Overview

With an increasing urbanized 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, evidence 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 Masters Extension program primarily comprise courses specifically relevant to Smart Cities. Specifically: Scientific Programming, Digital Cities, GIS in Planning, and Urban Data Visualisation.
<table>
<thead>
<tr>
<th><strong>Faculty</strong></th>
<th>Faculty of Built Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campus</strong></td>
<td>Kensington</td>
</tr>
<tr>
<td><strong>Study Level</strong></td>
<td>Postgraduate</td>
</tr>
<tr>
<td><strong>Typical duration</strong></td>
<td>2 Years</td>
</tr>
<tr>
<td><strong>Delivery Mode</strong></td>
<td>Face-to-face</td>
</tr>
<tr>
<td><strong>Intake Period</strong></td>
<td>Term 1, Term 3</td>
</tr>
<tr>
<td><strong>Academic Calendar</strong></td>
<td>3+ Calendar</td>
</tr>
<tr>
<td><strong>Minimum Units of Credit</strong></td>
<td>96</td>
</tr>
<tr>
<td><strong>Award type</strong></td>
<td>Masters (Coursework)</td>
</tr>
<tr>
<td><strong>Award(s)</strong></td>
<td>Master of City Analytics (Extension) - MCA(Ext)</td>
</tr>
<tr>
<td><strong>CRICOS Code</strong></td>
<td>093773G</td>
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</tbody>
</table>
Learning Outcomes

1. Demonstrate both theoretical and practical grounding to be competent and confident in understanding, analysing, modelling, and visualising urban data.

   Professionals  Scholars

2. Develop skills and applications in relevant computer technologies and a critical appreciation technology transfer in practice in the changing global context.

   Global Citizens

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

   Professionals  Leaders

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

5. Develop and apply of specialised knowledge and analytical skills to inform evidence-based policy and decision making processes.

   Scholars  Professionals

6. Demonstrate ability to research principles and methods applicable to City Analytics in local, national and international contexts.

   Scholars  Global Citizens

7. Demonstrate capacity to apply knowledge and skills in urban informatics within the context of collaborative and multi-stakeholder urban planning and design processes.

   Professionals  Leaders

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Graduate Capabilities:

For more information on Graduate Capabilities, please click on this [link](#).
Program Structure

Students must complete 96 UOC as a standalone program.

Capstone Courses

Students must take 24 UOC of the following courses.

- **BENV7550 | 12 UOC**
  Smart Cities and Urban Informatics Major Project

- **SUSD0007 | 12 UOC**
  Integrated Design Studio

Core Courses

Students must take 42 UOC of the following courses.

- **BENV7020 | 6 UOC**
  Research Seminar

- **BENV7500 | 6 UOC**
  Programmable Cities

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

- **BENV7502 | 6 UOC**
  Geodesign

- **BENV7503 | 6 UOC**
  Geocomputation

- **BENV7504 | 6 UOC**
  Digital Cities

- **BENV7728 | 6 UOC**
Prescribed Electives

Students must take 30 UOC of the following courses.

Students may take other relevant UNSW courses on approval of Program Director.

BEIL6002  |  6 UOC
Urban and Regional Design

BENV7307  |  6 UOC
Writing the City

BENV7712  |  6 UOC
Healthy Built Environments

BENV7811  |  6 UOC
Urban Renewal

CONS0005  |  6 UOC
Construction Informatics

CVEN9405  |  6 UOC
Urban Transport Planning Practice

ECON5330  |  6 UOC
Real Estate Economics and Public Policy

MUPS0001  |  6 UOC
Drivers of Urban Change

MUPS0002  |  6 UOC
Strategic Urban Policy

MUPS0007  |  6 UOC
Research for Evidence-Based Policy
<table>
<thead>
<tr>
<th>Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN7142</td>
<td>6 UOC</td>
<td>City Equity &amp; Wellbeing</td>
</tr>
<tr>
<td>PLAN7143</td>
<td>6 UOC</td>
<td>Urban Design</td>
</tr>
<tr>
<td>PLAN7145</td>
<td>6 UOC</td>
<td>City Building - Infrastructure Planning</td>
</tr>
<tr>
<td>PLAN7146</td>
<td>6 UOC</td>
<td>City Economics, Urban Development &amp; Finance</td>
</tr>
<tr>
<td>PLAN7148</td>
<td>6 UOC</td>
<td>Strategic Spatial Planning</td>
</tr>
<tr>
<td>PLAN7156</td>
<td>6 UOC</td>
<td>Housing Policy and Finance</td>
</tr>
<tr>
<td>PLAN7157</td>
<td>6 UOC</td>
<td>Engaging Communities</td>
</tr>
<tr>
<td>PLAN7320</td>
<td>6 UOC</td>
<td>Housing Management and Markets</td>
</tr>
<tr>
<td>PLAN7321</td>
<td>6 UOC</td>
<td>Implementing Urban Regeneration Projects</td>
</tr>
<tr>
<td>SRAP5001</td>
<td>6 UOC</td>
<td>Policy Analysis</td>
</tr>
</tbody>
</table>

**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. Applicants who don't have a credit average may be considered for entry to the Graduate Certificate or Graduate Diploma.

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

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

Graduate Certificate in City Analytics - GradCertCA
7451 City Analytics

Faculty: Faculty of Built Environment
Campus: Kensington
Units of Credit: 24
Typical Duration: 0.7 Years
Master of City Analytics - **MCA**

8151 City Analytics

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

Award with Excellence

The Award with Excellence is awarded in coursework masters programs, including Masters (Extension) but with the exception of Masters (Extended) such as JD and MD, when a Weighted Average Mean (WAM) of at least 80% has been achieved and at least 50% of the requirements of the award are completed at UNSW. All eligible programs will award 'with Excellence' except in special circumstances where approval of Academic Board has been given for a program to opt out.

For more information, please visit:

Current Students Award with Excellence
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