Durban University of Technology, South Africa
Department of Town and Regional Planning

Theresa Gordon and Gilberte Lincoln

1. Introduction

This paper will present a perspective on planning education as seen from a university of technology, in this case the Durban University of Technology (DUT). The authors are senior lecturers in the Department of Town and Regional Planning which has been in existence for the past 24 years, producing graduates from two programmes, the National Diploma (ND): Town and Regional Planning and, since 1995, the Bachelor of Technology (BTech): Town and Regional Planning.

DUT is a merged institution consisting of the former ML Sultan Technikon and the Natal Technikon; the merger took place in 2002. The ML Sultan Technikon was racially integrated from inception, whereas the Natal Technikon, a 'white' technikon under the apartheid dispensation, was racially integrated in the late 1980s. DUT has had three vice-chancellors since merging, which has contributed to a prolonged period of internal restructuring. More broadly, the tertiary education terrain is contested, with national education policies shifting several times in the post-apartheid years. These national shifts and resultant contestations, combined with prolonged institutional restructuring, have placed considerable pressure on academic programmes and staff. This has been felt in the Town and Regional Planning Department at DUT; whilst our department is credited with exemplary teaching and learning practices in evaluation processes by our Quality Assurance unit and other institutions, there is constant pressure to be economically viable.

The pressure to conduct and publish research poses a difficult challenge for a relatively small department engaged in studio-based programmes that require a low staff-student ratio. Our relatively high throughput rate is due to a range of interventions, not least the teaching-intensive style of delivery of our programmes, which leaves lecturers with little time to conduct research. This is a lost opportunity, given the staff's considerable knowledge and experience, especially in the field of tertiary planning education.

The experience of the ND second-year students and graduates from DUT point to a complex reality in the workplace; challenging and interesting projects in understaffed municipalities, a general skills shortage, a poor work ethic, uneven mentorship of new graduates, responsibilities allocated far beyond those of a traditional technician,[1] delegation of responsibilities to new graduates beyond their experience,[2] and increased pressure to produce work in the private sector within relatively tight profit margins.

[1] Students have reported a wide-ranging list of tasks allocated to them; perhaps the most troubling has been a local authority requiring the students to evict illegal tenants.

[2] This has been the case especially in small municipalities where graduates take on managerial roles such as overseeing the spatial development framework (SDF) after two or three years of work.

2. The urban and regional context within which the planning school is located

2.1 The provincial context

The province of KwaZulu-Natal (KZN) has a population of 10.4 million, of which the largest proportion, approximately 3.4 million, are located in eThekwini Metropolitan Municipality (KZN DLGTA 2007b). Of the remaining 7 million, 2 million reside in the two largest district municipalities, Uthungulu and uMgungundlovu. Within these two district municipalities the local municipalities Msunduzi and Mhlatuze contain the largest urban centres, respectively Richards Bay/Empangeni, with a population of 634 000, and Pietermaritzburg, with a population of 416 000. KZN's growth rate between 2001 and 2006 was a mere 0.47% (SAIRR 2008). Given the impact of HIV/AIDS, it is unlikely that the population will grow at a higher rate in the coming decade.

These urban and in many instances peri-urban concentrations of population occur within a provincial space economy that is defined as largely rural, as shown in Table 1. The definition of 'rural' used in policy documents (eThekwini Municipality 2008; KZN DLGTA 2007b) refers to dispersed settlements, usually on tribal land; in reality the urban-rural continuum consists of a complex settlement typology as outlined by Lincoln and Robinson (2008).

Table 1: A provisional settlement typology for KwaZulu-Natal

	Settlement type	Examples
Urban end of continuum	eThekwini a) formal, established areas	Berea, Westville, Kloof, Umhlanga, Amanzimtoti
	eThekwini b) long-established townships, many with backyard shacks and pockets of informal settlement	Chesterville, Umlazi, KwaMashu, Mpumalanga, Chatsworth, Phoenix
	eThekwini c) new townships (bond housing and RDP housing*)	Chesterville ext., Welbedacht, Waterloo, Illovo
	eThekwini d) informal settlements within and around formal established areas	Cato Crest, Folweni, Bhambayi, St Wendolins
	eThekwini e) informal settlements on the periphery	Fredville, Cottonlands, Amahlongwa,
	eThekwini f) peri-urban and rural settlements of the outer periphery	Umbumbulu, Umgababa, Inchanga, Ximba

	Secondary metropolitan city Msunduzi (Pietermaritzburg) – formal established, etc., as for eThekwini	Scottsville, Hayfields, Wembly Edendale, Northdale, Bisley Copesville
	Secondary metropolitan city Mhlatuze (Richards Bay/Empangeni) – formal established, etc., as for eThekwini	Empangeni, Meerensea, Esikaweni, Ngwelezana Nseleni
	Intermediate towns – formal established , etc., as for eThekwini	a) Ballito/Stanger b) Groutville, Shakaville c) Etete d) Shayamoya
	Small towns – formal areas, townships, new RDP areas, informal settlements	Babanango, Richmond, Dundee, Harding
	Small towns – informal settlements	Highflats, Mbazwana, Izingolweni
	R293 towns + surrounding informal and peri-urban settlements	Jozini
	Remote resettlement areas and RDP townships	Frisgewaagdt Beacon Hill (S. Coast)
	Peri-urban / dense rural settlements	East of Mandeni, inland of Scottburgh
	Rural settlements (ranging from large to very small)	Surrounding Ulundi
	Scattered rural settlements	Deep rural areas
	Scattered rural (hardly a settlement)	Deep rural areas
Rural end of continuum	Commercial farms	North coast, Midlands, South coast

Source: Lincoln & Robinson 2008: 12

Note: * RDP is housing is low-cost or free housing provided by the national government in terms of its Reconstruction and Development Programme (RDP) of redress and poverty alleviation.

The urban-rural split in the province is 48%–52% respectively, but varies greatly across the 10 district municipalities, as shown in Table 2 (SAIRR 2008: 19). Significantly, the fastest-growing areas, in terms of population and economy, are concentrated in the three cities eThekwini, Richards Bay/Empangeni and Pietermaritzburg (McCarthy 2008). It is envisaged that the pressure to provide work opportunities, housing and the supporting facilities and infrastructure will be felt in the province's urban centres.

Table 2: KwaZulu-Natal population distribution, by district, 2006

District	Name	Population (N) 2006	Population (%) 2006	% urban	% rural
Ethekwini	Ethekwini	3 395 283	32.70	83.0	17.0
DC28	Uthungulu	1 035 973	9.98	22.5	77.5

DC22	UMgungundlovu	957 054	9.22	61.0	39.0
DC26	Zululand	887 897	8.55	17.7	82.3
DC21	Ugu	761 370	7.33	23.0	77.0
DC23	Uthukela	760 693	7.33	31.9	68.1
DC27	Umkhanyakude	645 358	6.22	4.5	95.5
DC29	iLembe	574 774	5.54	28.0	72.0
DC25	Amajuba	522 340	5.03	63.0	37.0
DC24	Umzinyathi	487 410	4.69	17.3	82.7
DC43	Sisonke	354 560	3.41	18.0	82.0
Totals		10 382 712	100.00	48.0	52.0

Sources: KZN DLGTA 2007b; SAIRR 2008: 19

In addition, the provincial context reflects high levels of poverty; 59% of households fall below the R3 500-per-month income band,[3] which places the focus on survival strategies in contradistinction to the ambitious growth targets contained in national and provincial policies (Robbins 2008).

2.2 The metropolitan context

Our immediate context is that of a metropolitan municipality[4] that includes one of the fastest-growing ports in Africa, many construction projects involving large-scale infrastructure in preparation for the 2010 FIFA World Cup, and the most important economic project in the region, Dube Tradeport, which will be the largest logistics platform in the southern hemisphere. Notwithstanding these visible signs of a thriving metropole, the eThekwini Municipality Integrated Development Plan identifies the following challenges:

- Low economic growth and high rate of employment
- Access to basic household and community services are [sic] less than optimal
- Relatively high levels of poverty
- Low levels of literacy and skills development
- Sick and dying population affected by HIV/AIDS
- Exposure to unacceptably high levels of crime and risk
- Many development practices still unsustainable
- Ineffectiveness and inefficiency of inward-looking local government still prevalent in the municipality. (eThekwini Municipality 2008: 6)

3. The planning system

[3] This is an indicator of the high demand for subsidised housing in the province.

[4] The local government landscape, in terms of the Local Government Municipal Demarcation Act (No. 27 of 1998 and No. 58 of 1999), consists of one metropolitan municipality, ten district municipalities and fifty local municipalities.

During the previous decade a number of policies, Acts, strategic frameworks and an array of planning instruments have been developed and issued at national, provincial and local government scales that aim to use resources according to an agreed set of priorities in a programmatic and integrated manner.[5]

The purpose of this section is to provide a snapshot of the main policy frameworks in place in the province and in eThekwini Municipality. An overview of the post-apartheid planning system and the challenges arising out of its implementation are well documented and articulated elsewhere (Harrison et al. 2003; Harrison et al. 2008; Parnell et al. 2002; Watson 2002). These issues are relevant to planning education, but beyond the scope of this paper.

3.1 Planning strategies in KwaZulu-Natal

In this section the focus is on strategies that guide public sector investment.

The National Spatial Development Perspective (NSDP) (RSA 2006) provides 'a set of national guidelines to develop a shared understanding of the national space economy, a set of principles and guidelines for infrastructure investment and development decisions, a check on the current interpretations of the spatial realities of South Africa and the implications for government intervention' (Lincoln & Robinson 2008: 18, 19). The NSDP provides a planning and development context and frame for the provincial and local government planning instruments such as the Provincial Growth and Development Strategy, the Integrated Development Plans (IDPs) and sector plans.

At provincial level, the status of the main strategic guide to planning and development, the Provincial Growth and Development Strategy (PGDS) and accompanying Provincial Spatial Development Framework (PSDF), is that of 'work in progress'. However, in 2007 the Provincial Economic Cluster developed a Provincial Spatial and Economic Development Strategy (PSEDS) that has been adopted by the KZN Provincial Cabinet. In this document economic priorities are linked to a spatial plan and it 'goes some way to achieving the objectives of the PSDF in that it provides clear economic and spatial directions for public investment' (Lincoln & Robinson 2008: 23).[6]

In the PSEDS key investment nodes and activity corridors in the KZN Provincial Corridor Development Programme are mapped, and it provides a strategic framework for inter-governmental decision-making. 'In principle, and since 2007, the linking of spatial projects is now part of the KZN budgeting process as one of the integrating instruments' (Lincoln & Robinson 2008: 28).

There are substantial problems with alignment between the various scales of planning frameworks, as stated by Lincoln & Robinson (2008: 39): 'The Assessment of IDPs Review Process undertaken by the Provincial Department of Local Government and Traditional Affairs into the alignment of IDPs to the PSEDS has revealed that there are differences in alignment across the Province … of the sixty IDPs in the Province, thirty-one are aligned to the PSEDS.'

[5] See KZN DLGTA 2007a; RSA 2006.

[6] A Draft KZN PGDS (dated 16 July 2008) is currently in circulation for comment within the various KZN provincial departments.

3.2 Planning issues at local government level

The Local Government: Municipal Systems Act (No. 32 of 2000) (MSA) defines the scope of the IDP,[7] which is a multi-sectoral strategic management and planning process. The Spatial Development Framework (SDF) and Land Use Management System (LUMS) are the spatial planning instruments of the IDP. 'At the strategic planning level, the SDF potentially provides an important integrative tool for an IDP and for orienting policies, strategies and projects spatially and as a tool for visualisation. The LUMS give effect to the strategies on a sub-divisional basis' (Gordon & Hansmann 2006: 2).

EThekwini Municipality has developed a 'package of plans',[8] ranging from a Long-Term Development Framework, through the IDP and SDF to the Scheme Plan, in order to develop an appropriate spatial response at different planning scales. At this juncture there is a relatively complex mix of spatial plans being implemented across the metropole in accordance with the 'package of plans', such as a number of sub-metropolitan Spatial Development Plans at various stages of completion; a draft Local Area Plan for the inner city area; Precinct Plans for sub-metropolitan centres, priority investment nodes and rural nodes; and Special Area Projects in the inner city. Various management plans such as the eThekwini Environmental Services Management Plan and the proposed Coastal Management Plans have implications for the package of spatial plans and will require scheme reviews and articulation across sectors and plans. At present the Town Planning Scheme (in preparation) guides land use management as there is no integrated LUMS in place for Durban, although some innovative planning bulk and design parameters are implemented at project level.

4. The planning education system at DUT

4.1 Overall objectives of the curriculum

The Department of Town and Regional Planning at DUT recognises the need to effectively respond to the socio-economic transformation challenges facing South Africa.

The department aims to offer a service to its students in the following ways:

- to develop curricula and syllabi which are relevant and appropriate to the needs of the country as it undergoes socio-economic transformation;
- to reach out to communities where possible, by way of practical projects, and to make this information accessible to interested constituency groups;
- to redress the imbalances of the past especially in respect of race, gender, class and any other form of social imbalance, through appropriate equity policies;
- to develop and refine technological methodologies relevant to development planning; and

[7] The IDP is a statutory requirement in terms of the Municipal Systems Act (No. 32 of 2000) (MSA). The IDP is a principal strategic planning instrument which guides and informs all planning, budgeting, management and decision-making in a municipality over a five-year period. The IDP contains a spatial development framework, which is also a statutory requirement in terms of the MSA.

[8] The Spatial Development Plan, Local Area Plan and Precinct/Special Area Plan fit – at differing scales with increasing complexity – between the SDF and the Planning Scheme (eThekwini Municipality 2008).

- to continually monitor and evaluate planning, teaching and learning methodologies to ensure effective planning education.

The underpinning objectives of the department are:

- to develop our learners as a 'whole', espousing the ethics and values of the institution, as well as the planning profession, to be responsible citizens who make a contribution to the positive development of our society, and have a 'world view' that supports lifelong learning;
- to achieve a balance between theory and practice; and
- to provide the relevant career-focused training in the field of town and regional planning within the context of the time of the programmes offered, resources and technology, and recognising the developmental context of our society, as well as the multi-disciplinary nature of our profession.

The DUT programmes are offered at National Qualifications Framework (NQF) Level 6 for the ND and NQF Level 7 for the BTech, and focus on the skills, applied technology, spatial analysis and application of planning techniques and spatial solutions relevant to the development of urban areas and regions, economic issues relating to planning and development, environmental management and sustainability challenges in urban and rural environments, understanding and applying the legal framework in which planning occurs appropriately, and an understanding of planning and the role it plays in society.

The transition of DUT to an institution with the status of a university of technology is a recent change, and one that presents particular challenges for our sector and for the department in particular. The current formulation of views relating to the role of a university of technology within the academic sector has been led at DUT by the Vice-Chancellor Academic, in a discussion document entitled 'Faculty Configuration Scenarios for the Proposed Academic Structure, January 2007' (Slammert 2007), which defines a university of technology as:

> a special kind of university whose main or central focus is that of technology as the study of the application of knowledge in the light of, and together with, practice and technique (knowledge, ideas, paradigms, methods) gained from practice. The implications for the core business of a university of technology is that the teaching and learning programmes are geared for practice in careers, professions, technology-transfer, and work-place learning. Research programmes are geared for practice driven research and applied strategic research. Community engagement is geared in a mutually beneficial way for the application and development of appropriate technologies.

The articulation and development of a strategic and curriculum plan for the faculty, and the department in particular, to respond to the challenges outlined above, is work in progress.

4.2 Producing critical thinkers and professionals

The purpose of the qualifications offered in town and regional planning is to provide professional and technical education leading to a qualification, and to professional recognition as identified by the Planning Profession Act (No. 36 of 2002). The following qualifications have been registered with the South African Qualifications Authority (SAQA):

- National Diploma: Town and Regional Planning (NQF Level 6)
- Bachelor of Technology: Town and Regional Planning (NQF Level 7)

Graduates of the programme are able to enter the town and regional planning profession, in the case of the ND to register as technical planners, and in the case of the BTech to register as professional planners.[9]

To achieve this purpose, the Department of Town and Regional Planning provides the opportunity for students to develop their skills, knowledge and application thereof, within the context of social responsibility and sustainable development, through the following broad curricular guidelines:

- the use of social science theory as an analytical framework in which to understand, conceptualise and analyse society, politics, process, the environment and context of development;
- the application of design as a spatial tool for developing human settlement processes, land use and physical development;
- facilitating collaborative knowledge construction, providing case-based problem-solving learning environments through engagement with private- and public sector planners and encouraging reflective practice;
- investigating economic issues and context as they relate to development;
- considering the environmental and sustainability challenges for planning and society;
- taking account of the legal framework in which planning functions;
- learning skills involved in management processes as they relate to the built environment;
- taking account of ethics and values that underpin the profession;
- conducting research as part of critical thinking and problem-solving;
- developing communication skills;
- using appropriate technology in problem-solving; and
- developing life skills.

Career opportunities for graduates include working in all spheres of government, national, provincial

[9] The purpose of the ND: Town and Regional Planning qualification as submitted to the SAQA is defined as follows:

> This qualification is intended for planning technicians working in government and non-government sectors. Learners would in a team be able to perform in both spatial and non-spatial planning fields using appropriate technology in order to critically respond to the challenges in the built environment. Learners may apply for registration as a technician with the SACTRP (SAC for P).

The purpose of the BTech: Town and Regional Planning qualification as submitted to the SAQA is defined as follows :

> This qualification is intended for persons specialising in the field of urban and regional development planning working in government and non-government sectors. Learners achieving this qualification would independently and in a team, be able to plan in both spatial and non-spatial fields using appropriate technology in order to critically respond to the challenges in the natural and built environment. Learners may apply for registration as a professional planner with the SACTRP (SAC for P).

and local (in the following departments: Land Affairs and Agriculture, Housing, Local Government, Environment and Tourism, Public Works); in private sector town planning firms; in non-governmental organisations; for property developers; and in parastatals. We are also seeing a trend of increasing specialisation in the field of geographic information systems (GIS) and environmental planning in parastatal organisations such as the national electricity supplier Eskom, the Development Bank of Southern Africa, specialist planning firms, and project management agencies.

4.3 Programmes offered

The department currently offers two programmes: the ND: Town and Regional Planning and the BTech: Town and Regional Planning. (The department is currently developing a master's programme in infrastructure and spatial planning, and will be submitting details to the Department of Education shortly.) The present staff complement consists of six full-time academic staff members, one part-time computer-aided design (CAD) lecturer, one GIS laboratory technician and a departmental secretary.[10]

4.4 Courses, levels and time allocated to programmes

The current curriculum is divided into two parts. The first part of the course consists of the ND which includes a 12-month mandatory period of work-integrated learning. The diploma is designed as an entrance qualification for the BTech degree.

The second part of the course is a one-year full-time or two-/three-year part-time BTech degree in Town and Regional Planning. In this programme, students take a total of six subjects that may lead to professional registration. Tables 3 and 4 presents the detailed structures of these programmes.

[10] The programmes offered in Town and Regional Planning date back to 1984 at the former ML Sultan Technikon, where the old National Diploma and National Higher Diploma courses were offered, housed within the Faculty of Engineering. The programmes fell under the administrative control of the Department of Architecture and Town and Regional Planning. In 1995, the Department of Town and Regional Planning gained full status as an academic department in the Faculty of Engineering. In April 2002, the institution underwent major changes as a result of the merger of tertiary education institutions. By the end of 2003, the department had been physically relocated to the Steve Biko Campus (former Natal Technikon), and fell within the Faculty of Engineering, Science and the Built Environment at the newly constituted DUT. The most recent restructuring of the faculty took place as recently as 20 April 2007. The department is currently housed in the Faculty of Engineering and the Built Environment.

Table 3: Subjects in ND: Town and Regional Planning

	Register code	Subject	Level	Credits
Year 1	PLAN101	Planning 1 (*)	1 - Annual	0.234
	SANS101	Survey and Analysis 1 (*)	1- Annual	0.100
	COSK101	Communication Skills 1	1- Annual	0.083
	DRWG101	Drawing 1 (*)	1-Semester	0.100
	CPSK101	Computer Skills 1	1-Semester	0.083
	CIVE101	Civil Engineering 1	1-Semester	0.100
	GEGY102	Geography 1	1-Semester	0.100
	PLDE201	Planning Design 2 (*)	1-Semester	0.100
	SURG101	Surveying 1	1-Semester	0.100
Year 2	IST	Work Integrated Learning (*)	2- Annual	0.100
	PPPW201	Planning Practice and Project Work 2 (*)	2- Annual	0.100
Year 3	PLDE301	Planning Design 3 (*)	3- Annual	0.300
	DEVP301	Development Planning 3 (*)	3- Annual	0.300
	CAPP301	Computer Applications 3 (*)	3- Annual	0.100
	STIS102	Statistics 1	3-Semester	0.100
	LGPR101	Legal Principles 1	3-Semester	0.100
	LEPO201	Legal Procedures 2 (*)	3-Semester	0.100

Notes: All subjects are compulsory.

(*) denotes major subject.

Table 4: Subjects in BTech: Town and Regional Planning

Register code	Subject	Level	Credits
PLDE401	Planning Design 4	4- Annual	0.200
CRPL401	City and Regional Planning 4	4- Annual	0.200
ENVS401	Environmental Studies 4	4- Annual	0.200
MANA104	Management 4	4- Annual	0.200
GISS401	Geographic Information Systems 4	4- Annual	0.100
CSTU401	Community Studies 4	4- Annual	0.100

Note: All subjects are compulsory.

Work-integrated learning (WIL) is a mandatory component of the ND and is sandwiched between years 1 and 3. It is supported by the subject Planning Practice and Project Work 2. The latter is assessed through continuous evaluation. Students placed in WIL are monitored by departmental staff in their workplace, and the visits include discussion with the employer/supervisor and the student. Log books are checked. The employer, student and staff member sign a record of discussion. Records are kept in the department. In some instances, not all students have been visited in a particular year, primarily due to distance, cost and staffing constraints. However, telephone discussions are held with employers in these cases.

Whilst the programmes are coherent in their design and there is clear articulation between the ND and BTech programmes, there are a number of shortcomings within the constraints of Report

NATED 02-151.[11] In particular there is inadequate attention paid to areas such as the environment, discipline-based technology needs to be applied earlier in the programme (CAD and GIS in the first year), the statistics course needs to be replaced with a research methodology course at level 3, and some courses need to be replaced and rearranged within the curriculum (e.g. Geography, Civil Engineering, Legal Principles, Statistics and Surveying). As a result, the department has initiated changes to the curriculum to address these issues.

4.5 Teaching methods

The department's approach to teaching and learning identifies a number of generic and specialist skills that all learners are expected to achieve mastery of by the end of their studies. The department's approach to educational practice is student-centred, and the programmes offered articulate well with an outcomes-based approach to learning. Effective teaching is seen as a process of socialising students into new behavioural norms and ways of working while helping them master the subject content. In support of this approach, a series of simple-to-complex tasks are designed to scaffold progress from dependent to independent work. The shift from a transmission mode to a developmental approach is achieved by setting problem-based tasks that require the learners to construct their own knowledge relating to theoretical subject themes. The outcomes identified in the programme relate to skills, knowledge and values that learners must attain. These include substantive and theoretical knowledge in the required fields, as well as communication skills (written, oral and graphic); participating in, and facilitating team work; managing and synthesising information; achieving competencies in the use of information technology and software; developing research skills; developing spatial analysis and design competencies; and learning time-management skills and a problem-solving approach to tasks at hand.

Teaching and learning activities include attendance at lectures, tutorials, group work, seminars, supervised projects, site visits, field trips, studio-based learning, reading and preparation, presentations, and input from visiting lecturers. Assessments of projects, assignments and group work etc. are covered in the next section.

Students are involved in the improvement of the teaching and learning process through evaluation of their courses, using various instruments. These include the DUT's Quality Assurance Policy instruments, as well as instruments that have been developed by the department, such as qualitative evaluations, action planning of the curriculum (involving senior students) and staff-student meetings.

4.6 Admission requirements at undergraduate and postgraduate levels

The entrance requirements for the ND: Town and Regional Planning and BTech: Town and Regional Planning are outlined in the Department Rule Book.

ND: Town and Regional Planning

In addition to a National Senior Certificate (NSC), compulsory subjects for entry into the ND course are English, Mathematics, and Geography. Recommended subjects are History, Technical Drawing and Biology. The ratings that students must achieve in relation to the old and new NSC codes, are set out in Table 5.

[11] This report represents the Minister of Education's general policy regarding formal former technikon /current university of technology instructional programmes in the Republic of South Africa as determined by the Minister.

Table 5: New National Senior Certificate Rating Code

New National Senior Certificate Rating Code		Old National Senior Certificate		
			Higher Grade	Standard Grade
English	4	English	D	C
Maths	4	Maths	E	D
Geography	4	Geography	D	C

Prospective students are required to sit for a selection test held in November each year, based on two assessments; a comprehension test and a written motivation in support of their application for the course.

BTech: Town and Regional Planning

The entrance requirement for the BTech: Town & Regional Planning is a ND in Town & Regional Planning. The student must have achieved an average of 60% in the ND to be eligible for entry. In addition, the student must attend a departmental interview and provide a written motivation for entry into the programme.

Recognition of prior learning

The department also takes in students through Recognition of Prior Learning (RPL), although this is mainly in the form of subject recognition rather than recognition of a whole qualification. This is especially applicable to prospective students who have been working in local authority structures in the town and regional planning field, and have extensive related experience. RPL is assessed by way of a portfolio and written motivation, and follows the DUT Policy and Procedures of RPL.

4.7 Assessment practices

In order to promote deep and effective learning, and given the varied products such as essays, seminars, reports, studio-based projects, tests and examinations, that students produce, a wide range of assessment strategies are used throughout the programme. The chosen method of assessment is closely aligned to the outcome that is being demonstrated. Formative and summative assessment strategies are included within the assignment cycle. Various methodologies and formats are used, including continuous assessment, assessment rubrics, peer assessment, integrated assessment and oral presentations. Assessment practice therefore is constantly discussed amongst staff, resulting in innovative approaches being tried, adapted and refined.

Core knowledge and understanding are developed though lectures, tutorials, use of electronic media to access information, computer-aided instruction, site visits, group projects, practical work and guided independent study. The student's knowledge is also developed through the informal interactions during studio and practical training sessions. Substantive knowledge and theoretical constructs are outlined and explored in lectures and through guided reading; this is then consolidated in the application to project work, assignments, essays, etc.

Students who face difficulties in achieving the stated outcomes are encouraged to meet with the relevant lecturer during their timetabled consultation time, or by appointment. In order to assist students in improving their performance, they are given written feedback on assignments, and the option to resubmit either portions of, or the whole assignment is given from time to time. Continuous

evaluation subjects are treated in the same way, except that the resubmission option forms part of the portfolio that is submitted to be moderated.

Knowledge and understanding are assessed primarily through written examinations, which constitute 50% of the overall mark, and by a year mark of 50%. Some courses are assessed primarily through continuous assessment, especially in years one and two.

4.8 Class numbers, and staff/student ratios

The department has approximately 170 students in any given year. The spread of students across levels of study is given in Table 6. The staff-student ratio is 1 : 28.

Table 6: Average annual student numbers

National Diploma	
Year 1	55–70
Year 2	40–45
Year 3	40–45
Total	+/– 160
Bachelor of Technology	10–20
Total for both programmes	170–180

4.9 Student throughput rates

The throughput rate is calculated as the minimum amount of time taken by a student to complete a particular qualification, as reported to the Department of Education. In the case of the ND, this is three years, and for the BTech it is one year for full-time students and two or three years for part-time students, depending on the combination of courses taken.[12]

The following tables are included in this report. Table 7 gives the subject enrolment and pass rate per subject from 2001 to 2006, and reflects a fairly high pass rate per subject. Table 8 gives the number of graduates, by race and gender, from 2001 to 2006, and reflects a fairly even gender split and a high proportion of African and Indian students, reflecting the regional demographics. Table 9 is a reflection of the current available information relating to throughputs, as reported to the Department of Education by DUT for the period 2003–2007. There are a number of problems with the way these rates are calculated. For example, they track total student numbers in a programme, rather than tracking those eligible for graduation, to establish the graduation rate. Table 10 is the cohort study for 2003–2005 that tracks a cohort of students completing their studies in the minimum period. There are some problems with the way this is calculated, especially in relation to students moving from one programme of study into a new area of study, for example from Arts to Town Planning – the student is counted from year one of their entry into a tertiary institution and not from the time they start the Town Planning programme.

Within DUT, the throughput rates in the department are considered to be above average to high, and need to be viewed within the developmental context of higher education. No empirical study has been done to assess the reasons why students take longer than the minimum time to complete their qualification. From discussions with our students over the years it appears that, beyond learning difficulties or gaps in knowledge resulting from inadequate secondary education, a proportion of our student population experiences difficulty in relation to accessing finances for fees and daily living expenses, financial exclusions, problems relating to accommodation, and adapting to the higher education environment. More broadly, it is evident that the impacts of HIV/AIDS and unemployment on students and their families are increasing and are affecting students' ability to continue with their studies.

[12] Official and current information on throughput rates is dependent on verification through the institutional processes, as they relate to the information that is supplied to the Department of Education for reporting purposes by the DUT's Department of Management Information. The Cohort study from 2003–2005 is currently being verified and is included here as draft information, subject to change.

Analysis over the years relating to student performance indicates the following: of the 55 new students that we take, approximately 40–45 are able to complete the ND. Most BTech candidates complete the course in the minimum required time.

Table 7: Subject enrolment and pass rate, by subject and servicing department, 2001–2006

Year	Qualification	Servicing department	Subject code	Subject	No. enrolled	No. passed	Pass rate (%)
2001	BTech: Town and Regional Planning	MLST: Town and Regional Planning	CRPL401	City And Regional Pl	8	5	63
			CSTU401	Community Studies 4	8	8	100
			ENVS401	Environmental Studies	7	5	71
			GISS401	Geographic Inform.	11	10	91
			MANA103	Management	11	8	73
			PLDE401	Planning Design 4	8	4	50
	ND: Town and Regional Planning	MLST: Civil Eng. and Surveying	GEOG102	Geography 1	1	1	100
			SURG101	Surveying 1	52	9	17
		MLST: Communication	COSK101	Communication Skills	55	32	58
		MLST: Computer Studies	CPSK101	Computer Skills I	57	51	89
		MLST: Law and Administration	LGPR101	Legal Principles 1	22	22	100
		MLST: Physics and Mathematics	STIS102	Statistics 1	22	19	86
		MLST: Town and Regional Planning	CAPP301	Computer Application	19	18	95
			CIVE101	Civil Engineering 1	52	44	85
			DEVP301	Development Planning	23	16	70%
			DRWG101	Drawing 1	50	46	92%
			GEGY102	Geography 1	51	45	88%
			LEPO201	Legal Procedures 2	22	18	82
			PLAN101	Planning 1	55	32	58
			PLDE201	Planning Design 2	51	44	86
			PLDE301	Planning Design 3	19	16	84
			SANS101	Survey And Analysis	57	45	79
2002	BTech: Town and Regional Planning	MLST: Town and Regional Planning	CRPL401	City And Regional Pl	7	4	57
			CSTU401	Community Studies 4	7	7	100
			ENVS401	Environmental Studies	7	5	71
			GISS401	Geographic Inform.	7	7	100

			MANA103	Management	6	5	83
			PLDE401	Planning Design 4	8	8	100
	ND: Town and Regional Planning	MLST: Civil Eng. and Surveying	SURG101	Surveying 1	63	56	89
		MLST: Communication	COSK101	Communication Skills	51	42	82
		MLST: Computer Studies	CPSK101	Computer Skills I	43	37	86
		MLST: Law and Administration	LGPR101	Legal Principles 1	22	21	95
		MLST: Physics and Mathematics	STIS102	Statistics 1	23	18	78
		MLST: Town and Regional Planning	CAPP301	Computer Application	22	22	100
			CIVE101	Civil Engineering 1	48	35	73
			DEVP301	Development Planning	20	16	80
			DRWG101	Drawing 1	46	29	63
			GEGY102	Geography 1	46	23	50
			LEPO201	Legal Procedures 2	24	24	100
			PLAN101	Planning 1	51	32	63
			PLDE201	Planning Design 2	33	33	100
			PLDE301	Planning Design 3	23	23	100
			PPPW201	Planning Practice An	36	33	92
			SANS101	Survey And Analysis	49	31	63
2003	BTech: Town and Regional Planning	Town and Regional Planning	CRPL401	City And Regional Pl	6	6	100
			CSTU401	Community Studies 4	4	3	75
			ENVS401	Environmental Studies	3	2	67
			GISS401	Geographic Inform.	3	3	100
			MANA103	Management	4	3	75
			PLDE401	Planning Design 4	4	3	75
	ND: Town and Regional Planning	Applied Law	LGPR101	Legal Principles 1	35	34	97
		Civil Eng. and Surveying	SURG101	Surveying 1	56	51	91
		English and Communication	COSK101	Communication Skills	53	49	92
		Information Technology	CPSK101	Computer Skills I	49	48	98
		Statistics	STIS102	Statistics 1	36	27	75
		Town and Regional	CAPP301	Computer Application	35	35	100

		Planning	CIVE101	Civil Engineering 1	52	47	90
			DEVP301	Development Planning	37	25	68
			DRWG101	Drawing 1	55	48	87
			GEGY102	Geography 1	64	52	81
			LEPO201	Legal Procedures 2	36	33	92
			PLAN101	Planning 1	59	34	58
			PLDE201	Planning Design 2	49	38	78
			PLDE301	Planning Design 3	36	34	94
			PPPW201	Planning Practice An	33	28	85
			SANS101	Survey And Analysis	60	40	67
2004	BTech: Town and Regional Planning	Town and Regional Planning	CRPL401	City And Regional Pl	10	3	30
			CSTU401	Community Studies Iv	11	9	82
			ENVS401	Environmental Studies	16	10	63
			GISS401	Geographic Inform.	15	10	67
			MANA103	Management	16	8	50
			PLDE401	Planning Design Iv	11	7	64
	ND: Town and Regional Planning	Applied Law	LGPR101	Legal Principles I	30	27	90
		Civil Eng. and Surveying	SURG101	Surveying I	55	25	45
		English and Communication	COSK102	Communication Skills	49	43	88
		Information Technology	CPSK101	Computer Skills I	46	45	98
		Statistics	STIS102	Statistics I	31	25	81
		Town and Regional Planning	CAPP301	Computer Application	27	26	96
			CIVE101	Civil Engineering I	50	45	90
			DEVP301	Development Planning	33	23	70
			DRWG101	Drawing I	52	46	88
			GEGY102	Geography I	52	39	75
			LEPO201	Legal Procedures Ii	27	26	96
			PLAN101	Planning I	61	32	52
			PLDE201	Planning Design Ii	49	46	94
			PLDE301	Planning Design Iii	29	27	93
			PPPW201	Planning Practice An	41	39	95
			SANS101	Survey And Analysis	55	41	75

2005	BTech: Town and Regional Planning	Town and Regional Planning	CRPL401	City And Regional Pl	10	9	90
			CSTU401	Community Studies Iv	10	10	100
			ENVS401	Environmental Studies	11	9	82
			GISS401	Geographic Inform.	11	7	64
			MANA103	Management	10	8	80
			PLDE401	Planning Design Iv	10	9	90
	ND: Town and Regional Planning	Civil Eng. and Surveying	SURG101	Surveying I	84	73	87
		English and Communication	COSK102	Communication Skills	62	55	89
		Information Technology	CPSK101	Computer Skills I	60	56	93
		Applied Law	LGPR101	Legal Principles I	42	41	98
		Statistics	STIS102	Statistics I	46	41	89
			CAPP301	Computer Application	41	39	95
			CIVE101	Civil Engineering I	58	46	79
			DEVP301	Development Planning	46	36	78
			DRWG101	Drawing I	56	48	86
			GEGY102	Geography I	75	58	77
			LEPO201	Legal Procedures Ii	42	38	90
			PLAN101	Planning I	72	42	58
			PLDE201	Planning Design Ii	52	46	88
			PLDE301	Planning Design Iii	41	40	98
			PPPW201	Planning Practice An	35	34	99
			SANS101	Survey And Analysis	63	43	68
2006	BTech: Town and Regional Planning	Town and Regional Planning	CRPL401	City and Regional Pl	19	17	89
			CSTU401	Community Studies Iv	19	18	95
			ENVS401	Environmental Studies	20	17	85
			GISS401	Geographic Inform.	18	11	61
			MANA103	Management	21	18	86
			PLDE401	Planning Design Iv	18	14	78
	ND: Town and Regional Planning	Civil Eng. and Surveying	SURG101	Surveying I	62	49	79
		English and Communication	COSK102	Communication Skills	51	45	88
		Information Technology	CPSK101	Computer Skills I	50	48	96

		Management	LGPR101	Legal Principles I	35	31	89
		Statistics	STIS102	Statistics I	38	36	95
		Town and Regional Planning	CAPP301	Computer Application	32	31	97
			CIVE101	Civil Engineering I	58	48	83
			DEVP301	Development Planning	40	29	73
			DRWG101	Drawing I	54	49	91
			GEGY102	Geography I	55	47	85
			LEPO201	Legal Procedures Ii	39	37	95
			PLAN101	Planning I	71	45	63
			PLDE201	Planning Design Ii	55	48	87
			PLDE301	Planning Design Iii	33	32	97
			PPPW201	Planning Practice An	42	40	95
			SANS101	Survey and Analysis	63	52	83

Table 8: Number of graduates, by race and gender, 2001–2006*

Year awarded	Qualification name	African		Coloured		Indian		White		Total		
		Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Total
2001	ND: Town and Regional Planning	14	9			10	4			24	13	37
	BTech: Town and Regional Planning	4	2			2	1			6	3	9
	Total	18	11	0	0	12	5	0	0	30	16	46
2002	BTech: Town and Regional Planning	2				1	2			3	2	5
	ND: Town and Regional Planning	8	7			1	1			9	8	17
	Total	10	7	0	0	2	3	0	0	12	10	22
2003	BTech: Town and Regional Planning	3	1			1				4	1	5
	ND: Town and Regional Planning	10	14			1	2			11	16	27
	Total	13	15	0	0	2	2	0	0	15	17	32
2004	BTech: Town and Regional Planning	3	1							3	1	4
	ND: Town and Regional Planning	8	13			3	1			11	14	25
	Total	11	14	0	0	3	1	0	0	14	15	29
2005	BTech: Town and Regional Planning	1	7			1	2			2	9	11
	ND: T Town and Regional Planning	8	24			1	5		1	9	30	39
	Total	9	31	0	0	2	7	0	1	11	39	50
2006	BTech: Town and Regional Planning	2	12			1	1		1	3	14	17
	ND: Town and Regional Planning	15	16			3	1	1		17	17	37
	Total	17	28	0	0	4	2	1	1	20	31	54

Note: * Graduate numbers are as per year of graduation ceremony.

Table 9: Graduation rate per qualification, 2003–2007

Qualification	2003			2004			2005			2006			2007		
	Headcount	Graduates (N)	Grad rate (%)	Headcount	Graduates (N)	Grad rate (%)	Headcount	Graduates (N)	Grad rate (%)	Headcount	Graduates (N)	Grad rate (%)	Headcount	Graduates (N)	Grad rate (%)
BTech: Town and Regional Planning	7	5	71	19	4	21	13	11	85	22	17	77	22	15	68
ND: Town and Regional Planning	142	27	19	142	25	18	161	39	24	160	34	21	161	42	26
Total	149	32	21	161	29	18	174	50	29	182	51	28	183	57	31

Note: The graduation rate is the number of graduates divided by the headcount enrolled in the same reporting year, expressed as a percentage.

Table 10: Cohort study of first-time entering students, ND: Town and Regional Planning, 2003–2005

First time entering in 2003	Graduated in 2005	Enrolled in 2006	No. of dropouts	Dropout rate	Throughput rate – minimum time
44	22	11	11	25%	50%
First time entering in 2004	Graduated in 2006	Enrolled in 2007	No. of dropouts	Dropout rate	Throughput rate – minimum time
48	18	11	19	40%	38%
First-time entering in 2005	Graduated in 2007	Enrolled in 2008	No. of dropouts	Dropout rate	Throughput rate – minimum time
55	24	15	16	29.09%	43.64%

Note: Throughput rate tracks a cohort of students registering for the first time at a tertiary institution and completing in minimum time (3 years), minimum time + 1, minimum time + 2, etc.

4.10 Students' exposure to the most recent literature and ideas in planning

Departmental staff provide students with access to the latest information and ideas in planning and technology in a number of ways. These include:

- research and consulting on relevant and current planning-related projects that feed directly into the curriculum;
- staff and students attending national and international conferences;
- supporting student attendance at student conferences and planning conferences such as SAPI, Planning Africa and annual GIS conferences;
- exchanges with other planning schools nationally and internationally when the opportunity arises, e.g. student and staff visits from the University of Botswana, Global Studio visit, student visits from the University of the Witwatersrand, and the South African Planning Institute (SAPI) KZN Competition;
- supporting KZN SAPI events on topical issues such as current legislative changes in planning, environmental issues, major projects, etc.;
- staff and student participation in the eThekwini Municipality 'Imagine Durban' project;
- updating of library resources – books and journals as well as online journal access both in the library and in the classroom, including e-learning;
- visiting lecturers – international and local specialists in various fields of planning lecturing on various themes relating to mega-projects, planning theory, housing, urban design, planning law, spatial planning, integrated planning, etc.

All students in the ND undergo 12 months of compulsory and structured WIL experience under the guidance of a registered professional planner such that work-based experience is a reflection of current work practices and exposure to the latest technology.

Exit examinations are externally moderated by a combination of practitioners and academics. Examiners' reports provide useful feedback on content and curricula.

4.11 Library and IT resources

The infrastructure, space allocation, library and IT resources available at DUT are adequate to successfully run the current programmes.

The department has two dedicated lecture venues that can accommodate 50 and 60 students respectively, two new design studios and furniture (for first-year and third-year students), a 40-seat GIS /CAD facility, a BTech facility comprising a seminar room, design studio and individual reading rooms, and a research office. The GIS/CAD facility is available to BTech students by arrangement. The remaining facilities are available to students 24 hours per day. All the classrooms have access to IT facilities and students are able to access the internet via their personal computers.

Students who do not have their own PCs have access to several hundred computers through open computer labs within DUT, which are available to students during the day as well as in the evening and at weekends.

Library

DUT has four library sites on its Durban campuses. Our students mainly use material from the ML Sultan and Steve Biko libraries. Three subject librarians service the Faculty of Engineering and the Built Environment. The library holds over three thousand volumes of planning and built environment-related books, relevant periodicals, databases, internet facilities, an inter-library loans service and a user service. The books and periodicals are adequate, but could be improved, especially the periodicals. Library orientation for students is scheduled at the beginning of the academic year, and third-year BTech students attend advanced library orientation sessions. A budget is allocated annually to the department to extend the existing collection. Students are able to access e-journals from the library computer facilities.

IT access and classroom facilities

The provision of equipment in the department includes survey instruments, electronic scribers, digital cameras, stereoscopes, fully equipped drawing laboratories, GIS and CAD hardware and software, light tables, scanners, projectors and laptop computers. Each level of study has a laptop computer and projector for teaching and for student use in presentations. The department has a full GIS Site Licence, which includes satellite software. Both GIS and CAD are available to students in the general laboratories during operating hours. Institutional online learning facilities are not always functional. Currently, students have access to email facilities on campus. Technical support from the ICT unit is available for staff and student laboratories.

4.12 Revisions in the curriculum

The approach of the department to education, training and curriculum development, as defined in the programmes offered, is in accordance with international trends, the educational philosophy of DUT and the principles outlined in the various national policy documents on higher education, including the NQF.

Between 1997 and 2000 the department went through an intensive process of restructuring the programmes offered. In this process the department reflected on the outcomes of the programmes and reworked the existing curricula within the confines of NatEd 151. The department was assisted by the Academic Development Unit with the purpose of rethinking, reworking, restructuring and changing the curriculum where required.[13]

[13] The imperatives of change within the broader educational environment in South Africa and within the planning profession were perceived as long overdue and were supported by staff and students in the department. The following principles of the NQF informed the process that was followed:

- Integration: developing human resources
- Relevance: responsive to national development needs
- Credibility: education and training should have national and international value and acceptance
- Coherence: work within a consistent framework of principles and certification
- Flexibility: allow for multiple pathways to learning outcomes
- Standards: expressed in a nationally agreed framework and internationally accepted outcomes
- Access: provide ease of access/entry to appropriate levels of education and training for all learners which facilitates progression
- Articulation: provide for learners on successful completion of accredited pre-requisites to move between components of the delivery system
- Progression: permit learners to move through the levels of national qualifications via different appropriate combinations of the components of the delivery system

The department is presently reviewing the curriculum with the assistance of the DUT Centre for Higher Education and Development for the purpose of registration of qualifications in 2010 in terms of the requirements of the new Higher Education Qualification Framework (HEQF). The department is in informal discussion with the universities of technology that offer similar courses, for the purpose of discussing matters of common interest and changes that have been identified and are common to all our programmes.

The process is also informed by the international literature on planning education and practice (Diaw et al. 2002; Frank 2007; Friedmann 1996, 2005; Healy 2002, 2005; Flyvbjerg 1998; Rakodi 1996; RTPI 2003; Sandercock 1998, 2003) and local initiatives (the Bloemfontein Competencies 2002, discussed in Faling & Todes 2004; Harrison et al. 2008; Todes et al. 2003).

The Standards Generating Body (SGB) for Planning was established in 2006 and has met once. A member of staff has been nominated to serve as a member of the SGB. In the absence of a functioning SGB prior to 2006, the South African Council for Town and Regional Planners (SACTRP) called a meeting of planning educators in 2000 and developed a set of agreed core competencies and critical outcomes for planning. These became known as the 'Bloemfontein Competencies'. It is useful to include them here (see Appendix) as they play a key role in shaping the refining of our curriculum. The status of the SGB for Planning is still in flux and matters relating to competencies for the profession have not been finalised.

It is anticipated that in line with the requirement for re-submission of qualifications to the SAQA in terms of the new HEQF, more intensive changes will be needed to the current qualifications offered by DUT prior to submission.[14] In the interim, it is the intention of DUT to offer a master's degree programme, and the department is in the process of submitting the application to the Department of Education for approval.

The department proposes to offer a master's programme geared toward knowledge and advanced skills production in the inter-related fields of planning research, mega-projects (large-scale infrastructure), environmental planning design (spatial planning) and environmental management (sustainability studies). This proposal is a response to our context: that of a metropolitan municipality that has one of the fastest growing ports in Africa; that is currently constructing large-scale infrastructure which will require long-term management and maintenance; and that houses Dube Tradeport, the largest logistics platform in the southern hemisphere.

This proposed master's programme will be unique in the country and will draw upon the existing skills and emerging research directions of the current staff, as well as those of staff from other departments in the Faculty of Engineering and the Built Environment at DUT and academics from other universities.

- Portability: enable learners to transfer their credits from one leaning institution and/or employer to another
- Recognition of prior learning: through assessment, give credit to learning which has already been acquired in different ways
- Guidance of learners: provide for the counselling of learners by specially trained individuals who meet nationally recognized standards for educators and trainers. (SAQA 2001: 9–10)

[14] Although the date for resubmission has not been finalised, 2010 has been mooted.

4.13 Links to the planning profession and professional accreditation systems

The department makes a contribution to the planning profession nationally and regionally in a variety of ways. These include:

- serving on the following committees: the South African Planning Institution (KZN Branch), the South African Council for Planners (SACPLAN) (which replaced the former SACTRP on which a member of staff served), as a member of the Education and Training Sub-committee of the SACPLAN, and as accreditation committee member;
- acting as joint organiser of the KZN SAPI Annual Planning Competition with the University of KwaZulu-Natal from 2007 to 2008;
- holding membership of the former SACTRP Education Advisory Committee from 1998 to 2004, and since the demise of the above committee with the advent of the new SACPLAN, current membership of the 'informal' Heads of Planning Schools Committee;
- jointly organising, with the University of KwaZulu-Natal Town and Regional Planning Department, seminars relating to planning issues for the South African Planning Institution; and
- hosting of public hearings with the Department of Land Affairs on legislation, policy documents and discussion papers relating to planning.

Professional accreditation and evaluation of qualifications and the department

Prior to the changes in the higher education sector that began in 1994, the technikon sector was subject to external review processes known as SERTEC (Certification Council for Technikon Education – a statutory body), as well as by the then SACTRP, in terms of Act 19 of 1984.

Major changes arising from the transformation of the higher education sector have included an exercise in restructuring of institutions, primarily through the merger and rationalisation of some institutions, the introduction of a NQF and the shift into a quality assurance modality that all higher education institutions are now subjected to. DUT is bound by the requirements of the Higher Education Act, and those of the Council for Higher Education and the Higher Education Quality Committee, in terms of institutional quality assurance.

The planning profession has also undergone changes through the replacement of the former Act governing planning with the Planning Professions Act of 2002. The department is subject to the SACPLAN accreditation process, as identified in the Planning Professions Act. The following are the more recent evaluations that have been held in the department:

- SACTRP Schools Accreditation visit – 1998
- Sertec Programme Evaluation – 2000
- Sertec Experiential Learning Evaluation – 2001
- Internal Self-Evaluation on Continuous Assessment – 2002
- Internal Self-Evaluation – January 2006
- Royal Town Planning Institute Benchmarking – May 2007

The SACPLAN is due to undertake an accreditation visit by the end of 2008 / beginning of 2009.

5. Preparing students to operate in 21st-century urban (and regional)

environments

The department continues to provide a generalist planning education, focusing on conceptual thinking relating to spatial planning, with the use of technology. Over the last ten years, the areas listed below have undergone significant changes reflecting our societal context. The intention in this section is to consider our curriculum as it currently stands and to discuss the changes we envisage making in the near future.

- Design and related application of innovations in technology

The integration of technology into our design courses is an ongoing process. We have doubled the percentage of electronically generated products over the past three years, in response to the requirements of employers. This is a trend that will intensify and place considerable strain on academic institutions to deliver technologically proficient students whilst battling with updating and maintaining the infrastructure required. More worrying is whether tertiary institutions have the ability to attract staff with the required qualifications and experience.

- Applied technology such as CAD, GIS, Microsoft Projects, PowerPoint

Our BTech graduates are in demand as generalist planners and for their technical CAD and GIS skills. We aim to introduce GIS training at the ND level in the re-curriculation process required by the HEQF. The need to provide students with skills in 'old' and new technologies is challenging; for example, in the Surveying 1 course taught at third-year level in the ND, the students will be required to capture and interpret both data from a Tachi survey as well as data obtained from a GPS.

- The impacts of globalisation on space and its meaning

These impacts permeate the content of most of the courses, but are dealt with in the theory-oriented courses in both programmes. One of the challenges is to provide students with enough of a theoretical basis and substantive knowledge to understand the global context and impacts at local level, and on planning. The scale of intervention, such as the infrastructure investments currently being made in preparation for 2010, the back-of-port restructuring and Dube Tradeport construction, raise questions about the degree to which planning education prepares students to interact with large-scale projects and to understand the impacts of such projects. We have begun to grapple with these questions in the construction of our master's programme.

- Planning theory and practice

The need to provide a theoretical basis, given the complexity of the planning arena in South Africa and globally, is outlined in the previous point.

- Environment and sustainability

The technical requirements and technical proficiency required in environmental planning and management have shaped our environmental studies course. Recently, sustainability as it relates to urban management strategies, such as energy conservation, sustainable housing typologies and settlement patterns, waste management, sustainable mobility, etc., has become more integrated into the BTech programme as a whole. We envisage that our programmes needs to become more focused on implementable, sustainable planning and management strategies.

- Management and integrated planning

Whilst our BTech Management 4 course deals with management theory, we have over the past five years re-orientated the second semester to focus on the management skills required for planners

specifically related to the managerial aspects of the IDP, a typical housing project cycle and project assessment. Based on feedback from the second-year students after their year in the workplace, we intend introducing basic office practice into the first year of the ND. Ethics is another theme that we intend to address more specifically in response to the working environments that our students encounter.

- An urban focus

We recognise that our focus is urban; given the urbanising trend in the province this is understandable and defensible. However, it does highlight the need for planning education to deal with the troubling issue of what the tertiary education sector's response to rural planning should be.

- Planning procedures and legal and policy framework

Given the procedural and policy complexity of the planning environment, students are exposed to legal and policy frameworks in all years of study. There is a need for students to interact critically with policy documents, in both the conceptualisation and implementation stages. Planners' ability to formulate criteria to assess project and development proposals is critical, as is the translation of policy objectives and strategies into projects.

- Communication skills (presentation/graphic/verbal/visual/written)

Given the communicative dimension of planning and the necessity to make planning concepts 'portable', considerable emphasis is placed on communication skills at all levels in our programmes.

- Work-integrated learning (WIL)

We consider one of the strengths of our course to be the 12-month placement of WIL that prepares students for the world of work. Frank (2007) lists it as one of the innovations in planning education. The WIL component of the ND has been an area of contestation. Some associate it with technikon history and argue that it should not be an integral part of curricula in the new universities of technology. In other instances it has been argued that WIL does not qualify as an 'academic' year, and that the ND therefore constitutes only two years of academic study. The feedback from our second-year students indicates that an enormous amount of learning takes place in this year, which cannot be replicated or approximated in an academic programme. This feedback, documented for more than a decade in our department, is overwhelmingly supported by findings in higher education research.

- Entrepreneurship skills

In general, there is a growing need to provide students with basic 'hard skills' that traditionally fall within the business management sphere. Frank (2007) notes the introduction of management competencies into planning education as innovative and argues that it is the basic starting point for entrepreneurship. However, very few of our students enter private practice. Whilst the department aims to produce planners with a problem-solving attitude – and this is clearly reflected in the constructivist leanings in our pedagogy – we need to look more closely at how we could produce more planners who are innovative problem-solvers and potential entrepreneurs.

The focus on strengthening the above areas appears to have contributed to an existing curriculum that supports students' ability to perform in the workplace and to be adaptive to a complex and changing planning environment. However, as argued, we see the need to continually revise and renew our curriculum, in order to further focus and intensify delivery of our programmes so as to create the optimal conditions for developing technologically proficient and theoretically grounded planners who tackle planning challenges in a proactive, ethical manner.

Appendix
The Bloemfontein Competencies

The Bloemfontein Competencies were developed at a meeting of planning educators called by the South African Council for Town and Regional Planners in 2000, and function as a set of agreed core competencies and critical outcomes for planning. They are:

1. A knowledge and understanding of the moral and ethical dimensions of acting in the public domain and applying this in planning practice. The sub-outcomes showing evidence of this include:

    - orientation to social justice and equal opportunity;
    - an appreciation of the diversity of cultures and views;
    - a people-centred approach;
    - promotion of efficiency in resource use;
    - an orientation towards sustainable development.

2. Demonstration of a sound theoretical and contextual knowledge, and the ability to apply this in action. The sub-outcomes showing evidence of this include an understanding of:

    - the nature, purpose and methods of planning;
    - the histories, philosophies and theories of planning and of development;
    - the theories relating to the natural, social, economic, developmental and political environments;
    - the theories and principles relating to the design of urban environments;
    - the theories relating to urban, metropolitan, rural and regional development and to these contexts and processes;
    - the South African context and its particular challenges;
    - an application of these theories to the design, management and implementation of planning interventions to bring about positive change and societal benefits within human settlements.

3. Linking knowledge to spatial plans and policies. The sub-outcomes showing evidence of this include an aptitude to:

    - collect, analyse and organise information to determine planning processes;
    - use technologies to assist these processes;
    - apply appropriate knowledge pertaining to political, policy and institutional contexts, and of planning legislation and procedures;
    - prepare plans and formulate policies with spatial orientation at different scales;
    - undertake planning with due appreciation of aesthetic dimensions, and with sensitivity to the links between human settlement and the natural environment;
    - interpret and apply plans to ongoing decision-making and problem-solving;
    - apply knowledge to the implementation of plans and to land management and development processes.

4. Linking and synthesising programmes and projects from various sectors and institutions within the framework of integrative development. The sub-outcomes showing evidence of this include:

- an integrative understanding of development issues and processes;
- an understanding of the management requirements of integrative development processes;
- an ability to think creatively and synoptically;
- an understanding of the legal, policy and institutional frameworks within which such planning and development occurs;
- an understanding of the key issues in relation to development in South Africa including local economic development, land reform, and urban restructuring and the development of integrated settlements.

5. Conducting academic research in order to develop critical thinking and problem-solving abilities. The sub-outcomes showing evidence of this include:

   - an understanding of appropriate methodologies for different research requirements;
   - an ability to collect, analyse and evaluate information;
   - an ability to apply generated knowledge to planning problems, in a creative way.

6. Application of the managerial and communicative skills necessary for managing planning and development processes in the public and private sectors. The sub-outcomes showing evidence of this include:

   - an understanding of social dynamics and power relations;
   - an understanding of political processes and governance;
   - strategic thinking and management;
   - financial management;
   - organisational management;
   - project management;
   - decision-making skills;
   - organisational skills;
   - an ability to relate to and work with people;
   - an ability to work in teams as well as individually;
   - an understanding of approaches, processes and techniques associated with participatory and collaborative forms of planning;
   - negotiation, facilitation and mediation skills;
   - an ability to communicate effectively verbally, graphically and by electronic means.

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