



Climate Change and Urban Development

Elective module 3 in Southern African Master's in Climate Change and Sustainable Development

This elective module aims to familiarise students with climate change and development challenges at the city scale, and to equip them to provide advice on development decisions at this scale. The module aims to systematically work through how climate impacts, adaptation and mitigation, as well as broader agendas of systemic change (in which climate change is seen as one of many drivers of change) intersect with the key dimensions of urban development.

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Important note: This TLA Plan does not provide details of the key resources. Details and guidelines are found in the Courseware Guidelines, designed as an essential complement to the TLA Plan.

Southern African Regional Universities Association (SARUA) 2016



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Introduction to the Teaching-Learning-Assessment Plan

The Teaching-Learning-Assessment (TLA) Plan is intended as a guide to the teaching, learning and assessment activities of the module. It aims to be more than merely the syllabus or content of the module. It includes the development of knowledge, skills and competencies, guidelines on teaching methodology, formative feedback and summative assessment – all of which contribute to the learning experience and therefore outcomes of the student. However, it is not a textbook. More detailed guidelines on the use of the resources is found in the module Courseware Spreadsheet.

In order to understand the TLA Plan better, the following points should be noted before reading it:

Assessment and feedback: Assessment is an integral component of the entire teaching and learning process rather than a final adjunct to it, and for this reason, assessment tasks are spread across the module. The curriculum upholds a supportive, proactive approach to the student's continuous development and achievement of the desired outcomes through frequent formative feedback from either the lecturer or the peer group. The student's grades are compiled from the summative tasks across the module.

All assessment and feedback should be based on clear, transparent criteria, provided (or developed by the class) in advance of the assignment. Assessment tasks can be completed by the individual student or a group of students. In the latter case, guidelines for awarding individual marks are provided in the Assessment Guidelines on the ePlatform.

There are two types of assessment: formative and summative.

i) Formative assessment/ feedback:

The student should receive formative feedback, from either the lecturer or peers, ideally for every assignment. This feedback outlines strengths and weaknesses and allows for reflection on areas for improvement, thus supporting the student's progress and development. Effective feedback is prompt, frequent, specific and personalised.

ii) Summative assessment:

The goal of summative assessment is to build up marks that ultimately contribute to the student's grade for the module. Summative assessment measures student achievement by comparing it against standard criteria (i.e. the desired module outcomes). Because summative assessment is for marks, it is 'high stakes' and has a motivational effect on student engagement. To avoid contention, summative tasks should be assessed by the lecturer and an independent

moderator and should be based on clear, explicit and transparent criteria. It is recommended that summative tasks account for about 20% of the student notional hours of a module and do not place too big a burden on the lecturer. Careful consideration must be given to ensuring proactively that plagiarism is avoided.

Additional activities: The TLA Plan provides activities for 200 student notional hours. It also provides additional activities for those universities that require additional hours in the module.

Courseware Guidelines: The TLA Plan gives only abridged references for the prescribed resources. The number in [] links to the associated module Courseware Guidelines, which is a spreadsheet with full references to key and additional resources (see the different tabs). The Courseware Guidelines contains further guidelines for using the resources.

Exam: Should an institution require students to write an exam at the end of the module, the time allocated for the exam would be over and above the 200 notional hours provided by the TLA Plan. It is recommended that the exam questions are broad and integrated across the module, so as to demonstrate achievement of the broader competency outcomes of the module. Examples of exam type questions are provided at the end of the TLA Plan.

Grades: Grades are calculated from summative tasks. These may be weighted according to the institution's requirements. An example of a module grade table is provided in the Overarching Resources on the ePlatform.

Group work: Group work is encouraged as this builds the essential outcome of teamwork, defined as the ability to work flexibly in teams, engage effectively with peers and successfully complete team tasks. There are several ways to award individual scores for group work (see Assessment Guidelines on the ePlatform). It is important that the lecturer plays a key facilitating role in supporting group work to achieve the desired outcomes. We suggest that group process/ participation skills are assessed by students rather than the lecturer and therefore that the assessment of group participation skills is used formatively but not for marks, to avoid contention.

Key concepts: The key concepts detailed under some of the Learning Themes refer to concepts that the student should be familiar with before the first class in the Learning Theme. This means that if the student is not familiar with the term,

s/he should undertake a simple search to get a basic understanding of the term, in advance of the class.

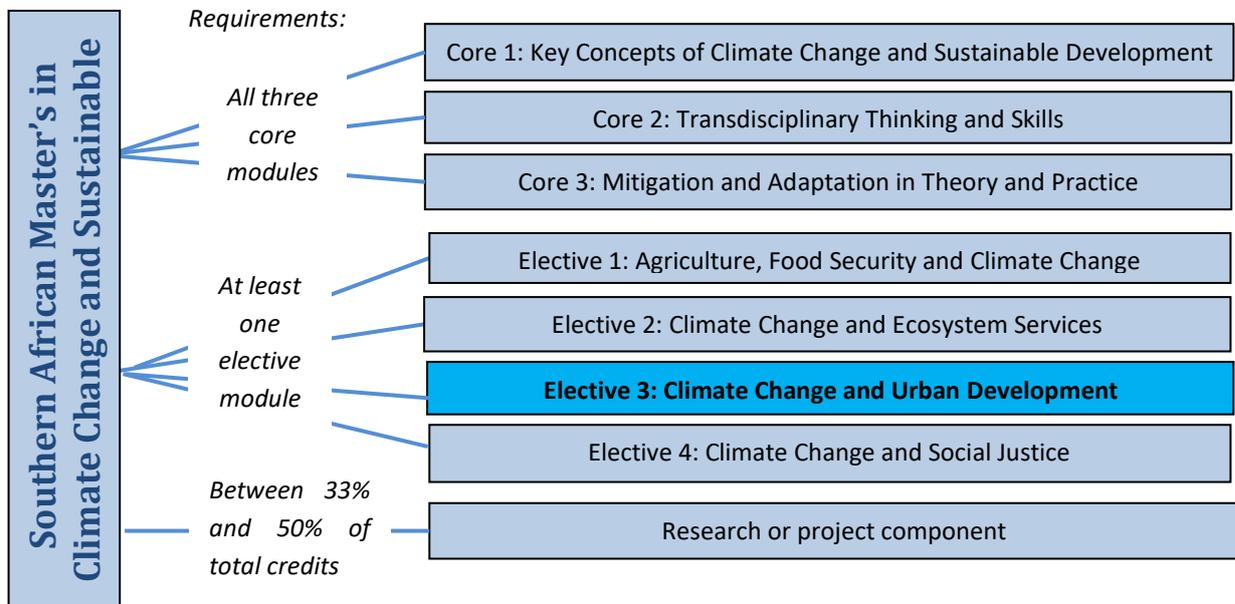
Marking rubrics: An assessment rubric with clear criteria should be provided (or developed by the class as a group) in advance for all student assignments to ensure that assessment is transparent and fair. The student should know, in advance, what is expected of the assignment, how the task links to the outcomes of the module and what is valued in the module. The following standard rubrics are found in the *Assessment Guidelines and Tools* on the ePlatform and can be adapted and weighted as necessary: Presentation, Report, Analytical Essay and Development of Writing Rubric. These are to be adapted to assess the desired outcomes of each task.

Outcomes: The TLA Plan provides topic-level and module-level outcomes that align with the curriculum-level outcomes. The curriculum outcome categories are derived from the South African Qualifications Authority (SAQA) National Qualifications Framework Master's level outcomes (Level 9) and the Critical Cross Field Outcomes, as these are consistent with regional requirements.

Student notional hours: The guidelines for hours in the TLA Plan refer to 'student notional hours'. A student notional hour is the estimated learning time taken by the average student to achieve an average pass rate for a specified task. Student notional hours are suggested for each activity to give an indication of the envisioned effort. The module provides for 200 student notional hours, with additional hours for institutions requiring a longer module.

Introduction to Module

Climate Change and Urban Development is the third elective module in the Southern African Master's in Climate Change and Sustainable Development.



Module rationale

Many African countries have high rates of urbanization. As such, more and more of the national population, economic activity and production, resource consumption (e.g. food, water, and energy), political mobilization, construction, land use change, waste and emissions generation is concentrated in and around cities. The welfare and development trajectory of cities and countries are increasingly closely tied. In the context of a variable and changing climate it is therefore imperative that both climate change mitigation and adaptation measures are built into the design, configuration, construction, operations and maintenance of cities and city regions. This is particularly true in Africa, where large parts of the urban systems that will exist in 2030 are yet to be constructed. It is also true that many African cities and rapidly growing towns are poorly equipped to deal with the current range of climatic conditions, leaving large areas, parts of the population, the infrastructure networks and the economy exposed to and regularly damaged by the impacts of climate conditions and extreme events. This thematic block focuses on the intersections between climate change and the expansion and socio-economic development of urban settlements, comparing the trajectory and processes of urbanization in Africa

with those in other regions of the world. Viewing cities as complex social, ecological and technical systems embedded in larger scale processes, the module has students critically engage with concepts and theories of risk, vulnerability, development pathways, carbon intensity, resilience and sustainability in urban contexts. The module focuses on how cities are both affected by and contribute to human-induced climate change, and how climate adaptation and mitigation can and is being integrated into urban development policies and practices.

Overview of Module

The module aims to familiarize students with climate change and development challenges at the city scale and equip them to do further research, to advise on and take development decisions at this scale in the context of climate change in Africa. The module aims to systematically work through how climate impacts and adaptation, climate mitigation, and broader agendas of systemic change (in which climate change is seen as one of many drivers of change) intersect with the key dimensions of urban development.

As such the module is organized into four learning themes: (1) urbanisation and the urban dividend; (2) addressing climate risks and vulnerabilities at the city-scale; (3) climate change mitigation at the city scale; (4) governing urban transitions under a changing climate. Issues of informality, context suitability (i.e. no one size fits all), scale (both temporal and spatial), decision-making power and social justice will cut across these learning themes.

Module Learning Outcomes

Students who take this elective will walk away being able to understand the risks and opportunities offered by urbanization in an African context and the role international agencies and networks play in shaping development trajectories of African cities. This means being able to identify and assess urban risks and vulnerabilities through the selection, modification and application of suitable analytical methods and assessment tools, and propose approaches to climate changes adaptation, disaster risk reduction and resilience building at the urban scale. Students who have taken this elective will understand the relationship between urban form and emissions, the potential and problems with urban “leap-frogging” and retrofitting, and are able to integrate principles of resilience, efficiency and effectiveness into mitigation planning and management. This is a practice-oriented module and thus students will be expected to critically analyse and recommend the modes, capacities and strategies of governing climate change at the city scale across the public, private and civil society sectors.

Knowledge Outcomes

- **Specialist knowledge:** The student is able to demonstrate knowledge with regards to:
 - Urbanization trends and implications (Africa compared with other regions) including migration, displacement, conflict, the ‘urban dividend’, and informality;
 - Urban governance and decision-making and how it relates to national and international levels (across public, private and civil society spheres);
 - Climate hazards and impacts on cities, and the role of cities and urban development in GHG emissions.
- **Knowledge of applications:** The student is able to:
 - Assess climate-related risks, vulnerabilities, impacts, resilience, sustainability and climate compatible development using the most appropriate methodologies as applicable within an urban context;
 - Critically assess urban risk and vulnerability, quantitatively and qualitatively;
 - Undertake policy, strategy and proposal analysis and critique.
- **Knowledge literacies:** The student is able to access and evaluate different types and sources of information (academic, policy, plans, and data) and knowledge production.
- **Research literacies:** The student is able to compare different approaches, choose an appropriate process of enquiry and draw conclusions from research data relating to climate-related risks, vulnerabilities, impacts, resilience, mitigation and decision-making and governance in an urban context. The student is able to conduct a literature review of leading and current research.

Skill Outcomes

- **Method & procedure:** The student is able to: apply an appropriate method, technique, process or tool to climate change challenges in an urban context; use GHG emissions inventories and audits for cities and mitigation planning and management tools; use urban adaptation and resilience planning and implementation tools.
- **Producing & communicating information:** The student is able to effectively engage with and disseminate information relating to climate change and cities to a wide range of stakeholders (academics, non-specialists and city officials) using appropriate language and information, in written form, orally and graphically.
- **Accountability & independent student/s:** The student demonstrates effective self-learning and academic development.

- **Teamwork:** The student is able to work collaboratively in mixed, diverse teams through debates, role-playing and on group presentations.

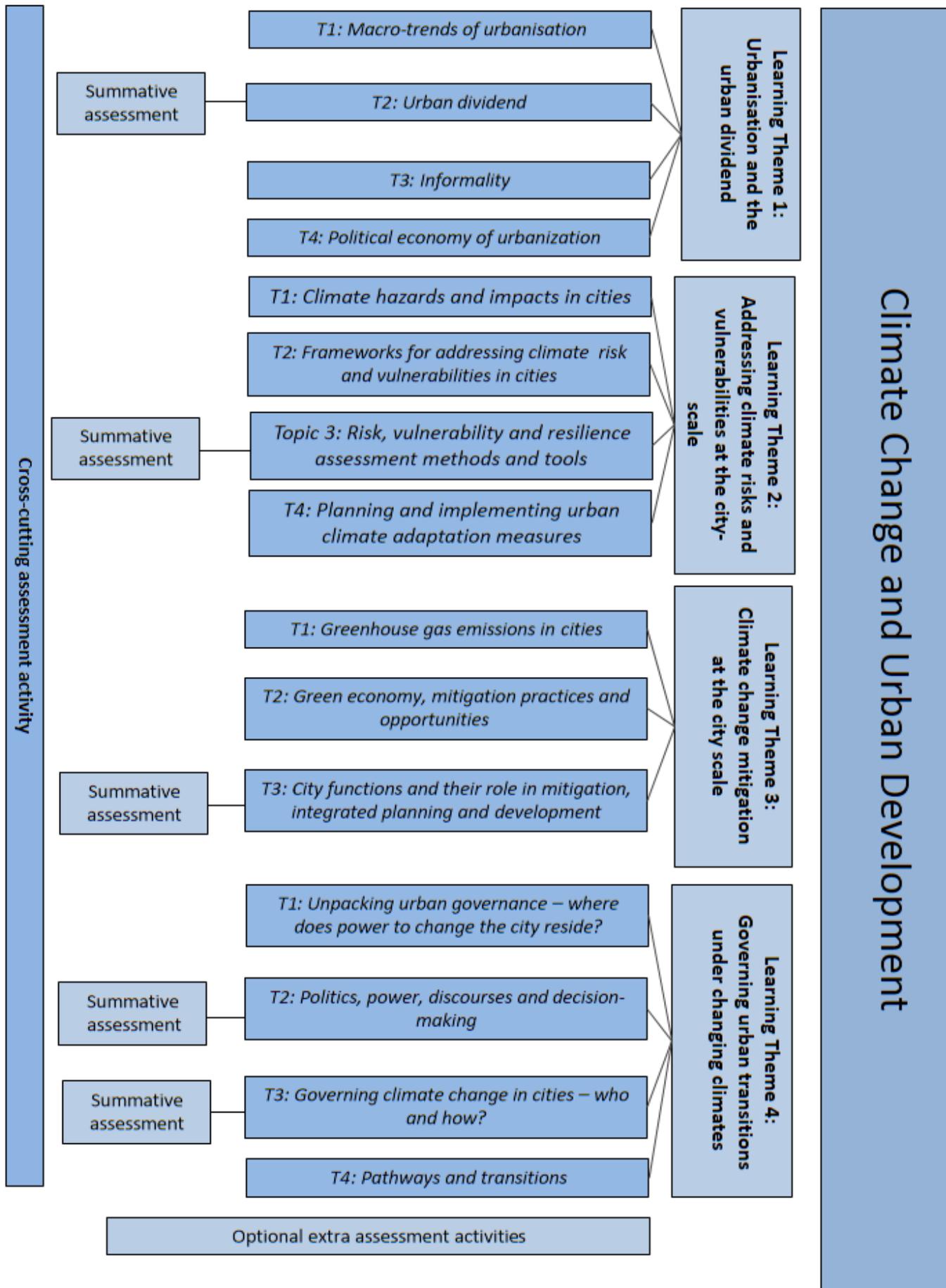
Competency Outcomes

- **Stakeholder engagement:** The student is able to demonstrate empathy for the diversity of roles, responsibilities and priorities relating to climate change and urban development across the public sector, private sector and civil society.
- **Context & systems thinking:** The student is able to suggest interventions at an appropriate level in an urban context, based on an understanding of the significance of spatial and temporal scale in an analysis, and of the different values, roles and processes of key actors and governance institutions.
- **Transdisciplinary thinking:** The student is able to demonstrate a valuing of epistemic diversity (i.e. familiarity with and respect for different paradigms, framings and methodologies).

Assumptions about students' prior knowledge and skills

- Some quantitative analytical capacity is required.
- Students have been introduced to the concepts of GHG emissions, climate risk, vulnerability, impacts, mitigation, carbon budgeting and footprints, adaptation and resilience in the core modules.
- Students have gained an understanding of international and national legal and policy frameworks pertaining to climate change in the core modules, such that this module can focus on how these relate to urban governance.

[See graphic overview of module on the following page]



Learning Theme 1: Urbanisation and the urban dividend

Rationale for Learning Theme

This learning theme focuses on urbanization, urban development and the role of cities in fostering development and dealing with climate change. It deals with urbanisation trends and the associated development implications, contrasting the growth of African cities with those in other regions of the world, particularly in terms of informality, income per capita, unemployment and public service provision.

Key words to understand prior to the activities in Learning Theme 1:

Urbanisation; urban dividend; informality

Outcome

Specialised knowledge: The student is able to demonstrate understanding of rate and scale of current and historical urbanisation and the implications for development and climate change.

LT1	Teaching-Learning-Assessment Activity	Hrs	Key resources
T1.1	Student/s: Key readings and video	3	[27] Freire, M et al. (2013)
T1.2	Student/s: Explore World Bank and UN DESA data	2	
T1.3	<p>Class activity: Lecture and discussion - Macro-trends of urbanisation</p> <p>This lecture is to help students understand urbanisation trends and development implications, with a specific insight into how Africa's urbanisation is different to urbanisation phases elsewhere (issues of migration, displacement and conflict will be touched on). The lecture is also intended to sensitize the student to the impact of current demographic shifts.</p>	2	<p>[11] UN Habitat lecture by Professor Edgar Pieterse on the underlying logics of slum urbanism</p> <p>[10] UN-DESA data and World Bank: World Development Indicators</p>

LT1. Topic 2: Urban dividend

- Outcome**
- **Specialised knowledge:** Understand the concept of an “urban dividend”, its causes, and the reasons why it may or may not apply in African cities
 - **Producing and communicating information:** Confidence in developing an argument around urbanisation; synthesising different sources of information and graphically portraying these for a non-academic audience

LT1	Teaching-Learning-Assessment Activity	Hrs	Key resources
T2.1	Student/s: Read Key readings	4	[9] Turok (2013)
T2.2	Class activity: Lecture Lecture introducing the idea of an urban dividend in terms of the urbanization and development trajectories. The lecture is also intended to sensitize the student to the impact of current demographic shifts and the complexity that is introduced by urbanisation.	2	[5] Cartwright (2015)
T2.3	Class activity: Open discussion Lecturer facilitates a group discussion on the advantages and disadvantages of Africa’s urbanisation	2	
T2.4	Students: Infographic Students work in small groups to create an infographic of Africa’s urbanization, drawing from the discussion, lecture, Key readings and other resources identified on their own Summative assessment: Lecturer assigns a grade based on the clarity and technical accuracy of the infographic and gives comment and feedback.	7	

LT1. Topic 3: Informality

- Outcome**
- **Specialised knowledge:** The expansion of “informal” settlements in African cities is understood in terms of causes, prognoses and implications.
 - **Teamwork:** Student is able to work democratically with peers, listening to other’s perspectives and opinions, critically reflecting, and building on these with their own positionality and thinking.

LT1	Teaching-Learning-Assessment Activity	Hrs	Key resources
T3.1	Student/s: Read Key readings In preparation for the seminar, students read the Key readings noting the concept of informality, its different definitions, why informality is the predominant urban existence in developing countries, and its implications in the context of climate change.	6	[7] Parnell, S. and Pieterse, E. (2014) [4] Jaglin, S. (2014) [8] Roy, A. (2011)
T3.2	Class activity: Discussion and seminar on informality Lecturer facilitates a group discussion on what the students learnt from the readings in terms of informality, with further discussion on the governance implications of rising informality.	2	

LT1. Topic 4: Political economy of urbanization

Outcome

- **Specialised knowledge:** The student will understand the role of international agencies and networks such as the UNFCCC, African Union, C40, UN Habitat, UCLG, Cities Alliance and ICLEI, and the nature of their relationship with African cities.
- **Producing and Communicating Information:** Students are able to argue a particular view on urbanisation, development and climate change, linking this view back to an institutional perspective

LT1	Teaching-Learning-Assessment Activity	Hrs	Key resources
T4.1	<p>Class activity: Lecture seminar on the Political economy of urbanisation</p> <p>Lecture on the Political economy of urbanisation, outlining: the role of international agencies and networks such as the UNFCCC, African Union, C40, UN Habitat, UCLG, Cities Alliance and ICLEI, and the nature of their relationship with African cities</p>	2	<p>[2] Didier et al. (2013)</p> <p>[6] OECD (2015)</p>
T4.2	<p>Student/s: Read Key readings</p> <p>Students prepare for the debate using the Key readings, lecture notes and any additional readings.</p>	4	
T4.3	<p>Class activity: Debate</p> <p>Lecturer facilitates a class debate between two groups, each of which adopts particular view on urbanisation, development and climate change and is able to link this view back to an institutional perspective</p>	2	

Learning Theme 2: Addressing climate risks and vulnerabilities at the city-scale

Rationale for Learning Theme

This learning theme explores the nature of climate risks and vulnerabilities facing African cities. The learning theme covers how risks and vulnerabilities are identified and measured, and the various approaches aimed at reducing climate risks and vulnerabilities in cities, including urban climate adaptation, disaster risk reduction and urban resilience building. The learning theme often requires students to apply the approaches in relation to their own city.

Key words to understand prior to the activities in Learning Theme 2:

risk; vulnerability; adaptation; resilience

Core cross-cutting resources for Learning Theme 2:

[22] Taylor, A. and Peter, C. (2014) Strengthening climate resilience in African cities: A framework for working with informality. Climate and Development

LT2. Topic 1: Climate hazards and impacts in cities

- Outcome**
- **Specialist Knowledge:** Students are able to characterise and identify climate hazards and demonstrate an understanding of differential impacts through risk and vulnerability lenses in the context of cities and climate change

LT2	Teaching-Learning-Assessment Activity	Hrs	Key resources
T1.1	Student/s: Read Key readings	2	[20] Hallegatte, S. & Corfee-Morlot, J. (2011)
T1.2	Student/s: Watch videos	1	
T1.3	Class activity: Seminar and discussion Lecturer facilitates a class discussion drawing from the Key readings and videos. The discussion focuses on defining the concepts of risk, hazard, vulnerability, adaptation and resilience in relation to climate in the context of cities, and on understanding the impacts and adaptation measures.	2	<i>Videos:</i> [13] ARUP video on “Urban systems, vulnerability and resilience” [18] Climate change, natural disasters and the urban poor

LT2. Topic 2: Frameworks for addressing climate risk and vulnerabilities

Outcome

- **Knowledge of applications:** Students are able to demonstrate an understanding of the appropriate use of the following frameworks: Disaster Risk Reduction (DRR), climate-smart development, Community Based Adaptation (CBA), Ecosystem Based Adaptation (EBA)
- **Transdisciplinary thinking:** Students are able to demonstrate a recognition of the linkages between the components of EBA and CBA as applied in cities and climate change, biodiversity, ecosystem services and sustainable resource management

LT2	Teaching-Learning-Assessment Activity	Hrs	Key resources
T2.1	Student/s: Read Key readings Students read the Key readings noting the different types of frameworks for assessing climate risk and vulnerabilities in cities: Disaster Risk Reduction (DRR), climate-smart development, Community Based Adaptation (CBA), Ecosystem Based Adaptation (EBA)	6	[23] UN (2015) Sendai Framework for Disaster Risk Reduction 2015 – 2030 [14] Bulkeley & Tuts (2013)
T2.2	Class activity: Lecture and discussion Lecture on the different frameworks for addressing climate risk and vulnerabilities in cities. The class discussion after the lecture should cover the climate-smart development approach to DRR, and the linkage between CBA and EBA with climate change, biodiversity, ecosystem services and sustainable resource management, along with their respective technologies.	2	[21] Mehrotra et al. (2009)

LT2. Topic 3: Risk, vulnerability and resilience assessment tools

Outcome

- **Knowledge of applications:** Student understands the range and applicability of urban risk and vulnerability analytical methods and assessment tools to be able to plan practical actions towards urban resilience
- **Context and systems-thinking:** Student understands the significance of the scale of analysis (both spatial and temporal)

LT2	Teaching-Learning-Assessment Activity	Hrs	Key resources
T3.1	<p>Student/s: Preparatory work and summary</p> <p>Students prepare for tutorial by:</p> <ul style="list-style-type: none"> • Reading Key readings; • Exploring the ICLEI Resilient Cities list of methodologies and tools; and • Exploring the CityRAP Tool <p>Student prepares a summary and critique of the readings</p>	6 2 2	<p><i>Readings:</i></p> <p>[19] Dickson et al. (2011)</p> <p>[12] Jha et al. (2013)</p>
T3.2	<p>Class activity: Tutorial</p> <p>Lecturer leads a tutorial on Risk, vulnerability and resilience assessment methods and tools. Students to present, discuss and provide peer-to-peer feedback on their understandings of the different methods and tools available.</p> <p>Assessment criteria to be developed by class, including:</p> <ul style="list-style-type: none"> • Capacity to present a clear and well-structured summary and critical response to the readings • Demonstrable understanding of the applicability of different methods and assessment tools <p>Summative assessment by lecturer</p>	2	

LT2. Topic 4: Planning and implementing urban adaptation measures

Outcome

- **Knowledge of applications:** Understand urban adaptation and resilience planning and implementation tools (including monitoring and evaluation)
- **Method and procedure:** Students should be to understand how to assess and identify adaptation measures and implement available tools for adaptation / resilience planning
- **Stakeholder engagement:** Student is able to engage effectively with professionals working in urban development agencies

LT2	Teaching-Learning-Assessment Activity	Hrs	Key resources
T4.1	Student/s: Preparatory reading	3	Readings [16] Carter et al. (2015) [24] UN Habitat video on " Flood Lines - Urban Adaption to Climate Change in Hoi An, Vietnam "
T4.2	Class activity: Lecture Lecture on planning and implementing urban climate adaptation measures	2	
T4.3	Students: Watch video	1	
T4.4	Class activity: Field visit to a hazard risk prone area Class to visit a hazard prone area in their city to engage with international and local agencies in a field setting to expose students to different vulnerability capacity assessments (e.g. using VCA or CityRAP tool). This might assist students to plan practical actions for urban resilience.	5	
T4.5	Class activity: Follow up presentations Students summarise field visit learnings and share between groups in informal presentations	3	

LT2. Topic 5. Cross-cutting activity

Outcome

- **Problem solving:** Student demonstrates critical and comparative thinking
- **Producing and Communicating Information:** Student is able to produce a short piece of writing for a non-specialist target audience on climate risk and resilience in their city.

Cross-cutting activity for LT2	Hrs	Key resources
Students: Blog post Student writes a blog post reflecting on similarities and differences between Manchester (described in Carter et al. core reading) and their own home town / city in terms of key climate risks, vulnerabilities and adaptation / resilience measures.	2	[16] Carter et al (2015) Student to identify any further resources
Class activity: Presentation of blog post Blogs are read and commented on by peers	2	

Learning Theme 3: Climate change mitigation at the city scale

Rationale for Learning Theme

This learning theme aims to develop students' understanding and appreciation of the risks and opportunities of climate change mitigation in cities, consider relevant approaches to sustainable spatial, energy and transport planning and implementation, as well as a strategic overview of key city functions and their role in climate change mitigation. This theme will deal with considerations for city management to improve their resilience and carbon footprint.

Key words to understand prior to the activities in Learning Theme 3:

Carbon footprint; GHG emissions; carbon budget; mitigation

LT3. Topic 1: Greenhouse gas emissions in cities

Outcome

- **Specialised knowledge:** Students develop an appreciation for the role of cities and urban development in GHG emissions
- **Producing and Communicating Information:** Students will be able to critically discuss the relevance of cities' mitigation planning in a climate change context.

LT3	Teaching-Learning-Assessment Activity	Hrs	Key resources
T1.1	Student/s: Key reading Students to read the Key readings	6.5	Readings: [30] Kennedy et al. (2009) [31] Lefevre (2012) [26] Climate Services Center Germany (GERICS) and KfW Development Bank (2015) [34] Walsh et al. (2011) [29] Hoornweg, et al. (2011)
T1.2	Class activity: Lecture and discussion Lecturer and facilitated discussion on GHG emissions in cities Students are not assessed on this topic at this point, but the topic is integrated into the cross-cutting assessment activity at the end.	2	

LT3. Topic 2: Green economy, mitigation practices and opportunities

Outcome

- **Producing and Communicating Information:** Students develop the ability to critically discuss the role of cities in a low carbon economy in terms of their mitigation risk, challenges and opportunities.
- **Specialist Knowledge:** Students are able to demonstrate understanding of the key considerations for a green and low carbon economy
- **Knowledge of applications:** Develop an ability to research best practices and/or benchmarks in dealing with city mitigation management approaches
- **Stakeholder engagement:** Students are able to demonstrate an appreciation of the role of transparent reporting of city GHG and related climate change criteria for improved stakeholder engagement.

LT3	Teaching-Learning-Assessment Activity	Hrs	Key resources
T2.1	Student/s: Preparatory reading Students to read the Key readings in preparation for the class discussion and presentation	8.5	[23] The New Climate Economy (2014)
T2.2	Class activity: Lecture and discussions Lecture covering key concepts and contexts such as green economy, current practices and application, and opportunities for cities in dealing with mitigation considerations, followed by a facilitated discussion to help clarify these issues	4	[28] GIZ (2013) [25] Childers et al. (2015) [27] Friesecke et al. (2012) [15] C40 Cities (2015)
	Students: Group work Groups will be formed to go and identify, assess and critically discuss mitigation risks and opportunities for a specific city.	3	[17] CDP Cities (2013)
T2.3	Class activity: Group presentations Each group presents findings (each student has a 5-minute slot) Class and lecturer will provide formative feedback on the group presentations (using Presentation Rubric)	1	

LT3. Topic 3: City functions and mitigation, planning and development

Outcome

- **Specialist Knowledge:** Students develop an understanding of the key roles within city management and their potential application of mitigation considerations
- **Producing and Communicating Information:** Students is able to communicate the city functions and their role in mitigation concisely and accurately in a presentation
- **Teamwork:** students demonstrate the ability to work flexibly and to collaborate with fellow students

LT3	Teaching-Learning-Assessment Activity	Hrs	Key resources
T3.1	Student/s: Preparatory reading Students to read the Key readings in preparation for the group work assignment	4	[32] OECD (2010) Cities and Climate Change
T3.2	Class activity: Preparation for assignment The class meets to discuss the following assignment and find ways to grow the resource pool for the class. Students are encouraged to research the roles/ functions of city management through a review of their local/ nearest city's departments. Lecturer to provide support with resources if necessary. Criteria for presentation to be decided	1	[35] World Bank, Urban Development & Local Government (2010)
T3.3	Students: Group work - research and development of presentation Students work in groups to research and consider the different functions within city management and what their role/ influence in mitigation management could/ should be. Criteria for presentation to be decided in advance:	4	
T3.4	Class activity: Group presentations Groups present findings to class. Each student has a 5-minute slot. Summative assessment of presentations (using Presentation rubric)	2	

Learning Theme 4: Governing urban transitions under changing climates

Rationale for Learning Theme

This learning theme explores: how, why and by whom responses to climate change are being promoted, addressed, blocked or impeded in cities, grappling with concepts of institutions, structure and agency; the plurality of values that underpin preferences for urban change and/or stability; how spaces for innovation and experimentation are created or closed down in cities; and how alternative models are institutionalized or mainstreamed.

Students will critically engage with: frameworks for analysing the institutions, modes and strategies of governing climate change in cities; various approaches and strategies for promoting innovation and change; the difference between national and local government and be aware of the various multinational agencies governing climate change and urban development; the role, and modes of engaging, the private sector in pursuing low-carbon and resilient urban development; and discourses on sustainable cities, resilient cities, low carbon cities, smart cities, transition towns and world class.

This learning theme encourages and enables students to think through (1) who is doing what to act on climate change within cities, (2) how and why are they doing this, i.e. with what values and interests, by what means and to what end, (3) who is not involved or excluded from the climate change issue and action in cities, and (4) which city actors are mobilizing to get (more) action on climate change at the national and international levels, and/or get others within their city to act and/or others in other cities to act, and how are they mobilizing?

Key concepts to understand prior to the activities in Learning Theme 4:

Governance; transition; pathway

LT4. Topic 1: Unpacking urban governance
Where does power to change the city reside?

Outcome

- **Knowledge of applications:** Students develop familiarity with the conceptual frameworks for analysing the institutions, modes and strategies of governing climate change in the city
- **Producing and communicating information:** Using critical reading and writing skills, students cover some of the fundamentals for undertaking policy, strategy and proposal analysis and critique
- **Stakeholder engagement:** Student is able to demonstrate empathy for the diversity of roles, responsibilities and priorities relating to climate change and urban development across the public sector, private sector and civil society

LT4	Teaching-Learning-Assessment Activity	Hrs	Key resources
T1.1	Student/s: Preparatory reading Students to read the Key readings	4	[44] Pierre (1999)
T1.2	Class activity: Lecture Lecture on urban governance models and whether these adequately capture the realities of African cities (looking across the public, private and civil society sectors, across multiple scales from the local to the international, and both regulatory and customary forms of governance)	2	[41] Lindell (2008) ALTERNATIVE to Pierre (1999): [43] OECD (2015)
T1.3	Students: Blog post Each student to prepare blog post of 250-300 words answering 1 of the following questions: <ul style="list-style-type: none"> • If you were mayor for a day, what would you change to tackle climate change in this city/town? • If you were the CEO of a large utilities company, what would you change to tackle climate change in this city/town? Formative feedback: Blogs are read and commented on by peers	3	Governing the City

LT4. Topic 2: Governing climate change in cities – who and how?

- Outcome**
- **Specialised knowledge:** Students know the difference between national and local government; familiarity with the various multinational agencies governing climate change and urban development: UNFCCC, C40 and ICLEI
 - **Producing and communicating information:** student is able to as a discussant on academic papers
 - **Stakeholder engagement:** Student is able to demonstrate empathy for the diversity of roles, responsibilities and priorities relating to climate change and urban development across the public sector, private sector and civil society

LT4	Teaching-Learning-Assessment Activity	Hrs	Key resources
T2.1	<p>Student/s: Preparatory readings, videos and website</p> <p>In preparation for the seminar/tutorial, student to read the Key readings, and watch C40 videos of mayors talking about climate action in their cities, as well as look at the C40 Networks and Roadmaps / Good Practice Guides</p>	4	<p>[38] Bulkeley, H. (2013)</p> <p>[36] Aylett (2015)</p> <p>[39] C40 website</p>
T2.2	<p>Student/s:</p> <p>Student prepares a critical review of the concepts in the Key resources</p> <p>Criteria:</p> <ul style="list-style-type: none"> • Capacity to articulate a clear/ critical summary of the concepts in the readings • Demonstrable empathy and understanding of the diversity of roles relating to climate change and urban development across different sectors 	2	
T2.3	<p>Class activity: Seminar/ tutorial</p> <p>Student presents on Key readings and others, acting as discussants.</p> <p>Summative Assessment: Student’s presentation is graded, based on</p> <ul style="list-style-type: none"> • Capacity to articulate a clear summary of the concepts in the readings • Demonstrable empathy and understanding of the diversity of roles relating to climate change and urban development across different sectors 	2	

	<p>Lecturer facilitates a class discussion based on the blog posts from Topic 1, critically reflecting on whether the mayor or CEO really has the power to do what was proposed? And if not, who else would need to be involved to make it happen?</p>		
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LT4. Topic 3: Politics, power, discourses and decision-making

What kind of city is being aimed at and what are the gaps, silences, shortcomings and exclusions?

- Outcome**
- **Specialised knowledge:** Students are able to distinguish between and critically engage the discourses on sustainable cities, resilient cities, low carbon cities, smart cities, transition towns, world class
 - **Research literacy:** Students are able to choose an appropriate process of enquiry to produce a concise outline of the actors, networks and coalitions involved in climate change in a city, and their roles, power and influence,

LT4	Teaching-Learning-Assessment Activity	Hrs	Key resources
T3.1	Class activity: Lecture Lecture on urban politics and the powers at play in shaping city-wide decisions	2	[37] Bahadur and Tanner (2014)
T3.2	Student/s: Read Key readings Students to read Key readings in preparation for writing article	4	[46] Satterthwaite (2013)
T3.3	Student: 1000 word article Students write a 1000-word article on their home town/ city discussing key actors (potentially) involved in climate issues, networks and coalitions, reflecting on how much power and influence they have over the development trajectory of the city and how they resource their activities. The article could be targeted at a professional magazine dealing with climate change in cities that targets practitioners working in government agencies, consulting firms, NGOs, etc. Summative Assessment Assessment criteria to be developed by class: The article should illustrate that power structures within a city have been understood. A good article should show the tensions in how a city resources their activities. The language should suit the professional audience.	10	Video urban poverty and climate change, by David Satterthwaite

LT4. Topic 4: Pathways and transitions

How can we get more inclusive coordinated action on climate change to transform cities?

Outcome

- **Knowledge of applications:** Students know how to engage the private sector without replicating the private sector default of sprawl and splintered urbanism.
- **Transdisciplinary thinking:** Students understand the role of, and modes of engaging with, the private sector in pursuing low-carbon and resilient urban development.
- **Stakeholder engagement:** Students demonstrate empathy for the diversity of roles, responsibilities and priorities relating to climate change and urban development across the public sector, private sector and civil society.

LT4	Teaching-Learning-Assessment Activity	Hrs	Key resources
T4.1	Student/s: Key readings Students to read Key readings in preparation for the role-playing exercise	4	[40] Hodson & Marvin (2010)
T4.2	Class activity: Facilitated role-play Students are given one hour to prepare in class and two hours to play out the exercise. The lecturer facilitates a role-playing exercise to illustrate innovative and adaptive governance. Students must adopt the position of government (national or local), business, household or civil society. Working together, students must construct a proposal for urban development (to be assigned) in which each student and other parties play plausible and constructive roles and which constitutes a robust and durable low-carbon and climate resilient social compact or social contract. Lecturer to provide feedback on the plausibility of the different roles played.	3	[45] Revi et al. (2014) <i>Teaching aids:</i> [42] Short video of Karen O'Brien explaining the idea of social contracts

Cross-cutting summative assessment for the module

<i>Cross-cutting summative assessment for the module</i>	<i>Hrs</i>
<p>Report and presentation on city development strategy - Group work</p> <p>Working in groups and drawing from the resources for the learning themes within this module, students must critically analyse a city development strategy or medium-term development plan and make recommendations on how to account for climate change (both in terms of substantive entry points and process for getting multiple stakeholders' input) and what climate adaptation and mitigation measures could be integrated within the strategy or plan (providing a menu of possible options and criteria for screening these options). This will be written up in a group report to be assessed and the key points will be presented to a panel of experts.</p> <p>Summative assessment by lecturer and panel:</p> <p>In addition to submitting the group report, each group will, in the final week of the module, present their recommendations to a panel of invited guests representing government, private sector and civil society. The group report and the presentation (with sections presented by individual students) will be summatively assessed (weighted 60% for the report and 40% for the presentation).</p> <p>Assessment criteria adapted from Report and Presentation rubrics:</p> <ul style="list-style-type: none"> • Extent to which groups critically reflect on the challenges and opportunities for multi-stakeholder engagement and coordination in developing and executing the climate change dimensions of such a strategy / plan; • Range of sectoral entry points identified for mainstreaming climate change; • Variety and contextual relevance and appropriateness of adaptation and mitigation measures suggested <p>For allocation of an individual mark to the group report, refer to Assessment Guidelines on ePlatform. Ensure that criteria are explicit and transparent and fully understood by students in advance of the activity.</p>	38

Summary of summative assessment in the module

The student's grades are compiled from summative individual and/ or group tasks across the module.

Summative assessment measures the student's achievement by comparing it against standard criteria (i.e. the desired module outcomes). Because summative assessment is for marks, it is 'high stakes' and has a motivational effect on student engagement. To avoid contention, it is recommended the lecturer and an independent assessor provide summative assessment, based on clear, explicit and transparent criteria. Standard rubrics are found in the *Assessment Guidelines and Tools* on the ePlatform and can be adapted and weighted as necessary. Careful proactive consideration must be given to ensuring that plagiarism is avoided.

It is recommended that summative tasks account for about 20% of the student notional hours of a module and do not place too big a burden on the lecturer.

LT	Topic	Activity/ Task	Subject	Hrs
LT1	2.4	Group Infographic	Urbanisation in Africa	7
LT2	3.2	Tutorial	Assessment tools	2
LT3	3.3	Group presentation	City roles in climate compatible development	10
LT4	2	Critical literature review oral	Climate change governance	8
	3	Article	Key development actors in city	10
Cross-cutting		Group report/ individual presentation	City development strategy	38

Additional activities for institutions requiring more notional hours

Teaching-Learning-Assessment Activity	Hrs
<p>Option A: Report on urban assessment or planning tool</p> <p>Student uses an urban adaptation, mitigation or resilience assessment and planning tool (may be city-wide or for a location or social group within the city depending on the nature of the tool), including site visits and data collection as relevant. Student writes a report assessing the tool and its value in a specific context. This activity can be aligned to Learning Theme 2 or 3 depending on selection of tool.</p> <p>Criteria: Adapt the Report Rubric. The report should demonstrate that the student has understood the tool sufficiently to demonstrate how it can be applied and then justify assessment of how and why the tool may be usefully applied in various contexts.</p> <p>Students would achieve the following outcomes: Knowledge of applications: Student is able to critically assess the value and applicability of any tool (rather than being the master of one tool) Producing & communicating information: Student is able to effectively communicate information using appropriate language and information, in a written report</p>	50

<p>Option B: Student Work placement</p> <p>Student is placed in a government unit, private company or non-governmental organization dealing with issues of climate adaptation, risk management, resilience or mitigation to learn from practical work experience.</p> <p>Knowledge outcomes: Knowledge of adaptation and/ or mitigation approaches, measures and technologies for city</p> <p>Skills outcomes: depends on placement but likely to include: Undertaking policy, strategy and proposal analysis and critique; Working collaboratively in mixed, diverse teams; Communicating with urban researchers, policy-makers and practitioners, including writing and presentation</p> <p>Competency outcomes: Understand diversity of roles, responsibilities and priorities relating to climate change and urban development across the public sector, private sector and civil society</p> <p>This activity can be aligned to Learning Theme 4 in terms of better understanding the practicalities of governing climate change in a city, as well as Learning Themes 2 and 3 depending on the position of the placement (e.g. disaster management unit in local government versus a renewable energy company).</p>	<p>50</p>
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Note for printing:

This TLA Plan has been formatted to be printed as an A5 booklet, with a gutter margin. Ensure that you select 'Booklet' on your Printer Settings, under the 'Layout' tab.

This document is an output from a project commissioned through the Climate and Development Knowledge Network (CDKN), a programme funded by the UK Department for International Development (DFID) and the Netherlands Directorate-General for International Cooperation (DGIS) for the benefit of developing countries. The views expressed and information contained in it are not necessarily those of or endorsed by DFID, DGIS or the entities managing the delivery of the Climate and Development Knowledge Network, which can accept no responsibility or liability for such views, completeness or accuracy of the information or for any reliance placed on them.



Climate & Development
Knowledge Network

The **Southern African Master's Curriculum in Climate Change and Sustainable Development** is part of the **SARUA Programme for Climate Change Capacity Development**.

The curriculum is the product of a collaborative partnership. The curriculum was developed by the University Delivery Consortium. Strategic support was provided by SARUA and HEMA. The sponsor was the Climate and Development Knowledge Network (CDKN). Academic oversight and review was provided by the Curriculum Innovation Working Group and the Peer Review Group through the SARUA Curriculum Innovation Network (SCIN).

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