

**Urban Planning and Development
(Sustainable and Smart Cities and Regions)
(SAQA99782) (NQF 9)**

EB11.20.1 Purpose of the qualification

The purpose of the qualification is to develop an intellectual with advanced abilities in applying fundamental engineering sciences or related inter-disciplinary principles to specific problems of society at large. One of the main objectives in this process is to develop an advanced capability to do fundamental engineering research of inter/intra-disciplinary nature independently. It also promotes a lifelong learning approach.

EB11.20.2 Qualification outcomes

Exit level outcomes:

The qualified student will be able to:

1. Identify, assess, formulate, interpret, analyse and solve research/development problems creatively and innovatively by applying relevant inter-disciplinary knowledge in the chosen field of research.
2. Plan and manage research projects, demonstrating fundamental knowledge, understanding and insight into the principles, methodologies and concepts that constitute socially responsible (to local and other communities) research/development in the chosen field of research practice.
3. Work effectively, individually or with others, as a member of a team, group, organisation and the community or in multi-disciplinary environments in the chosen field of interdisciplinary research.
4. Organise and manage him/herself and his/her activities responsibly, effectively and ethically, accept responsibility within his/her limits of competence, and exercise judgement based on knowledge and expertise, pertaining to the field of research.
5. Plan and conduct applicable levels of investigation, research and/or experiments by applying appropriate theories and methodologies and perform appropriate data analysis and interpretation.
6. Communicate effectively, both orally and in writing, with specifically research audiences and the community at large, in so far as they are affected by the research, using appropriate structure, style and graphical support.
7. Use and assess appropriate research methods, skills, tools and information technology effectively and critically in research/development practice and show an understanding and a willingness to accept responsibility for the impact of inter-disciplinary research/development activities on society and the environment.
8. Perform synthesis of systems, works, products or processes as a set of related systems and assess their social, legal, health, safety and environmental impact and benefits, where applicable, in the chosen field of inter-disciplinary research.
9. Employ various learning strategies and skills to master outcomes required for preparing him/herself to engage in continuous learning, to keep abreast of knowledge and skills required in the inter-disciplinary field.
10. Participate as a responsible citizen in the life of local, national and global communities by acting ethically in the chosen field of research.
11. Demonstrate, where applicable, cultural and aesthetic sensitivity across a range of social contexts in the execution of research/development activities.
12. Explore, where applicable, education and career opportunities in research/development.
13. Organise and develop entrepreneurial opportunities through technical research, development and/or managerial skills.

EB11.20.3 Curriculum

First semester (All Core/ Compulsory)	Second semester (Choose 3 of 6 electives)
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AUPT019	Advanced Urban Planning Theory (Compulsory)	IHSD029	Integrated Human Settlements Development (Elective)
PSUD019	Principles of Sustainable Urban Development (Compulsory)	UED9X02	Urban Entrepreneurial Dynamics (Elective)
SUSC019	Sustainable Urban Infrastructure and Smart Cities Development (Compulsory)	UEPG029	Urban Environmental Planning and GIS Applications (Elective)
		UFE9X02	Urban Financial and Economic Management (Elective)
		MUP9X02	Urban Policy and Design (Elective)
		USD9X01	Urban Sociology and Social Development (Elective)
MSUP019	Minor Dissertation (Compulsory)	MSUP029	Minor Dissertation (Compulsory)