Overview

With an increasing urbanised world there is a critical need to do more with less. The City Analytics programs will play an integral role in growing the skill set and culture of data driven evidenced based policy and decision-making across our Cities, both in Australia and Internationally. Smart cities, big data, virtual reality and such technologies promise much in their use in planning more sustainable, productive and resilient cities. However, such technologies need to be properly understood, critically appraised and used effective by government industry to ensure our cities of the future are equitable, prosperous and sustainable.

The new City Analytics articulated suite of programs will provide a unique offering upskilling the next generation of practitioners and policy-makers with the ability to harness the power of data driven approaches to understanding the spatial and temporal dimensions of our cities, both past, present and future.

The core elements of the City Analytics Graduate Certificate primarily comprise of courses specifically relevant to Smart Cities. Specifically; Scientific Programming, Digital Cities, GIS in Planning, and Urban Data Visualisation.
Faculty
Faculty of Built Environment

Campus
Kensington

Study Level
Postgraduate

Typical duration
0.7 Years

Delivery Mode
Face-to-face

Intake Period
Term 1, Term 3

Academic Calendar
3+ Calendar

Minimum Units of Credit
24

Award type
Graduate Certificate

Award(s)
Graduate Certificate in City Analytics - GradCertCA
Learning Outcomes

1. Demonstrate a basic grounding in understanding, analysing, modelling, and visualising urban data.
   Scholars Professionals

2. Develop skills in relevant computer technologies and a critical appreciation for technology transfer in practice in the changing global context.
   Leaders Global Citizens

3. Demonstrate understanding of professional and ethical conduct and personal accountability consistent with industry expectations in the context of new technology and data governance.
   Leaders Professionals

4. Demonstrate ability to interpret and communicate knowledge, skills and ideas to both specialist and non-specialist audiences with a focus on technology.
   Leaders Professionals

Graduate Capabilities:

For more information on Graduate Capabilities, please click on this link.
**Program Structure**

Students must complete 24 UOC as a standalone program.

**Core Courses**

Students must take 24 UOC of the following courses.

- **BENV7500 | 6 UOC**
  Programmable Cities

- **BENV7501 | 6 UOC**
  Urban Data Visualisation

- **BENV7504 | 6 UOC**
  Digital Cities

- **BENV7728 | 6 UOC**
  Geographical Information Systems and Urban Informatics

**Enrolment Disclaimer**

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.
Admission Requirements

Entry Requirements

The emerging field of smart cities is of interest and relevance to a wide range of professions and disciplines areas. Accordingly, the range of Bachelor degree subject areas considered a relevant background for admission to this program is quite broad. Applicants with undergraduate degrees in the following subject areas and who have achieved a credit average will be eligible for admission to the suite of City Analytics programs. There will be an opportunity for articulation to the Masters program on satisfactory completion of the course requirements for the Graduate Certificate or Graduate Diploma.

- Built Environment subject areas
- Business
- Computer Science
- Environmental Sciences
- Engineering
- Law/Jurisprudence
- Social science, social and public policy
- Design Disciplines

PLEASE NOTE: That the Graduate Certificate is not available to International students as it can only be undertaken on a part-time basis.

Special Admission Requirements

Additional selection criteria for admission to this program:

- Work experience
- CV
- Personal statement

Where applicants do not have a recognised Bachelor's degree, they may be considered on the basis of relevant work experience as detailed below:

A recognised college or university diploma in one of the above subject areas with a minimum of 3 years of relevant professional work experience OR

A minimum of 5 years relevant professional work experience.

Applications based on work experience will be assessed by the Program Director on
the basis of the following documentation provided upon application:

1. A detailed resume
2. A supporting statement outlining the applicant's interest in applying for the Graduate Certificate in City Analytics

For more information about admission requirements for various UNSW programs, visit the following website(s):

Domestic Students
International Student
Program Requirements

Progression Requirements

Students may apply to progress from the Graduate Certificate or the Graduate Diploma to Masters level with full credit for courses completed in earlier programs in the sequence.

For more information on university policy on progression requirements please visit Academic Progression.
Pathways

Post Graduate

Doctor of Philosophy - PhD

1120 Built Environment

Faculty: Faculty of Built Environment
Campus: Kensington
Units of Credit: 144
Typical Duration: 3 to 4 Years

Read More

Master of Philosophy - MPhil

2222 Built Environment

Faculty: Faculty of Built Environment
Campus: Kensington
Units of Credit: 72
Typical Duration: 1.7 Years

Read More

Articulation Arrangements

Other program(s) within articulated suite:

Graduate Diploma in City Analytics - GradDipCA

5151 City Analytics

Faculty: Faculty of Built Environment
Campus: Kensington
Units of Credit: 48
Typical Duration: 1 Years

Read More

Master of City Analytics - MCA

8151 City Analytics

Faculty: Faculty of Built Environment
Campus: Kensington
Units of Credit: 72
Typical Duration: 1.7 Years

Read More
Program Fees

At UNSW fees are generally charged at course level and therefore dependent upon individual enrolment and other factors such as student's residency status. For generic information on fees and additional expenses of UNSW programs, click on one of the following:

Domestic Students
Commonwealth Supported Students
International Students

Additional Expenses

Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179