# ABPL90366 Urban Informatics

| | |
|---|---|
| **Credit Points:** | 12.5 |
| **Level:** | 9 (Graduate/Postgraduate) |
| **Dates & Locations:** | 2016, Parkville<br>This subject commences in the following study period/s:<br>September, Parkville - Taught on campus.<br>Quota 50 Students may provisionally enrol via the Student Portal, but places are not guaranteed until selection is completed. You will be notified in writing by the Student Centre if you are selected. Selection criteria: Selection will be based upon academic merit. For detailed information on the quota subject application process and due dates, refer to the EDSC Quota Subjects webpage. |
| **Time Commitment:** | Contact Hours: 5 intensive teaching days, 7 hours per day. Total Time Commitment: 170 hours |
| **Prerequisites:** | None |
| **Corequisites:** | None |
| **Recommended Background Knowledge:** | Understanding of digital data, spatial information and related geographical information sciences would be advantageous. |
| **Non Allowed Subjects:** | None |
| **Core Participation Requirements:** | For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: <a href="http://services.unimelb.edu.au/disability">http://services.unimelb.edu.au/disability</a> |
| **Coordinator:** | Dr Jack Barton |
| **Contact:** | Subject Coordinator email:<br>**jack.barton@unimelb.edu.au (mailto:jack.barton@unimelb.edu.au)**<br>**The Eastern Precinct (building 138 (http://maps.unimelb.edu.au/parkville/building/138) )** (between Doug McDonell building and Eastern Resource Centre)<br>*Enquiries:*<br>Current Student: **http://ask.unimelb.edu.au/ (http://ask.unimelb.edu.au/)** Web: **http://msd.unimelb.edu.au/ (http://msd.unimelb.edu.au)** |
| **Subject Overview:** | Urban Informatics is the study of cities using digital data, information, knowledge and models to understand trends, complexities and inform the formulation and evaluation of sustainable urban futures.<br>This subject aims to arm the student with the necessary fundamental concepts and practical understanding of the rise of the Smart City and how urban informatics can assist in evidenced-based and collaborative decision-making.<br>The new science of cities (Batty, 2013) is driven by the deluge of data that enables the mapping of the Smart City and new geographies that can be explored, analysed and synthesized. Planners, geographers, urban designers, landscape architects, spatial scientists and other disciplines interest in the urban settlements require a deeper knowledge of digital data and how to access, interrogate, visualize and synthesis such data to realise the vision of the smart and sustainable city.<br>This subject utilises the Australian Urban Research Infrastructure Network (AURIN) portal as an e-learning resource for exploring what is possible in emerging in the new discipline of urban informatics. Students will also be exposed to a range of other complementary digital |

| | |
|---|---|
| | environments including open data repositories, urban modelling and visualisation tools and open source geospatial information technologies. |
| **Learning Outcomes:** | On completion of this subject students should be able to:<br># Recall the basic concepts and theory of urban informatics, GIS, modelling and visualisation<br># Recall the origin and development of smart cities<br># Identify and source available data resources being made available through open government data initiatives<br># Use online data portals and open source analytical tools to understand human settlement patterns<br># Operate the Australian Urban Research Infrastructure Network (AURIN) Portal for conducting urban analysis<br># Conduct spatial-statistical analysis of data comprising Australian cities<br># Conduct thematic mapping of census and other aggregate datasets<br># Experiment with visual analytic techniques to explore trends in urban data<br># Prepare reports and presentations that use complex urban data to interpret socio-economic and physical changes in cities.<br># Synthesize fine scale city data to support urban planning and design at the precinct level. |
| **Assessment:** | Completion of 4 tutorial exercises (equivalent 2,000 words) due two weeks after the final day of teaching (40%); Collaborative Research Project part I – Oral presentation. 4 students per group with individual student contribution (equivalent 1,000 words). Oral presentation due 4 weeks after the final day of teaching (20%); Collaborative Research Project part II – 8,000 word report. 4 students per group with individual student contribution (equivalent 2,000 words). Report due 8 weeks after final day of teaching (40%). |
| **Prescribed Texts:** | Townsend, A. 2013, Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia. |
| **Breadth Options:** | This subject is not available as a breadth subject. |
| **Fees Information:** | Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees |
| **Generic Skills:** | Spatial analysis, data visualisation. |
| **Related Course(s):** | Master of Design (Urban Design)<br>Master of Landscape Architecture<br>Master of Property<br>Master of Property<br>Master of Urban Design<br>Master of Urban Planning |
| **Related Majors/Minors/ Specialisations:** | 200 point Master of Landscape Architecture<br>200 point Master of Property<br>300 point Master of Landscape Architecture<br>300 point Master of Property<br>Master of Engineering (Spatial)<br>Melbourne School of Design multidisciplinary elective subjects |