
- Hazard identification risk management
- Safety performance monitoring
- Air accident investigation
- Unmanned Aircraft Systems

WHAT IS COVERED (CONT'D)

Module 3: Airport Emergency

- Changi Airport emergency plan
- Exercise planning, design and evaluation
- Fire chemistry and basic first aid
- Working in smoke-filled and dark environment
- Human behaviour in emergency situations
- Survival techniques and tactics
- Classification of Dangerous Goods
- Fire-fighting and wet training
- Life as Fire fighter: Fire-fighting equipment and vehicles

LEARNING ACTIVITIES

- Learning journeys
- Practical sessions

WHO SHOULD ATTEND

This programme is beneficial to airline and airport personnel from airlines and airport-related organisations. Participants will attain a certificate upon successful completion of each module.

DURATION

Full programme: 3 weeks

Module 1 – 3: 5 days per module

Modules can be taken in any sequence, or as a stand-alone course.

FEES

- Module 1 - \$\$1,120 per participant
- Module 2 - \$\$1,022 per participant
- Module 3 - \$\$1,090 per participant

Participants from Singapore are required to add GST to the programme fee. Funding is available for eligible companies. Please refer to the [funding information](#) for details.

FUNDING INFORMATION

These programmes are supported by SkillsFuture Singapore (SSG) and NTUC.

SSG Enhanced Training Support Package

Singaporeans/ PR participants will receive 90% funding support, and up to \$10 per hour absentee payroll (*absentee payroll claims are only applicable to employers*) for training hours completed, if they meet the funding criteria.

Funding criteria:

Participant:

- Must be from companies in the air transport sector/white-listed companies
- Achieves at least 75% attendance for each course
- Passes the assessment with a minimum score of 50% for each course

NTUC

Unionised companies in the air transport sector will receive an additional NETF Collaborative Fund (NCF) funding support which funds 50% of the unfunded course fees up to \$250 per member. This can be used together with the SSG course fee funding. The application and submission of the NCF claims should be done by the respective unionised company.

- 1) Unionised company apply for courses that are supported by NCF.
- 2) Unionised company obtains their union's endorsement for the NCF application prior to course commencement.
- 3) Upon course completion, the company will generate the list of employees who have attended the training for the union to verify on membership status etc before the NCF claim is routed to NTUC for processing and disbursement.

Please complete the **NCF application form** and return to NTUC for approval. Alternatively, companies may also email Ms Poon (email: yeeman@e2i.com.sg) directly on enquiries relating to the application process.

Application Process

For corporate registration, please contact Ms Sultana Begum (email: Sultana_BEGUM@caas.gov.sg).

For individual applications, please submit your applications at <https://go.gov.sg/saa-etsp>.

Enquiries

For enquiries on funding, please contact Ms Andrea Cho (email: andrea_cho@caas.gov.sg) or Ms Sultana Begum (email: Sultana_BEGUM@caas.gov.sg).