(SCTP) Advanced Professional Certificate in Data Analytics: 21 April to 25 July 2025

SN	Week	Module Name	Class Type	Online Type	Topics	Hours	Trainer	Date	Day	Time			Venue for F2F	Remarks
		Data Management, Data Wrangling and Exploratory Data Analysis (EDA)		Synchronous and Asynchronous	**LEARNING OBJECTIVES**: **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 Program	1	Francis Tay Kan Hwa Heng	21-Apr-25	Monday	7:00 pm	to	8:00 pm		Introduction session
2			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	22-Apr-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
3			Lecture	Synchronous	Introduction to Data Management and Wrangling and EDA	3	Kan Hwa Heng	23-Apr-25	Wednesday	7:00 pm	to	10:00 pm		Lecture
4			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	2	Kan Hwa Heng	24-Apr-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
5			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Kan Hwa Heng	26-Apr-25	Saturday	10:00 am	to	10:00 pm		Assignment/Quiz due date
6	Wk 2	Introduction to Relational Databases and SQL statements	Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	28-Apr-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	29-Apr-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	30-Apr-25	Wednesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
9								1-May-25	Thursday					Labour Day Holiday
10			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Kan Hwa Heng	2-May-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	3-May-25	Saturday	9:00 am	to	12:00 pm	SR902	Lecture and Group Work
			Lecture	F2F	Career Pathfinder Series - Module 1 - Fundamentals of Career Discovery Navigation and Readiness	3	Justus Teo	3-May-25	Saturday	1:30 pm	to	4:30 pm	SR902	
12	Wk 3	Introduction to Data Model Documentation	Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	5-May-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	6-May-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.	3	Kan Hwa Heng	7-May-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	8-May-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	2	Kan Hwa Heng	9-May-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	10-May-25	Saturday	9:00 am	to	12:00 pm	LT602	Lecture and Group Work
18	Wk 4	Shaping data with SQL						12-May-25	Monday					Vesak Day Holiday
19			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Kan Hwa Heng	13-May-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
20			Lecture	Synchronous	Shaping Data with SQL.	3	Kan Hwa Heng	14-May-25	Wednesday	7:00 pm	to	10:00 pm		Lecture and Group Work
21			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	2	Kan Hwa Heng	15-May-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
22			Assignment/Quiz	Asynchronous	Assignment/Final Module Quiz	2	Kan Hwa Heng	16-May-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
		Analysing and Interpreting Data		Synchronous and Asynchronous	**LEARNING OBJECTIVES**: **Week 5**: Introduction to Business Analytics and Time Series Analysis **Week 6**: Time Series & Benchmarking **Week 7**: Project Week 1 **Week 8**: Forecasting and Scenarios **Week 9**: Correlation Analysis **Week 10**: Project Week 2 + Presentation	88	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.
23	Wk 5	Introduction to Data Analysis and Interpretation	Check-in	Synchronous	Introduction to Module	1	Francis Tay	19-May-25	Monday	7:00 pm	to	8:00 pm		Introduction and the use of Excel for data analysis.
24			Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Francis Tay	20-May-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
25			Lecture	Synchronous	Data Cleaning & Time Series Analysis	3	Francis Tay	21-May-25	Wednesday	7:00 pm	to	10:00 pm		Use of Excel and hand-on work.
26			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Francis Tay	22-May-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	3	Francis Tay	23-May-25	Friday	12:00 am	to	12:00 am		Assignment/Quiz due date
			Lecture	F2F	Career Pathfinder Series - Module 2 - Career Marketplace - Labour Market Research and Career Planning	3	Justus Teo	24-May-25	Saturday	9:30 am	to	12:30 pm	LT601	
28	Wk 6	Time Series, Benchmarking	Check-in	Asynchronous	Access to Materials, Self-Learning.	2	Francis Tay	26-May-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.	3	Francis Tay	27-May-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
30			Lecture	Synchronous	Benchmarking	2	Francis Tay	28-May-25	Wednesday	7:00 pm	to	9:00 pm		Use of Excel and hand-on work.

#	Wk	Topic	Session	Mode	Activity	Hrs	Instructor	Date	Day	Start		End	Room	Notes
31			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Francis Tay	29-May-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	3	Francis Tay	30-May-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
33			Lecture	F2F	Work on Project	2	Francis Tay	31-May-25	Saturday	10:00 am	to	12:00 pm	LT601	Use of Excel and hand-on work.
34	Wk 7	Dashboarding and Data Storytelling	Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	2-Jun-25	Monday	9:00 am	to	9:00 pm		Use of Excel and Work on project.
35		and PROJECT WEEK 1	Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	3-Jun-25	Tuesday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
36			Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	4-Jun-25	Wednesday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
37			Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	5-Jun-25	Thursday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
38			Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	6-Jun-25	Friday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
								7-Jun-25	Saturday					Hari Raya Haji Holiday
39	Wk 8	Forecasting Techniques	Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	9-Jun-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
40			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	10-Jun-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
41			Lecture	Synchronous	Forecasting	2	Francis Tay	11-Jun-25	Wednesday	7:00 pm	to	9:00 pm		Use of Excel and hand-on work.
42			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	12-Jun-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
43			Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	13-Jun-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
			Lecture	F2F	Career Pathfinder Series - Module 3 - Career Readiness Prep - Personal Branding & Resume	3	Justus	14-Jun-25	Saturday	9:30 pm	to	12:30 pm	LT601	
44			Lecture	F2F	Project Presentation	2	Francis Tay	28-Jun-25	Saturday	10:00 am	to	12:00 pm	LT601	Presentations
45	Wk 9	Correlations Analysis	Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	16-Jun-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
46			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Francis Tay	17-Jun-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
47			Lecture	Synchronous	Correlations Analysis	3	Francis Tay	18-Jun-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	19-Jun-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	20-Jun-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
50			Lecture	F2F	Work on Project	3	Francis Tay	21-Jun-25	Saturday	10:00 am	to	1:00 pm	LT601	Use of Excel and hand-on work.
51	Wk 10	PROJECT WEEK 2	Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	23-Jun-25	Monday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
52			Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	24-Jun-25	Tuesday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
53			Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	25-Jun-25	Wednesday	10:00 am	to	10:00 pm		Use of Excel and Work on project.
54			Check-in	Asynchronous	Work on Excel Dashboard Project	2	Francis Tay	26-Jun-25	Thursday	11:00 am	to	11:00 pm		Use of Excel and Work on project.
55			Assignment/Quiz	Asynchronous	Assignment/Quiz	3	Francis Tay	27-Jun-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due / Presentations
		Communicating Insights, Dashboarding and Data Storytelling		Synchronous and Asynchronous	**LEARNING OBJECTIVES**: **Week 11**: Introduction to Data Visualization and Data Storytelling; Basic chart creation in Tableau **Week 12**: Manage and Manipulate Data within Tableau; Exploring data using charts **Week 13**: Creating Dashboards and Telling Story **Week 14**: Basic Predictive Analytics	65	Khoo Seok Teng							Participants will be required to download FREE version of TABLEAU Public 2022 at https://public.tableau.com/en-us/s/download. 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: https://public.tableau.com/en-us/s/ • Use "Sign up" button on top right of page
56	Wk 11	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	30-Jun-25	Monday	7:00 pm	to	10:00 pm		Lecture and Group Work
57			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	1-Jul-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
58			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	2-Jul-25	Wednesday	10:00 am	to	10:00 pm		Midweek recorded lecture with assignment
59			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	2	Khoo Seok Teng	3-Jul-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
60			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Khoo Seok Teng	4-Jul-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-Jul-25	Saturday	9:30 am	to	12:30 pm	LT601	
61	Wk 12	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	7-Jul-25	Monday	9:00 am	to	9:00 pm		Check in anytime to get materials for self-learning in "Content" section.
62			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	8-Jul-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
63			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	9-Jul-25	Wednesday	10:00 am	to	10:00 pm		Midweek recorded lecture with assignment
64			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	10-Jul-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
65			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Khoo Seok Teng	11-Jul-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
66			Lecture	F2F	Data Manipulation in Tableau; Creating charts to explore data using charts	3	Khoo Seok Teng	12-Jul-25	Saturday	9:00 am	to	12:00 pm	LT601	Lecture and Group Work
67	Wk 13	Creating Dashboards and Telling Story using Tableau	Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	14-Jul-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
68			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	3	Khoo Seok Teng	15-Jul-25	Tuesday	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	Khoo Seok Teng	16-Jul-25	Wednesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
70			Check-in	Asynchronous	Access to Materials, Self-Learning. Work on Assignment.	2	Khoo Seok Teng	17-Jul-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.

71			Assignment/Quiz	Asynchronous	Assignment/Quiz	2	Khoo Seok Teng	18-Jul-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date
72			Lecture	F2F	Creating dashboards with interactivity and telling story using Tableau	3	Khoo Seok Teng	19-Jul-25	Saturday	9:00 am	to	12:00 pm	LT601	Lecture and Group Work
			Lecture	F2F	Career Pathfinder Series - Module 6 - Career Transition and Stablization	2	Justus Teo	19-Jul-25	Saturday	1:30 pm	to	4:30 pm	LT601	
73	Wk 14	Apply basic predictive analytics using Clusters and Forecasting	Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	21-Jul-25	Monday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
74			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	22-Jul-25	Tuesday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
75			Lecture	Synchronous	Basic Predictive Analytics using Clusters and Forecasting	3	Khoo Seok Teng	23-Jul-25	Wednesday	7:00 pm	to	10:00 pm		Lecture and Group Work
76			Check-in	Asynchronous	Access to Materials, Self-Learning.	3	Khoo Seok Teng	24-Jul-25	Thursday	10:00 am	to	10:00 pm		Check in anytime to get materials for self-learning in "Content" section.
77			Assignment/Quiz	Asynchronous	Assignment/Final Module Quiz	2	Khoo Seok Teng	25-Jul-25	Friday	10:00 am	to	10:00 pm		Assignment/Quiz due date

• All lectures will be facilitated virtually unless otherwise stated
• F2F lectures will be held at NTU@one-north campus (11 Slim Barracks Rise, Singapore 138664)
• NTU reserves the right to change the date, mode/venue of lessons or cancel them due to unforseen circumstances