

Schedule for (SCTP) Advanced Professional Certificate in AI and Urban Intelligence for Future Cities- Cohort 2 (Part Time)
Updated: 6 April 2026

Total Hours	Hours	Course: (SCTP) Advanced Professional Cert in AI and Urban Intelligence for Future Cities				
135		Main Program		Description:	The NTU PACE Advanced Professional Certificate in AI and Urban Intelligence for Future Cities equips forward-thinking professionals with cutting-edge expertise in AI-driven urban planning, smart infrastructure & buildings, and sustainable digital transformation. Spanning 6 comprehensive modules, the program covers IoT, 5G, digital twins, BIM, VR, cybersecurity, smart grids, smart street lightings and energy management. Through expert-led discussions, case studies, site visits, and a capstone project, participants gain practical insights and hands-on experience. The program empowers leaders to design and implement intelligent, resilient, and human-centric urban solutions - integrating data-driven innovation to shape future-ready net zero cities amid rapid urbanization and evolving sustainability demands.	
		Mode	Date & Time	Module	Program Topics	
28	Module 1		Launch Program	Launch of the Program		
			Core Module 1	Transitioning with Digital and Sustainable Skills		
			CM Description:	The Core Module "Empowering Digital & Sustainable Urban Leaders" equips participants with key leadership and digital competencies to drive sustainability and digital transformation in Urban Environments. It begins with personal leadership development, fostering self-awareness and accountability. Participants then explore data intelligence, AI, and digital transformation to enhance sustainable decision-making. The module concludes with design thinking and human-systems strategy, enabling multi-dimensional problem-solving and strategic implementation. Designed for future-ready leaders, it empowers professionals to integrate digital solutions with sustainability, ensuring impactful and adaptive leadership in evolving urban environments.		
			Part 1: Title	Programme Launch		
	3	Session 1	F2F	18/07/26 Sat 9am-12pm	LP-D1-1	Welcome & Networking Lunch
	1	Session 1	F2F	18/07/26 Sat 12pm-1pm	LP-D1-2	Introduction of the Program
	1	Session 1	F2F	18/07/26 Sat 1pm-2pm	LP-D1-3	Program Overview (incl. Q&A Session)
	3	Session 2	Virtual	22/07/26, Wed, 7-10pm	LP-D1-4	NTU PACE Career Advisory Sharing
				Part 2: Title	Foundations of Personal Leadership	
	1.5	Session 3	F2F	18/07/26, Sat, 2-3.30pm	CM: D1-T1	Leading Self
	1.5	Session 3	F2F	18/07/26, Sat, 3.30-5pm	CM: D1-T2	The Why, How and What
	1	Session 3	F2F	18/07/26, Sat, 5-6pm	CM: D1-T3	Personal Awareness Report Part 1
				Part 3: Title	Leading with Intelligence	
	2	Session 3	F2F	24/07/26, Fri, 9-11am	CM: D1-T3	Personal Awareness Report Part 2
	1	Session 4	F2F	24/07/26, Fri, 11am-12pm	CM: D2-T1	The Value of Data/Cycle of Intelligence
	1	Session 4	F2F	24/07/26, Fri, 1-2pm	CM: D2-T2	Data Analytics and AI
	1	Session 4	F2F	24/07/26, Fri, 2-3pm	CM: D2-T3	Generative AI
	1	Session 4	F2F	24/07/26, Fri, 3-4pm	CM: D2-T4	Overview of Digital Transformation
	1	Session 4	F2F	24/07/26, Fri, 4-5pm	CM: D2-T5	Overview of Triple Bottom Line & ESG
	1	Session 4	F2F	24/07/26, Fri, 5-6pm	CM: D2-T6	Leading Change
				Part 4: Title	Journey-led Application	
	1	Session 5	F2F	25/07/26, Sat, 9-10am	CM: D3-T7	Reframing the Problem
	1	Session 5	F2F	25/07/26, Sat, 10-11am	CM: D3-T8	Design Thinking / Human Systems Thinking
	4	Session 5	F2F	25/07/26, Sat, 11am-4pm	CM: D3-T9	Vision & Outcome to Use Cases Road-mapping
	1	Session 5	F2F	25/07/26, Sat, 4-5pm	CM: D3-T10	Delivering and executing AI projects
	1	Session 5	Virtual	25/07/26, Sat, 5-6pm	Module 1 ASSESSMENT	
21	Module 2		Module 2: Title	Foundations of Intelligent Urban Environments		
			D-M2 Description:	This module delves into cutting-edge AI technologies driving the evolution of intelligent urban environments. Participants will examine Singapore's Smart Nation vision through the integration of artificial intelligence, autonomous building systems, and data-centric urban innovation. Key focus areas include BIM, Digital Twins with real-time analytics, and Integrated Digital Delivery (IDD). Enriched by expert insights and a site visit to Podium, this module equips participants with practical capabilities to harness AI, data intelligence, and digital tools - enhancing urban connectivity, efficiency, resiliency, and sustainability in real world operations.		
			Part 1: Title	Why, How & What of Intelligent Urban Environments		
	1.5	Session 6	Virtual	29/07/26, Wed, 7-8:30pm	D-Module 2-D1-T1	Intelligent Cities: Singapore Smart Nation 2.0 & National AI Strategy
	1.5	Session 7	Virtual	29/07/26, Wed, 8:30-10pm	D-Module 2-D1-T2	Evolving of Smart Technologies - IoT, Smart Devices, Equipment, Plant, & Systems.
	3	Session 50	F2F	30/07/26, Thu, 7-10pm	Module 6: Session 1	Capstone Project Kick-Off - S01
	4	Session 8	Virtual	01/08/26, Sat, 9am-1pm	D-Module 2-D1-T3	Evolving of Smart Buildings, Smart Precincts & Smart Cities
				Part 2: Title	The Building Blocks of Intelligent Urban Environments	
	1.5	Session 9	Virtual	03/08/26, Mon, 7-8:30pm	D-Module 2-D2-T1	Building Information Modelling (BIM)
	1.5	Session 10	Virtual	03/08/26, Mon, 8:30-10pm	D-Module 2-D2-T2	Integrated Digital Delivery (IDD)
	3	Session 11	Virtual	04/08/26, Tue, 7-10pm	D-Module 2-D2-T3	Digital Solution Architecture & Marchitecture
				Part 3: Title	Digital Transformation of Urban Planning	
	1.5	Session 12	F2F	07/08/26, Fri, 9-10:30am	D-Module 2-D3-T1	Digital Twins-Enabled Urban Transformation (Guest Speaker: TwinLogic)
	1.5	Session 13	F2F	07/08/26, Fri, 10:30am-12:00pm	D-Module 2-D3-T2	Digital Twins by G-Element
	2	Session 14	F2F	07/08/26, Fri, 1-3pm	D-Module 2-D3-T3	Site Visit: Industry Insights - Digital Transformation for Urban Planning (by Podium) - Part 1
	2	Session 15	F2F	07/08/26, Fri, 3-5pm	D-Module 2-D3-SV	Site Visit: Industry Insights - Digital Transformation for Urban Planning (by Podium) - Part 2
	1	Session 16	Virtual	07/08/26, Fri, 5-6pm	Module 2 ASSESSMENT	
21	Module 3		Module 3: Title	Smart Infrastructure, Energy Management & Security		
			D-M3 Description:	This module explores the transformative role of digitalisation and AI in advancing urban infrastructure, energy systems, and security. Participants will examine how AI enables smart grids, supports renewable energy integration, and enhances decision-making in IoT- and 5G-enabled environments. Core topics include predictive energy management, autonomous infrastructure control, cyber-physical threat detection, and smart city cybersecurity. With insights from industry leaders and real-world case studies, participants will gain hands-on knowledge to apply AI for building resilient, energy-efficient, and secure urban systems equipping them to shape future-proof smart infrastructures.		
			Part 1: Title	Energy Transition: Intelligent Grids, Renewable & Building Energy Systems		
	3	Session 17	Virtual	11/08/26, Tue, 6-9pm	Module3-D1-T1	Intelligent (Micro) Grid & Renewable Energy Integration
	1	Session 18	Virtual	11/08/26, Tue, 9-10pm	Module3-D1-T2	Industry Insights - Energy & Data Nexus of AI Data Centers
	1.5	Session 19	Virtual	12/08/26, Wed, 7-8:30pm	Module3-D1-T3	Industry Insights - Energy Transition Part 1
	1.5	Session 20	Virtual	12/08/26, Wed, 8:30-10pm	Module3-D1-T4	Industry Insights - Energy Transition Part 2
	3	Session 51	Virtual	15/08/26, Sat, 9am-12pm	Module 6: Session 2	Project check-in/ Group discussion - S02
				Part 2: Title	Cyber and Physical Security for Intelligent Urban Environments	
	2	Session 21	Virtual	18/08/26, Tue, 7-8:30pm	Module3-D2-T1	AI Driven Physical Security 2.0
	1	Session 22	Virtual	18/08/26, Tue, 8:30-10pm	Module3-D2-T2	Industry Insights- Cyber & Physical Security Part 1
	1.5	Session 23	Virtual	19/08/26, Wed, 7-8:30pm	Module3-D2-T3	Industry Insights- Cyber & Physical Security Part 2
	1.5	Session 24	Virtual	19/08/26, Wed, 8:30-10pm	Module3-D2-T4	Industry Insights - Cyber & Physical Security Part 3
				Part 3: Title	Shaping Smart Cities, Transforming Urban Infrastructures	
	1.5	Session 25	F2F	21/08/26, Fri, 9-10:30am	Module3-D3-T1	Industry Insights - Urban Transformation Part 1
	1.5	Session 26	F2F	21/08/26, Fri, 10:30am-12pm	Module3-D3-T2	Industry Insights- Urban Transformation Part 2
	1	Session 27	Virtual	21/08/26, Fri, 12pm-1pm	Module 3 ASSESSMENT	
	4	Session 28	F2F	21/08/26, Fri, 2-6pm	Module3-D3-T3	Site Visit: Industry Insights - Punggol Digital District
21	Module 4		Module 4: Title	Smart Infrastructure, Energy Management & Security		
			M4 Description:	This module examines how AI-powered digital automation and intelligent management systems are transforming urban infrastructure and services. Participants will explore the integration of AI in robotics, smart manufacturing, continuous-commissioning, and autonomous urban operations. Core themes include AI-as-a-Service business models, district cooling optimization, smart vertical mobility, and immersive technologies such as VR, AR and MR. A site visit to URA Smart City Gallery provides insight to real world urban planning — equipping professionals with forward-looking strategies to enhance operational efficiency, sustainability, and intelligent resource management in future-ready cities.		
	3	Session 52	Virtual	25/08/26, Tue, 7-10pm	Module 6: Session 3	Project check-in/ Group discussion - S03
				Part 1: Title	Smart Urban: Robotics, Smart Manufacturing & Virtual Reality	
	1.5	Session 29	Virtual	26/08/26, Wed, 7-8:30pm	Module4-D1-T1	Smart Manufacturing & AI (incl. Logistic & Robotics) - Lenovo
	1.5	Session 30	Virtual	26/08/26, Wed, 8:30-10pm	Module4-D1-T2	Smart Manufacturing & AI (incl. Logistic & Robotics) - Lenovo
	3	Session 31	Virtual	28/08/26, Fri, 7pm-8:30pm	Module4-D1-T3-1	AIoT Platform for Smart Eco-system
				Part 2: Title	Redefining Urban Services with AI	
	3	Session 53	Virtual	29/08/26, Sat, 9am-12pm	Module 6: Session 4	Project check-in/ Group discussion - S04

	3.5	Session 32	Virtual	01/09/26, Tue, 6.30-10pm	Module4-D2-T1	Business Model Transformation and AI Driven Urban Services (Case Study: Johnson Controls)
	1.5	Session 33	Virtual	02/09/26, Wed, 6.30-8pm	Module4-D2-T2	Industry Insights - Urban with AI Part 1 - Smart Plant Optimisation
	2	Session 34	Virtual	02/09/26, Wed, 8-10pm	Module4-D2-T3	Industry Insights - Urban with AI Part 2 - Intelligent Lift & Elevator Systems: Revolutionising Vertical Mobility
					Part 3: Title	Smart Solutions for Urban Management & Continuous Optimisation
	3.5	Session 35	F2F	04/09/26, Fri, 9am-12:30pm	Module4-D3-T1	Site Visit: Industry Insights - Future of Workspaces
	1	Session 36	Virtual	04/09/26, Fri, 1:30-2:30 pm	Module 4 ASSESSMENT	
	3.5	Session 37	F2F	04/09/26, Fri, 2:30-6pm	Module4-D4-T1	Industry visit to URA Lecture & Smart City Gallery
21	Module 5				Module 5: Title	Future Trends & Innovations in Intelligent Urban Environments
					M5 Description:	This module explores future-focused technologies shaping intelligent cities, from AI-driven urban planning and smart infrastructure to net-zero buildings and sustainable mobility. Participants will delve into dynamic street lighting, drones for inspection and delivery, autonomous transport, future retail and workspaces. A site visit to Johnson Controls offers hands-on insights into their "Net Zero Building-as-a-Service" model. Through expert-led sessions and case studies, participants gain practical strategies to enhance energy efficiency, enable digital urban solutions, and lead innovation in smart, sustainable, and net-zero-ready cities of the future.
					Part 1: Title	Shaping Tomorrow's Cities: Intelligent Building Technologies
	1	Session 38	F2F	05/09/26, Sat, 9-10am	Module5-D1-T1	SMART Facilities Management
	1.5	Session 39	F2F	05/09/26, Sat, 10-11.30am	Module5-D1-T2	Industry Insights - Urban Management Part 1 - Practitioner Insights of (Smart) Facilities Management
	1.5	Session 40	F2F	05/09/26, Sat, 11.30am-1pm	Module5-D1-T3	Industry Insights - Urban Management Part 2 - 9 Gaps in Building Operational Performance
	1	Session 41	F2F	05/09/26 Sat, 2-3pm	Module5-D1-T4	Invited Insights - Urban Management Part 3 - Johnson Controls - Master Systems Integrator (MSI) - by Raymond Kang
	2	Session 42	F2F	05/09/26, Sat, 3-5pm	Module5-D1-T5	Invited Insights - Urban Management Part 4 - OpenBlue Enterprise Solutions & Case Studies - by Ravi (JC)
	3	Session 54	Virtual	09/09/26, Wed, 7-10pm	Module 6: Session 5	Project check-in/ Group discussion - S05
					Part 2: Title	Reimagining Urban Services: Lighting, Drones & Mobility
	1.5	Session 43	Virtual	10/09/26, Thu, 7-8:30pm	Module5-D2-T1	Industry Insights - Reimagining Urban Services Part 1 - AI Enabled Sustainability Reporting
	1.5	Session 44	Virtual	10/09/26, Thu, 8:30-10pm	Module5-D2-T2	Industry Insights- Reimagining Urban Services Part 2 - AI enabled Drones for Façade & Infrastructures Inspection
					Part 3: Title	The Future of Urban Planning & Net Zero Cities
	1.5	Session 46	F2F	12/09/26, Sat, 9-10:30am	Module5-D3-T1	Net Zero Cities of the Future 2050
	1.5	Session 47	F2F	12/09/26, Sat, 10:30-12nm	Module5-D3-T2	Intelligent and Regenerative Cities for Sustainable Urban Environments
	1	Session 48	Virtual	12/09/26, Sat 1-2pm	Module 5 ASSESSMENT	
	4	Session 49	F2F	12/09/26, Sat, 2-6pm	Module5-D3-T3	Industry visit
	3	Session 45	Virtual	19/09/26, Sat, 9.00am-12pm	Module5-D2-T3	Smart Infrastructure for Future Cities
						NTU PACE Career Advisory Sharing
23	Module 6				Module 6: Title	Capstone (Urban Intelligence)
					M6 Description:	The Capstone Project is the culmination of the NTU AUI Program, empowering participants to apply their learning to real-world urban challenges. Drawing from prior modules—spanning digital leadership, AI technologies, smart infrastructure, and net-zero strategies—participants will co-develop data-driven, actionable solutions that address both urban efficiency and sustainability. Through team-based, interdisciplinary collaboration, they will analyze complex case studies and propose integrated smart city initiatives. This hands-on experience equips professionals to design, advocate, and implement intelligent, resilient, and sustainable urban systems—preparing them to lead the transformation of future-ready cities.
	8	Session 55	F2F	26/09/26, Sat, 9am-6pm	Session 6	Capstone Presentation

Capstone	*Module 6 has been breakdown into the different dates within the cohorts as we embarked into different projects per modules
Career Advisory	*Career Advisory sessions
Industry Insights and Visits	*Industry Insights and Visits

*NTU reserves the right to change the date, mode/venue of lesson or cancel class due to unforeseen circumstances