

## (SCTP) Advanced Professional Certificate in Data Analytics: 10 February to 17 May 2025

SN	Week	Module Name	Class Type	Online Type	Topics	Hours	Trainer	Date	Day	Time	Venue	Remarks
		<b>Data Management, Data Wrangling and Exploratory Data Analysis (EDA)</b>		Synchronous and Asynchronous	<b>LEARNING OBJECTIVES:</b> Week 1: Introduction to Data Management and Wrangling and EDA concepts Week 2: Introduction to Relational Databases and SQL Statements Week 3: Understanding Data Model Documentation Week 4: Shaping Data with SQL	47	Kan Hwa Heng Francis Tay			Attendance Check-In times		Participants will be required to have SQLite and DB Browser for SQLite installed in their PC or Macbook.
1	Wk 1	Introduction to Data Management and Wrangling and EDA concepts	Check-in	Synchronous	Introduction to Programme and Module	2	Francis Tay Kan Hwa Heng	10-Feb-25	Monday	7:00 pm to 9:00 pm		Introductory Lecture
2			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	11-Feb-25	Tuesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
3			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	12-Feb-25	Wednesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
4			Lecture	Synchronous	Introduction to Data Wrangling, EDA, etc.	3	Kan Hwa Heng	13-Feb-25	Thursday	7:00 pm to 10:00 pm		Lecture and Group Work
5			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Kan Hwa Heng	14-Feb-25	Friday	10:00 am to 10:00 pm		Assignment/Quiz due date
			Lecture	F2F	Career Pathfinder Series - Module 1 - Fundamentals of Career Discovery Navigation and Readiness	3	Justus Teo	15-Feb-25	Saturday	9:30 am to 12.30 pm	LT702	Lecture and Group Work
6	Wk 2	Introduction to Relational Databases and SQL statements	Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	17-Feb-25	Monday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
7			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	18-Feb-25	Tuesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
8			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	19-Feb-25	Wednesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
9			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	2	Kan Hwa Heng	20-Feb-25	Thursday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
10			Assignment/Quiz	Asynchronous	Assignment/Quiz	1	Kan Hwa Heng	21-Feb-25	Friday	10:00 am to 10:00 pm		Assignment/Quiz due date
11			Lecture	F2F	Introduction to Relational Databases and SQL statements.	3	Kan Hwa Heng	22-Feb-25	Saturday	9:00 am to 12:00 pm	LT702	Lecture and Group Work
12	Wk 3	Introduction to Data Model Documentation	Check-in	Asynchronous	Access to Materials, Self-Learning.	1	Kan Hwa Heng	24-Feb-25	Monday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
13			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	25-Feb-25	Tuesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
14			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	26-Feb-25	Wednesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
15			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	2	Kan Hwa Heng	27-Feb-25	Thursday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
16			Assignment/Quiz	Asynchronous	Assignment/Quiz	1	Kan Hwa Heng	28-Feb-25	Friday	10:00 am to 10:00 pm		Assignment/Quiz due date
17			Lecture	F2F	SQL Statements. Data model documentation. (Part 2 of 2)	3	Kan Hwa Heng	1-Mar-25	Saturday	9:00 am to 12:00 pm	LT702	Lecture and Group Work
18	Wk 4	Shaping data with SQL	Check-in	Asynchronous	Access to Materials, Self-Learning.	1	Kan Hwa Heng	3-Mar-25	Monday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
19			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	4-Mar-25	Tuesday	10:00 am to 10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
20			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	5-Mar-25	Wednesday	10:00 am to 10:00 pm		Lecture and Group Work
21			Lecture	Synchronous	Introduction to Data Wrangling, EDA, etc.	3	Kan Hwa Heng	6-Mar-25	Thursday	7:00 pm to 10:00 pm		Lecture and Group Work
22			Assignment/Quiz	Asynchronous	Group Assignment Submission	2	Kan Hwa Heng	7-Mar-25	Friday	10:00 am to 10:00 pm		Assignment/Quiz due date
			Lecture	F2F	Career Pathfinder Series - Module 2 - Career Marketplace - Labour Market Research and Career Planning	3	Justus Teo	8-Mar-25	Saturday	9:00 am to 12.00 pm	LT702	Lecture and Group Work
		<b>Communicating Insights, Dashboarding and Data Storytelling</b>		Synchronous and Asynchronous	<b>LEARNING OBJECTIVES:</b> Week 5: Introduction to Data Visualization and Data Storytelling; Basic chart creation in Tableau Week 6: Manage and Manipulate Data within Tableau; Exploring data using charts Week 7: Creating Dashboards and Telling Story Week 8: Basic Predictive Analytics	62	Khoo Seok Teng					Participants will be required to download FREE version of TABLEAU Public 2022 at <a href="https://public.tableau.com/en-us/s/download">https://public.tableau.com/en-us/s/download</a> . Recommended System Requirements: • OS: Windows PC – Windows 8 or later, MacOS 10.14 or later. • RAM: Minimum 2 GB • Hard Disk Space: 2 GB Tableau Public Account Required: • Register link: <a href="https://public.tableau.com/en-us/s/">https://public.tableau.com/en-us/s/</a> • Use "Sign up" button on top right of page

23	Wk 5	Introduction to Data Visualization and Data Storytelling. Basic chart creation in Tableau.	Lecture	Synchronous	Introduction to Module. Introduction to Data Visualization and Data Storytelling with Tableau. Familiarise with Tableau Interface and Basic Chart Creation.	3	Khoo Seok Teng	10-Mar-25	Monday	7:00 pm	to	10:00 pm		Lecture and Group Work
24			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	11-Mar-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
25			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	12-Mar-25	Wednesday	10:00 am	to	10:00 pm		Midweek recorded lecture with assignment
26			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	13-Mar-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
27			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Khoo Seok Teng	14-Mar-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
28	Wk 6	Manage and Manipulate data within Tableau; Exploring data using charts	Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	17-Mar-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
29			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	18-Mar-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
30			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	19-Mar-25	Wednesday	10:00 am	to	10:00 pm		Midweek recorded lecture with assignment
31			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	20-Mar-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
32			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Khoo Seok Teng	21-Mar-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
33			Lecture	F2F	Data Manipulation in Tableau; Creating charts to explore data using charts	3	Khoo Seok Teng	22-Mar-25	Saturday	9:00 am	to	12:00 pm	FH1	Lecture and Group Work
34	Wk 7	Creating Dashboards and Telling Story using Tableau	Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	24-Mar-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
35			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	25-Mar-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
36			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	26-Mar-25	Wednesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
37			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	27-Mar-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
38			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Khoo Seok Teng	28-Mar-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
39			Lecture	F2F	Creating dashboards with interactivity and telling story using Tableau	3	Khoo Seok Teng	29-Mar-25	Saturday	9:00 am	to	12:00 pm	LT601	Lecture and Group Work
			Lecture	F2F	Career Pathfinder Series - Module 3 - Career Readiness Prep - Personal Branding & Resume	3	Justus	29-Mar-25	Saturday	1.30 pm	to	4.30 pm	LT601	Lecture and Group Work
40	Wk 8	Apply basic predictive analytics using Clusters and Forecasting						31-Mar-25	Monday					Hari Raya Puasa Holiday
41			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	1-Apr-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
42			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	2-Apr-25	Wednesday	11:00 am	to	11:00 pm		Check in anytime to get materials for self-learning in "Content" section.
43			Lecture	Synchronous	Basic Predictive Analytics using Clusters and Forecasting	3	Khoo Seok Teng	3-Apr-25	Thursday	7:00 pm	to	10:00 pm		Lecture and Group Work
44			Assignment/Quiz	Asynchronous	Assignment/Final Module Quiz	2	Khoo Seok Teng	4-Apr-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
			Lecture	F2F	Career Pathfinder Series - Modules 4 & 5 - Career Readiness Prep - Interview prep + mock interviews	3	Justus Teo	5-Apr-25	Saturday	2.00 pm	to	5.00 pm	LT601	Lecture and group work
		Analysing and Interpreting Data		Synchronous and Asynchronous	LEARNING OBJECTIVES: Week 9: Introduction to Business Analytics and Time Series Analysis Week 10: Time Series & Benchmarking Week 11: Project Week 1 Week 12: Forecasting and Scenarios Week 13: Correlation Analysis Week 14: Project Week 2 + Presentation	84	Francis Tay							Participants will be required to have Microsoft Excel installed in their PC or Macbook. Preference is for participants to have Excel 365, Excel 2016 or later. For this course, it is preferable to have Windows PC as many applications operated best on PC. For Mac users, please refer to notes on how to run Windows on Mac.
45	Wk 9	Introduction to Data Analysis and Interpretation	Check-in	Synchronous	Introduction to Module	1	Francis Tay	7-Apr-25	Monday	7:00 pm	to	8:00 pm		Introduction and the use of Excel for data analysis.
46			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Francis Tay	8-Apr-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
47			Lecture	Synchronous	Data Cleaning & Time Series Analysis	3	Francis Tay	9-Apr-25	Wednesday	7:00 pm	to	10:00 pm		Use of Excel and hand-on work.
48			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Francis Tay	10-Apr-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
49			Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	11-Apr-25	Friday	12:00 am	to	12:00 am		Assignment/Quiz due date
50	Wk 10	Time Series, Benchmarking	Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	14-Apr-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
51			Lecture	Synchronous	Benchmarking	3	Francis Tay	15-Apr-25	Tuesday	7:00 pm	to	10:00 pm		Use of Excel and hand-on work.
52			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Francis Tay	16-Apr-25	Wednesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.

53		Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	17-Apr-25	Thursday	10:00 am	to	10:00 pm		Assignment/Quiz due date
54							18-Apr-25	Friday					Good Friday Holiday
55	Wk 11	PROJECT WEEK 1	Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	21-Apr-25	Monday	9:00 am	to	9:00 pm	Use of Excel and Work on project.
56			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	22-Apr-25	Tuesday	10:00 am	to	10:00 pm	Use of Excel and Work on project.
57			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	23-Apr-25	Wednesday	10:00 am	to	10:00 pm	Use of Excel and Work on project.
58			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	24-Apr-25	Thursday	10:00 am	to	10:00 pm	Use of Excel and Work on project.
59			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	25-Apr-25	Friday	10:00 am	to	10:00 pm	Use of Excel and Work on project.
60	Wk 12	Forecasting Techniques	Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	28-Apr-25	Monday	10:00 am	to	10:00 pm	Check in anytime to get materials for self-learning in "Content" section.
61			Lecture	Synchronous	Forecasting	2	Francis Tay	29-Apr-25	Tuesday	7:00 pm	to	9:00 pm	Use of Excel and hand-on work.
62			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	30-Apr-25	Wednesday	10:00 am	to	10:00 pm	Check in anytime to get materials for self-learning in "Content" section.
63							1-May-25	Thursday					Labour Day Holiday
64			Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	2-May-25	Friday	10:00 am	to	10:00 pm	Assignment/Quiz due date
65			Lecture	F2F	Work on Project	2	Francis Tay	3-May-25	Saturday	2:00 pm	to	4:00 pm	LT602 Use of Excel and hand-on work.
			Lecture	F2F	Career Pathfinder Series - Module 6 - Career Transition and Stabilization	2	Justus Teo	3-May-25	Saturday	9:30 am	to	12:30 pm	LT602 Lecture and Group Work
66	Wk 13	Correlations Analysis	Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	5-May-25	Monday	10:00 am	to	10:00 pm	Check in anytime to get materials for self-learning in "Content" section.
67			Lecture	Synchronous	Correlations Analysis	2	Francis Tay	6-May-25	Tuesday	7:00 pm	to	9:00 pm	Use of Excel and hand-on work.
68			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	7-May-25	Wednesday	10:00 am	to	10:00 pm	Check in anytime to get materials for self-learning in "Content" section.
69			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Francis Tay	8-May-25	Thursday	10:00 am	to	10:00 pm	Check in anytime to get materials for self-learning in "Content" section.
70			Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	9-May-25	Friday	10:00 am	to	10:00 pm	Assignment/Quiz due date
71			Lecture	F2F	Work on Project	2	Francis Tay	10-May-25	Saturday	10:00 am	to	12:00 pm	LT601 Use of Excel and hand-on work.
72	Wk 14	PROJECT WEEK 2						12-May-25	Monday				Vesak Day Holiday
73			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	13-May-25	Tuesday	10:00 am	to	10:00 pm	Use of Excel and Work on project.
74			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	14-May-25	Wednesday	10:00 am	to	10:00 pm	Use of Excel and Work on project.
75			Check-in	Asynchronous	Work on Excel Dashboard Project	3	Francis Tay	15-May-25	Thursday	11:00 am	to	11:00 pm	Use of Excel and Work on project.
76			Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	16-May-25	Friday	10:00 am	to	10:00 pm	Assignment/Quiz due date
77			Lecture	F2F	Project Presentation	3	Francis Tay	17-May-25	Saturday	10:00 am	to	1:00 pm	LT601 Presentations

• All lectures will be facilitated virtually unless otherwise stated

• F2F lectures will be held at NTU@one-north campus (off North Buona Vista Road)

• NTU reserves the right to change the date, mode/venue of lessons or cancel them due to unforeseen circumstances