GRADUATE SURVEY REPORT

The primary responsibility for quality and the management of quality rests with higher education institutions themselves. Institutions should seek to establish and sustain effective internal quality management systems that enhance quality and yield reliable information for internal quality related planning, external audit and public reporting (CHE, 2007). As indicated later in this report, some quantitative data can be obtained about student performance and success rates, however, that does not necessarily relates to the quality of graduates.

A Graduate and student satisfaction survey was conducted during the March 2008 Graduation ceremonies for Vanderbijlpark and EduCity students. The aim of this survey was threefold:

- to obtain information about the employability and placement of our students;
- to build an Alumni Database; and
- to get retrospective feedback from students of their experience at VUT.

The questionnaire was distributed to 1547 students of which 1117 were satisfactory completed and could be used for the analysis. This resulted in a response rate of 72%

The questionnaire made use of both open and closed ended questions to:

- Determine whether the student is employed and if so, where and on what salary level.
- Determine what extent the curricula correlate with the work the students are doing.
- Determine the impact of WIL on finding employment.
- Obtain a critical perspective of their experience at the VUT, relating to the curricula, the quality of teaching and learning and the resources and facilities.

Although these results are based on student perceptions, it does provide some indication of students' experience at this institution.

The report comprises of three sections.

1. **Section 1** provides an overview of graduate employment/unemployment trends on a national level. Most of this information is obtained from a Research Report Compiled by the Development Policy Research Unit (DPRU) for Business Leadership South Africa, which was published in March 2006, (http://www.commerce.uct.ac.za/dpru/).
2. **Section 2** provides a summary of information for the institution and per faculty.
3. **Section 3 p**rovides a detailed breakdown of the results per qualification.

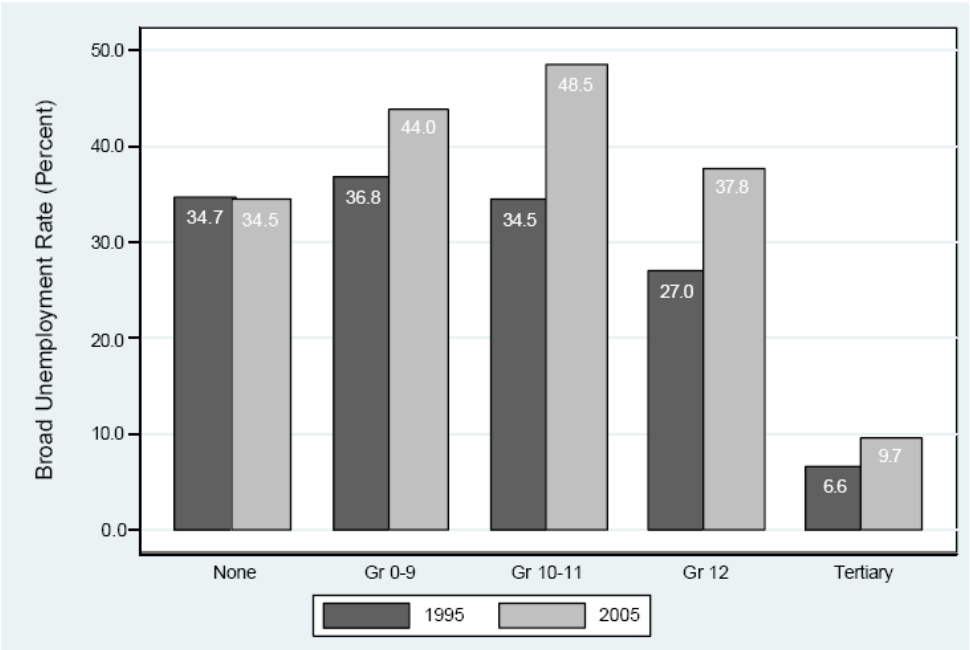
SECTION 1: GRADUATE UNEMPLOYMENT IN CONTEXT

1.1 Background

As shown in this report, the graduate unemployment rate appears to be rising together with the overall unemployment rate. In fact, graduate unemployment has been growing the fastest of all the education cohorts since 1995. Indications are that this is a result of a mismatch between educational outputs and the type of employment opportunities available (Kraak, 2005, Mlatsheni, 2005, Oosthuizen, 2005).

The labour force is defined as all people aged 15 to 65 years that are willing and able to work. Statistics South Africa uses two definitions of unemployment, namely a strict (official) and broad definition. The strictly unemployed are those people within the economically active population who (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview. The broad or expanded unemployment definition excludes criterion (c). Figure 1 provides an overview of the broad unemployment rates in South Africa categorized by level of education.

Figure 1. Broad Unemployment Rates by Level of Education, 1995 and 2005

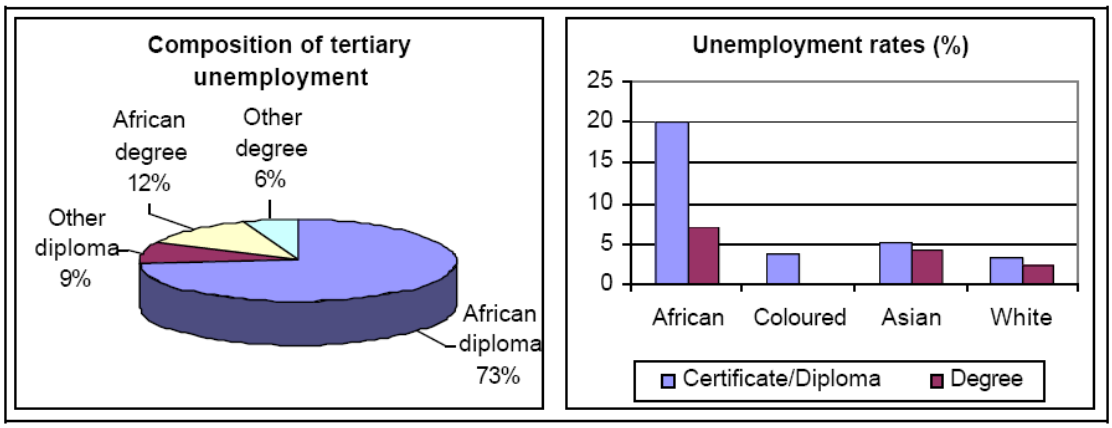


The unemployment problem in South Africa can be described as structural in nature, given that there appears to be an ongoing, almost intractable, mismatch between the types of workers demanded by firms and those supplied in the labour market.

The South African economy, like many other economies following a natural development path, has seen a structural shift in production towards more skill- and capital-intensive industries. Pressure to become technologically more advanced and the effects of increased global competition have further increased the demand for high-skilled workers at the expense of low-skilled workers. It is, therefore, understandable that South African unemployment is most prevalent among poorly educated, low-skilled workers. Within the context of increased demand for skilled workers and reported skills shortages the phenomenon of rising graduate unemployment is worrying.

Unemployment among graduates in itself is insignificant in the context of broader unemployment in South Africa. Almost 71 per cent of the unemployed (broad definition) have a Grade 11 or lower qualification. Matriculants make up 26 per cent of the unemployed. Tertiary qualified individuals, including people with post-matric diplomas, technical qualifications and university degrees make up less than three per cent of the unemployed. This represents approximately 200 000 individuals out of 7.8 million unemployed people in South Africa. However, as an institution that largely offer diplomas the following should be noted: Looking at the composition of tertiary unemployment (see Figure 2) we see that less than one in five of the tertiary unemployed hold degrees. In contrast, 82 per cent of tertiary unemployed persons hold diplomas.

Figure 2 Composition of tertiary unemployment



The majority of these individuals are African. The right hand side panel of the figure shows that the actual unemployment rate among Africans with diplomas is also significantly higher than that of the other racial groups.

Figure 3 provides a breakdown of tertiary unemployment in 2005 by field of study and type of qualification. Individuals with a diploma or certificate in business, commerce and management studies were the largest contributing category, accounting for 24.9 per cent of tertiary unemployment. They are followed by individuals with a diploma/certificate in physical, mathematical, computer and life sciences, with a 12.9 per cent share. Individuals with either a diploma/certificate in manufacturing, engineering and technology or education, training and development accounted for 10.8 per cent and 9.9 per cent respectively of total tertiary unemployment.

Figure 3 Breakdown of Tertiary Unemployment by Field of Study, 2000-2005

Field of Study	*Share (Per cent)*					
	2000	*2001*	*2002*	*2003*	*2004*	*2005*
Business, Commerce and Management Studies	30.5	26.9	28.2	27.6	28.2	28.1
Education, Training and Development	25.6	26.5	23.2	19.0	21.1	14.1
Physical, Mathematical, Computer & Life Sciences	11.3	15.1	10.5	14.4	9.8	16.5
Manufacturing, Engineering and Technology	8.6	9.2	12.4	13.7	10.8	11.6
Health Sciences and Social Services	5.8	3.4	5.7	5.5	8.3	9.7
Human and Social Studies	2.7	3.8	6.8	4.4	4.9	4.9
Other/Unspecified	15.5	15.1	13.1	15.4	16.9	15.2
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

Source: Own calculations, LFS 2000(2), LFS 2001(2), LFS 2002(2), LFS 2003(2), LFS 2004(2), LFS 2005(2) (Statistics South Africa).

While labour demand for students with qualifications in social sciences and humanities are "*less acute*" (Koen, 2003: 17) enrolments in these fields of study remain high. Moleke (2005) found that university graduates with qualifications in fields with a more professional focus, such as medical sciences and engineering, found employment faster than graduates with a more general degree. In the more general study fields, such as humanities and arts, which do not "*directly prepare graduates for a profession*", graduates Graduate Unemployment In South Africa took longer to find jobs than graduates in economic and management sciences and natural sciences (Moleke, 2005: 40). In 2000 the government's *National Plan for Higher Education* has set the target of a 30:30:40 split in enrolment between science/ engineering, technology/business/commerce and humanities/social sciences to be reached within a five to ten year period in order to meet the labour market needs more effectively (Kraak, 2005). This ratio was 26:24:50 for

technikons and universities combined, with technikons at 35:31:34 and universities at 21:20:58. Figure 4 provides a further breakdown of unemployment trends by qualification type and field of study.

Table 4: Breakdown of Tertiary Unemployment by Type and Field of Study, 2005

Field of Study	*Diploma/ Certificate*	*Degree*	*Total*
Business, Commerce and Management Studies	24.9	3.1	28.1
Physical, Mathematical, Computer and Life Sciences	12.9	3.6	16.5
Education, Training and Development	9.9	4.1	14.1
Manufacturing, Engineering and Technology	10.8	0.8	11.6
Health Sciences and Social Services	8.8	0.9	9.7
Human and Social Studies	4.4	0.5	4.9
Law, Military Science and Security	2.4	1.9	4.3
Communication Studies and Language	3.4	0.4	3.8
Agriculture and Nature Conservation	1.2	2.2	3.4
Other/Unspecified	3.2	0.4	3.7
Total	*82.0*	*18.0*	*100.0*

Source: Own calculations, LFS 2005(2) (Statistics South Africa).

1.2 Skills Scarcities

The issue of skills shortages and constraints was identified by many firms as somewhat of a predicament. While most of the firms adhere to the notion of a 'pipeline strategy' whereby firms focus their recruitment on young entry-level candidates who are then trained to become future managers, this strategy appears to be failing in many instances.

Many firms have lost skills in the last decade due to emigration, while poaching by competitors is widespread due to general shortages of managers and more experienced workers. As a result recruitment continues to focus heavily on attracting skills at a premium. This raises the issue of identifying scarce skills. In particular, three 'types' of scarce skills can be identified; the first two can be seen as skills shortages, while the third is more correctly defined as a skills deficit:

- There is a shortage of artisans and other technically trained workers, such as electricians, technicians, mechanics etc. Engineers and scientists also list high on the list of scarce skills. These shortages are especially a concern in the manufacturing sectors.

- There is a shortage of middle- and senior managers. This skills shortage exists within all industry types, e.g. mine managers or shaft managers in the mining industry, foremen and managing engineers in the manufacturing industry and general business managers in the services industry.
- Management skills, it seems, are so problematic that poaching is endemic across industries.
- As far as entry-level positions are concerned, the constraint is not necessarily the quantity of graduates, but rather the quality of these graduates. The problem therefore relates to a skills deficit (in terms of quality) rather than a skills shortage (in terms of numbers).

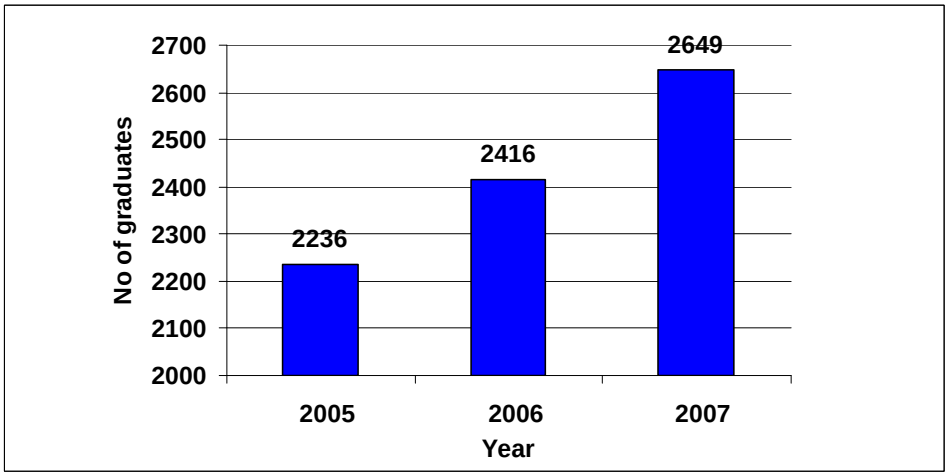
The above skills shortages together with unemployment trends raise critical questions about how students make decisions about what to study, and whether they receive any assistance or guidance in making such decisions.

SECTION 2 INSTITUTIONAL SUMMARY OF FINDINGS

2.1 Graduates

A summary of the number of graduates over the last three years are reflected below:

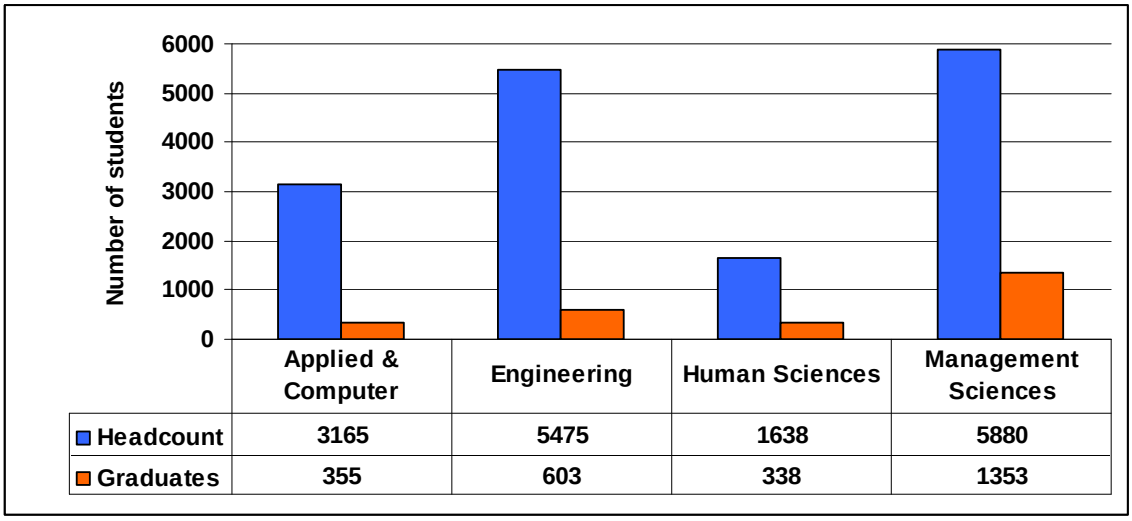
Figure 1 Number of graduates over the last three years



In Figure 2, the graduates are reflected per faculty. Although 36% of the students are from the Faculty of Management Sciences, the majority (51%) of the graduates were from this faculty. Engineering has the second largest number of students (34%), but the proportion of graduates from the Faculty of Engineering is 23%. The Faculty of Applied and Sciences who is hosting 20% of the students, represents 10 % of the graduates. The Faculty of Human Sciences hosts 10% of the students and 13% of the graduates. Also see

Tables 1A-1E in this report for a more detailed breakdown of student numbers and other departmental performance indicators.

Figure 2 Graduates per faculty



	Applied & Computer	Engineering	Human Sciences	Management Sciences
Headcount	3165	5475	1638	5880
Graduates	355	603	338	1353

2.2 Performance indicators

A Performance Indicator is a measure - usually in quantitative form, of an aspect of an activity of a HE institution. The measure may be ordinal, cardinal, absolute or comparative. What distinguishes a performance indicator from another indicator is that the former is used as an assessment of goal-attainment.

From the data available on ITS and through the graduate survey, The Institutional Planning Unit has identified a set of performance indicators to measure the attainment of the following two strategic goals:

- providing quality teaching; and
- achieving national benchmarks.

The following performance indicators are used in Table 1:

1. Number of students in the programme (Headcount).
2. Full time Equivalent (FTE) of students in a programme.
3. Weighted FTE's per progamme (W FTE). Subjects (not whole qualifications) are classified per CESM category. CESM categories are used as a differentiator in the funding framework to, thus modules in high funding CESM categories, generate more income per student. Teaching input subsidy is based on Weighted FTE's. The Teaching grid below indicates the CESM distribution on the funding grid.

Weighting factors for teaching inputs by funding group and course level:				
Funding group	**Undergraduate & equivalent**	**Honours & equivalent**	**Masters & equivalent**	**Doctoral & equivalent**
1	1.0	2.0	3.0	4.0
2	1.5	3.0	4.5	6.0
3	2.5	5.0	7.5	10.0
4	3.5	7.0	10.5	14.0

4. Number of graduates per programme.
5. Graduation rate (Benchmarks are indicated below).
6. Ratio FTE to Headcount (Benchmarks are indicated below).
7. Percentage of graduates employed (quality indicator).
8. Percentage of students that indicated their studies prepared them adequately for the world of work (quality indicator).

Enrolment and graduation benchmarks as set by the Department of Education (DoE, 2007):

Student enrolment targets	**National**	**VUT**
Ratio FTE to Headcount	68.6%	74%
Success rate	77%	74%

Contact Programmes: Graduates/diplomates as % of Head Count enrolments	**National**	**VUT**
Graduates: Undergraduate: up to 3 years	22.5%	18%
BTech	28%	25%
Postgraduate: up to Masters	54%	26%

Table 1A VUT – Performance Indicators

	HC	FTE	W FTE	Graduates	Grad Rate	HC/ FTE	% Employed	Prepared
VUT – Overall summary	**16158**	**11810**	**24341**	**2649**	**16.4%**	**73%**	**42%**	**77%**

Table 1B Faculty of Applied and Computer Sciences – Performance Indicators[1]

QUALIFICATION	HC	FTE	W FTE	Graduates	Grad Rate	HC/ FTE	% Employed	Prepared
FACULTY OF APPLIED AND COMPUTER SCIENCES	**3149**	**2480**	**5927**	**352**	**11%**	**79%**	**65%**	**83%**
N DIP: AGRICULTURAL MANAGEMENT	24	24	56	4	17%	98%		
N DIP: ANAL. CHEM.	569	394	1283	52	9%	69%	72%	92%
N DIP: BIOMEDICAL TECHNOLOGY	231	212	700	34	15%	92%	91%	100%
N DIP: BIOTECHNOLOGY	356	246	817	31	9%	69%	33%	50%
N DIP: INFO. TECH.	960	825	1227	96	10%	86%	70%	77%
N DIP: NON-DESTRUCTIVE TESTING	170	100	271	2	1%	59%	100%	100%
N DIP: OFFICE MANAGEMENT AND TECHNOLOGY	588	553	771	78	13%	94%	45%	67%
B TECH: CHEMISTRY	90	44	304	21	23%	49%	67%	100%
B TECH: INFORMATION TECHNOLOGY: BUSINESS	29	15	49	2	7%	52%	100%	70%
B TECH: OFFICE MANAGEMENT AND TECHNOLOGY	19	8	19	5	26%	41%	100%	0%
B. TECH: BIOMEDICAL TECHNOLOGY	17	7	53	4	24%	43%	100%	100%
B. TECH: BIOTECHNOLOGY	37	25	173	3	8%	61%	67%	100%
B. TECH: COMM. NURSING	16	11	41	12	75%	67%	100%	100%
H. DIP: COMM. NURSING	9	5	11	7	78%	54%		
M TECH.: BIOTECHNOLOGY	12	4	39	1	8%	27%		
M TECH.: CHEMISTRY	5	2	16			27%		
M TECH: INFORMATION TECHNOLOGY	8	3	11			27%		
D TECH ENG: INFORMATION SYSTEMS	5	4	30			77%		
D TECH.: CHEMISTRY	4	3	56			77%		

[1] For some BTech programmes and almost all M and D programmes, graduate numbers were too low to give significant feedback from the graduate survey. In those cases, results are omitted.

Due to incorrect registration of students and the phasing out of programmes, a few of the programmes have graduate rates higher than 100%.

Graduation rates and Headcount to FTE ratios below benchmarks are highlighted.

Many of the BTech programmes have a low headcount to FTE ratio as they are offered part-time.

Weighted FTE's are used to determine teaching input subsidy (approx 56%. of total subsidy).
No. of graduates are used to determine teaching output funding (approx 14% of total subsidy).
M and D graduates, together with accredited publications contribute to research outputs (12% of subsidy).

Table 1C Faculty of Engineering – Performance Indicators

QUALIFICATION	HC	FTE	W FTE	Graduates	Grad Rate	HC/ FTE	% Employed	Prepared
FACULTY OF ENGINEERING	**5491**	**3113**	**8033**	**606**	**11%**	**57%**	**74%**	**89%**
COMPUTER SYSTEMS: N. DIP.	523	325	637	47	9%	62%	93%	86%
N DIP: BUILDING	85	57	129	33	39%	67%	23%	100%
N DIP: CHEM. ENG.	621	338	892	52	8%	54%	100%	79%
N DIP: ELEC. ENG.	1757	933	2328	168	10%	54%	69%	91%
N DIP: ENG. CIV.	443	248	557	48	11%	56%	87%	92%
N DIP: ENG.: MECH.	592	378	907	39	7%	64%	82%	83%
N DIP: IND. ENG.	327	220	486	21	6%	67%	75%	89%
N DIP: OPERATIONS MAN.	123	139	203	30	24%	113%	9%	100%
N DIP: PROD. MAN.	3	10	14	6	200%	17%	50%	0%
N. DIP.: METAL. ENG.	286	163	409	24	8%	57%		80%
B TECH: COMPUTER SYSTEMS	16	7	15	3	19%	43%	0%	
B TECH: ENG.: CHEMICAL	135	41	196	16	12%	31%	100%	86%
B TECH: ENG.: CIVIL	95	35	171	13	14%	37%	100%	100%
B TECH: ENG.: ELECTRICAL	257	101	498	59	23%	39%	94%	94%
B TECH: ENG.: IND.	41	23	117	17	41%	57%		100%
B TECH: ENG.: MECH.	94	40	209	13	14%	43%	0%	100%
B TECH: ENG.: METAL.	22	11	66	4	18%	48%	100%	100%
B TECH: OPERATIONS MANAGEMENT	33	18	55	11	33%	54%	100%	100%
M TECH ENG: CHEMICAL ENGINEERING	4	1	9			27%		
M TECH ENG: CIVIL	1	0.3	2			27%		
M TECH ENG: INDUSTRIAL	6	2	14			27%		
M TECH ENG: MECHANICAL	3	1	5			27%		
M. TECH.: METALLURGICAL ENG.	1	0	2			27%		
MAGISTER TECH.: ENG. ELECTRICAL	16	4	42	2	13%	27%		
D. TECH. CHEMICAL ENG.	1	1	10			77%		
D. TECH.: CIVIL ENGINEERING	1	1	10			77%		
D. TECH.: MECHANICAL ENG.	2	2	20			77%		
DOCTOR TECH.: ENG.: ELECTRICAL	3	2	30			77%		

Table 1D Faculty of Human Sciences – Performance Indicators

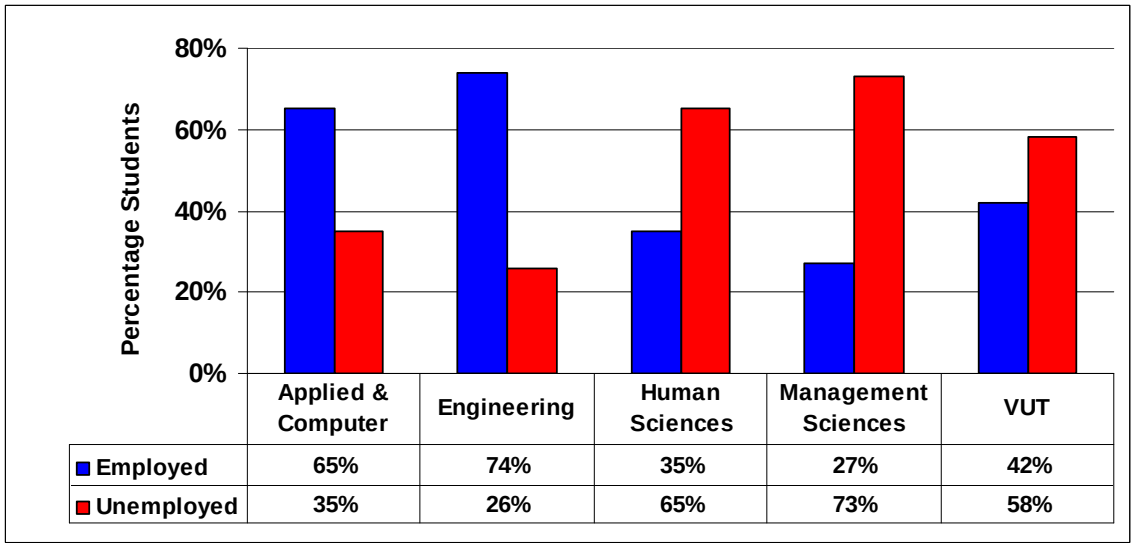
QUALIFICATION	HC	FTE	W FTE	Graduates	Grad Rate	HC/ FTE	% Employed	Prepared
FACULTY OF HUMAN SCIENCES	**1638**	**1272**	**2523**	**338**	**21%**	**78%**	**35%**	**84%**
N CERT: DRESSM. AND PATT. CONST.				1	Being phased out			
N DIP. CLOTHING	46	34	77	14	30%	74%		100%
N DIP. FASHION	56	61	145	10	18%	109%		0%
N DIP.: POLICING	130	108	127	44	34%	79%	5%	100%
N DIP: FINE ART	69	66	217	7	10%	96%	50%	100%
N DIP: FOOD AND BEVERAGE MANAGEMENT	1	0	1	3	300%	8%		
N DIP: GRAPH. DES.	72	52	127	5	7%	72%	100%	75%
N DIP: HOSPITALITY MANAGEMENT	180	116	228	41	23%	64%	27%	86%
N DIP: PHOTOGRAPHY	38	25	104	3	8%	67%		
N DIP: SAFE. MAN.	323	276	368	24	7%	86%	45%	80%
N DIP: TOURISM MANAGEMENT	394	309	448	83	21%	78%	35%	100%
N. DIP.: PUBLIC REL. MANAGEMENT	183	147	222	20	11%	80%	60%	50%
ADVANCED CERTIFICATE IN EDUCATION	26	20	43	23	88%	76%		
B TECH: CERAMICS				2	Being phased out			
B TECH: EDUCATION: POST SCHOOL	1	0	0	1	100%	10%		
B TECH: FASHION	13	12	63	6	46%	94%	40%	
B TECH: FINE ART	2	2	14	5	250%	100%		
B TECH: FOOD AND BEVERAGE MANAGEMENT	9	6	27	4	44%	62%	100%	
B TECH: FOOD SERVICE MANAGEMENT	1	1	5			80%		
B TECH: GRAPHIC DESIGN	4	4	22	6	150%	100%		
B TECH: PHOTOGRAPHY	6	3	46	4	67%	55%		
B TECH: PUBLIC RELATIONS MANAGEMENT	12	8	27	8	67%	65%	67%	
B TECH: TOURISM MANAGEMENT	15	8	38	9	60%	56%	57%	
M TECH: FASHION	3	1	7	6	200%	27%		
M TECH: FINE ART	6	2	16			27%		
M TECH: FOOD AND BEVERAGE MANAGEMENT	6	2	12			27%		
M TECH: FOOD SERVICE MANAGEMENT	12	3	21	2	17%	27%		
M TECH: GRAPHIC DESIGN	2	1	5	1	50%	27%		
M TECH: PHOTOGRAPHY	4	1	13	1	25%	27%		
M TECH: PUBLIC RELATIONS	5	1	7			27%		
M TECH: TOURISM & HOSPITALITY MANAGEMENT	3	1	4			27%		
MASTERS IN EDUCATION	5	1	7			27%		
POST GRADUATE CERTIFICATE IN EDUCATION	3	0	0	5	167%	13%		
D TECH: FINE ART	3	2	42			77%		
D TECH: FOOD SERVICE MANAGEMENT	5	4	40			77%		

Table 1E Faculty of Management Sciences – Performance Indicators

QUALIFICATION	HC	FTE	W FTE	Graduates	Grad Rate	HC/ FTE	% Employed	Prepared
FACULTY OF MANAGEMENT SCIENCES	**5880**	**4966**	**7857**	**1353**	**23%**	**84%**	**27%**	**57%**
N D: SPORT ADMINISTRATION AND MARKETING	1	0	0	1	100%	19%		
N D: SPORT MANAGEMENT	143	144	249	22	15%	101%	27%	100%
N DIP: COMMERCIAL ADMIN.				3	**Being phased out**			
N DIP: COST AND MAN. ACC.	216	138	213	133	62%	59%		50%
N DIP: FIN. INF. SYSTEMS	80	48	70	42	53%	60%	14%	100%
N DIP: HUMAN RESOURCES MANAGEMENT	707	669	949	194	27%	95%	17%	46%
N DIP: INT. AUDITING	485	353	549	258	53%	71%	32%	60%
N DIP: LABOUR RELATIONS	370	338	457	74	20%	91%	21%	17%
N DIP: LOGISTICS	579	570	821	127	22%	98%	18%	40%
N DIP: MANAGEMENT OF TRAINING	258	238	343	31	12%	92%	12%	0%
N DIP: MARKETING	745	663	941	132	18%	89%	40%	67%
N DIP: PURCHASING MANAGEMENT				2	**Being phased out**			
N DIP: RETAIL BUSINESS MANAGEMENT	177	166	241	38	21%	96%	24%	100%
N DIP: SMALL BUSINESS MANAGEMENT	17	9	12	8	47%	51%	50%	0%
N H CERT: ACCOUNTANCY	1433	1238	1919			86%		
NHC: FIN. INF. SYSTEMS	101	83	143			82%		
B TECH: BUSINESS ADMINISTRATION	58	21	60	9	16%	41%	67%	100%
B TECH: COST AND MANAGEMENT ACCOUNTING	67	29	89	35	52%	41%	63%	40%
B TECH: FINANCIAL INFORMATION SYSTEMS	9	4	14	1	11%	48%		
B TECH: HUMAN RESOURCES DEVELOPMENT	42	39	76	47	112%	94%	100%	67%
B TECH: HUMAN RESOURCES MANAGEMENT	121	87	221	78	64%	72%	48%	62%
B TECH: INTERNAL AUDITING	64	40	117	35	55%	63%	50%	50%
B TECH: LABOUR RELATIONS MANAGEMENT	34	21	54	13	38%	60%		
B TECH: LOGISTICS	41	26	77	25	61%	62%	50%	67%
B TECH: MARKETING	48	31	93	44	92%	65%	29%	50%
M TECH.: BUSINESS ADMINISTRATION	15	7	31	1	7%	48%		
M TECH.: COST & MANAGEMENT ACC.	7	2	10			27%		
M TECH.: LOGISTICS	2	1	3			27%		
M TECH.: MARKETING	7	2	10			27%		
M TECH: HUMAN RESOURCES MANAGEMENT	43	12	60			27%		
M TECH: LABOUR RELATIONS MANAGEMENT	2	1	1			27%		
M TECH: OFFICE MANAGEMENT AND TECHNOLOGY	3	1	4			27%		
D TECH.: BUSINESS	4	3	24			77%		
D TECH.: MARKETING	1	1	6			77%		

2.3 Employment

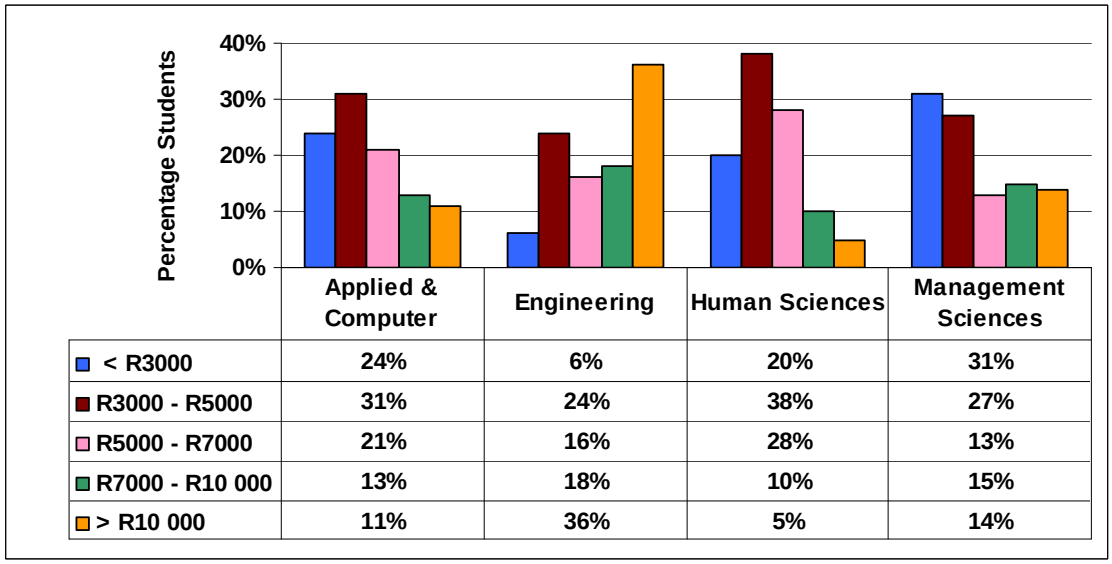
Students were asked whether they are employed. Both contract and permanent appointments are used to classify a student as "employed". Students, who indicated that they are furthering their studies on a full-time basis, were excluded from this analysis. From the graph it is clear the majority of engineering students (74%) are employed. The lowest employment rate is in the faculty of Management Sciences (27%).



	Applied & Computer	Engineering	Human Sciences	Management Sciences	VUT
Employed	65%	74%	35%	27%	42%
Unemployed	35%	26%	65%	73%	58%

2.4 Average salary earned by employed students

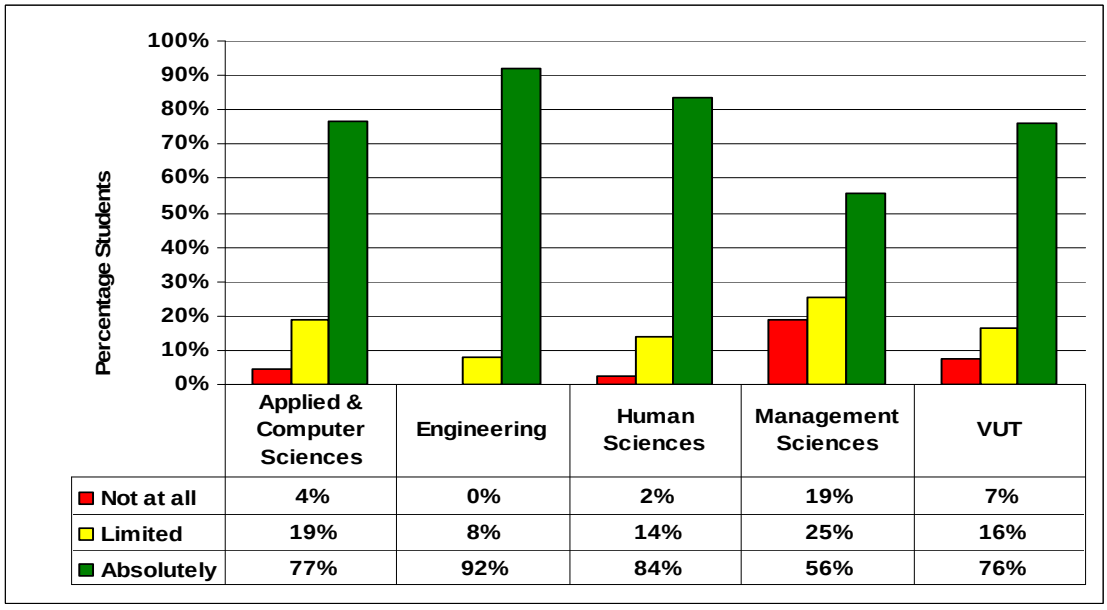
Students were given a range of values and had to indicate their salary before deductions.



	Applied & Computer	Engineering	Human Sciences	Management Sciences
< R3000	24%	6%	20%	31%
R3000 - R5000	31%	24%	38%	27%
R5000 - R7000	21%	16%	28%	13%
R7000 - R10 000	13%	18%	10%	15%
> R10 000	11%	36%	5%	14%

2.5 Work related

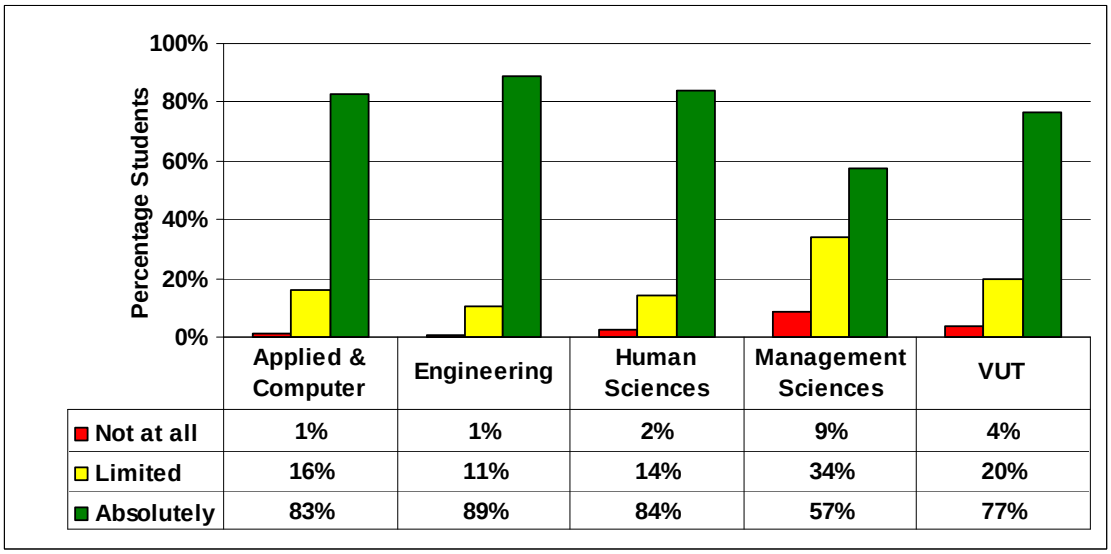
Respondents were requested to indicate to which extent the skills and methods required in the workplace are related to what they did as part of their studies at VUT.



	Applied & Computer Sciences	Engineering	Human Sciences	Management Sciences	VUT
Not at all	4%	0%	2%	19%	7%
Limited	19%	8%	14%	25%	16%
Absolutely	77%	92%	84%	56%	76%

2.6 Prepared

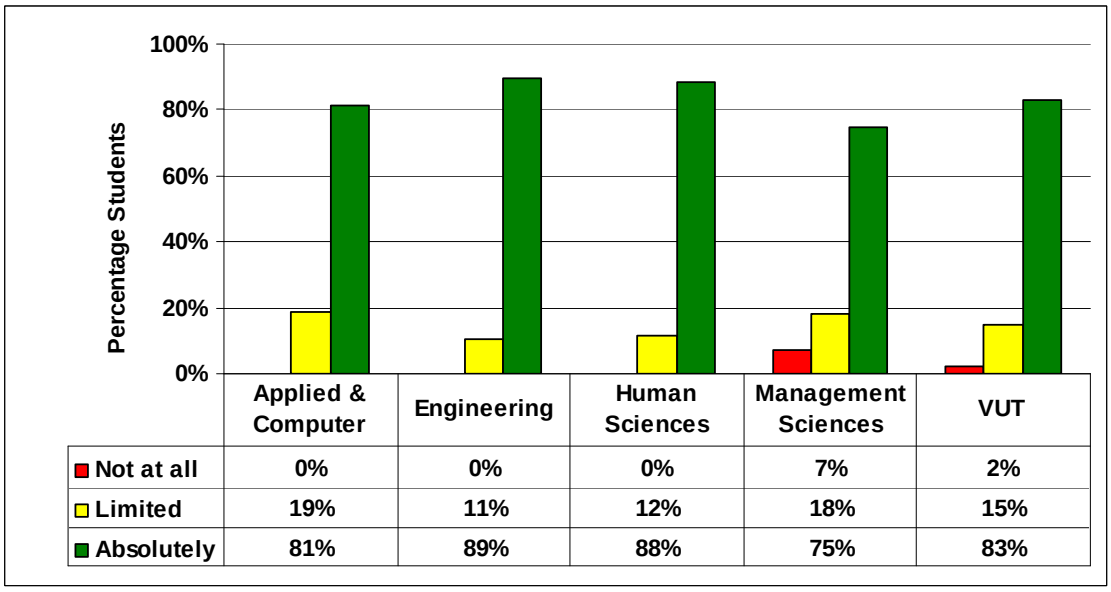
Respondents were asked whether they feel their studies provide them with adequate skills, knowledge and techniques to prepare them for is expected of them in the world of work?



	Applied & Computer	Engineering	Human Sciences	Management Sciences	VUT
Not at all	1%	1%	2%	9%	4%
Limited	16%	11%	14%	34%	20%
Absolutely	83%	89%	84%	57%	77%

2.7 Satisfied

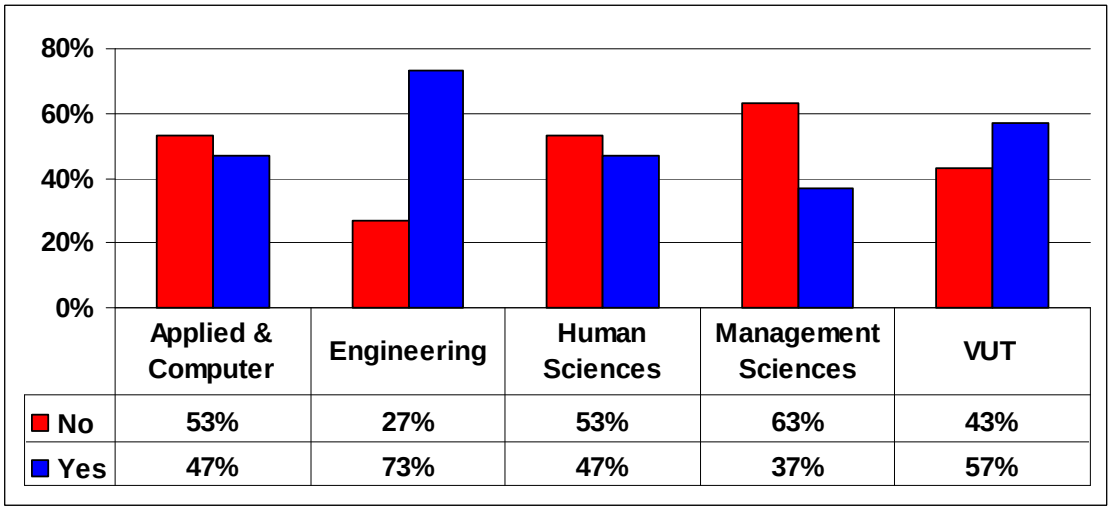
Respondents were asked whether they were satisfied with the overall experience of studying at the VUT?



	Applied & Computer	Engineering	Human Sciences	Management Sciences	VUT
Not at all	0%	0%	0%	7%	2%
Limited	19%	11%	12%	18%	15%
Absolutely	81%	89%	88%	75%	83%

2.8 Work integrated learning

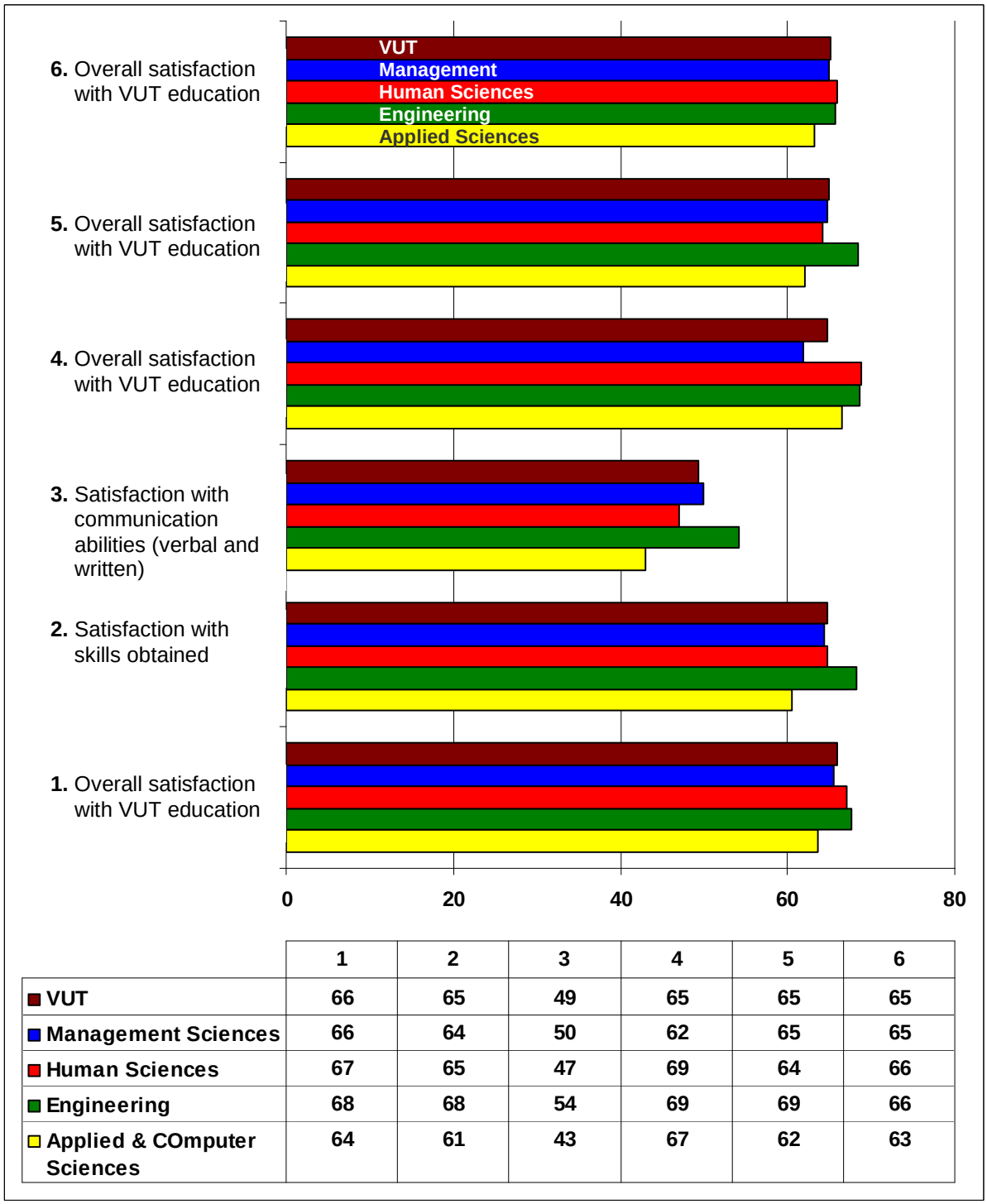
Students were asked to indicate whether WIL was part of their curricula and if so – did it assist them in finding employment. Engineering was the only faculty where the majority of students indicated that WIL assisted them in finding employment.



	Applied & Computer	Engineering	Human Sciences	Management Sciences	VUT
No	53%	27%	53%	63%	43%
Yes	47%	73%	47%	37%	57%

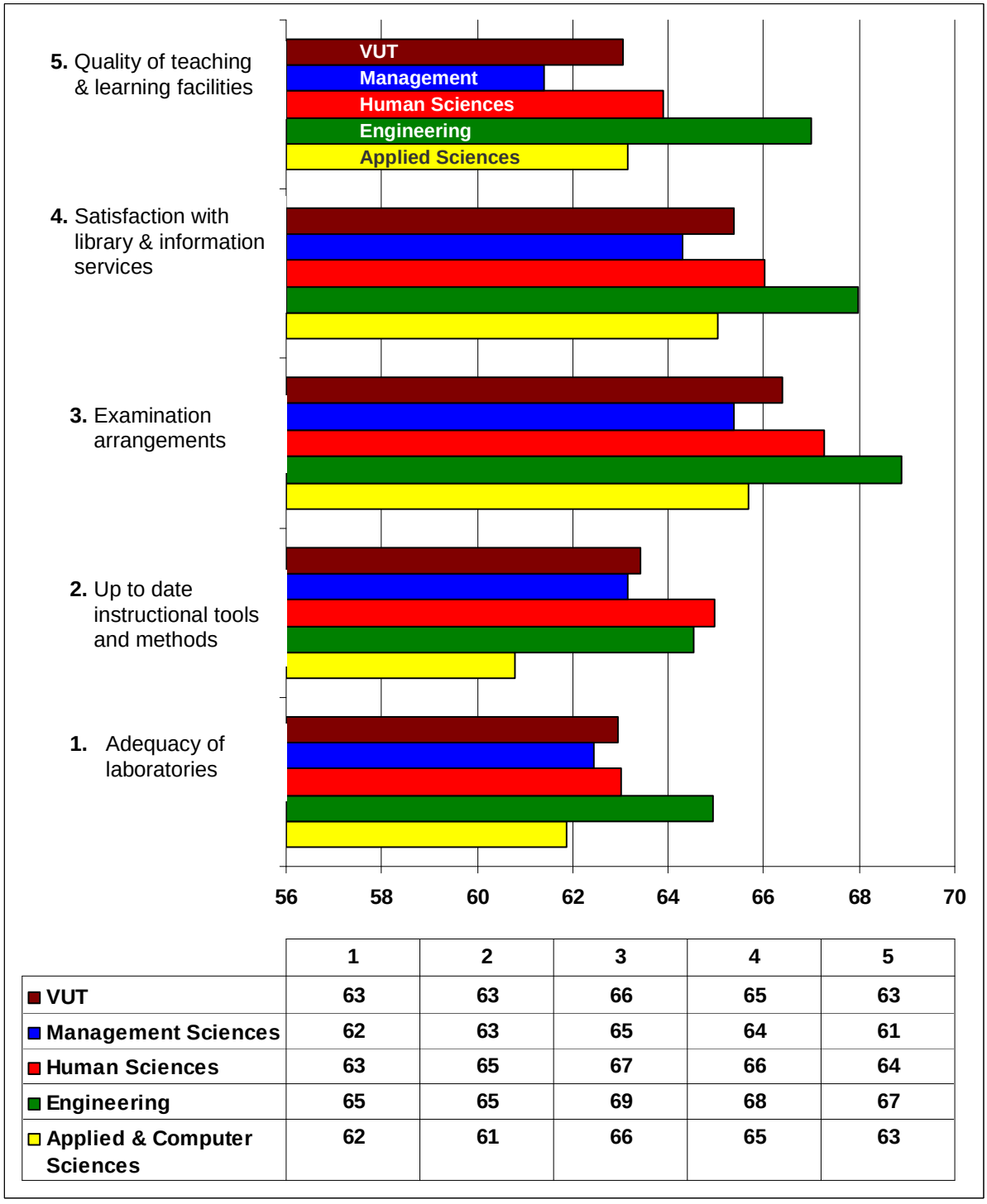
3. STUDENT SATISFACTION SURVEY

3.1 Curriculum responsiveness



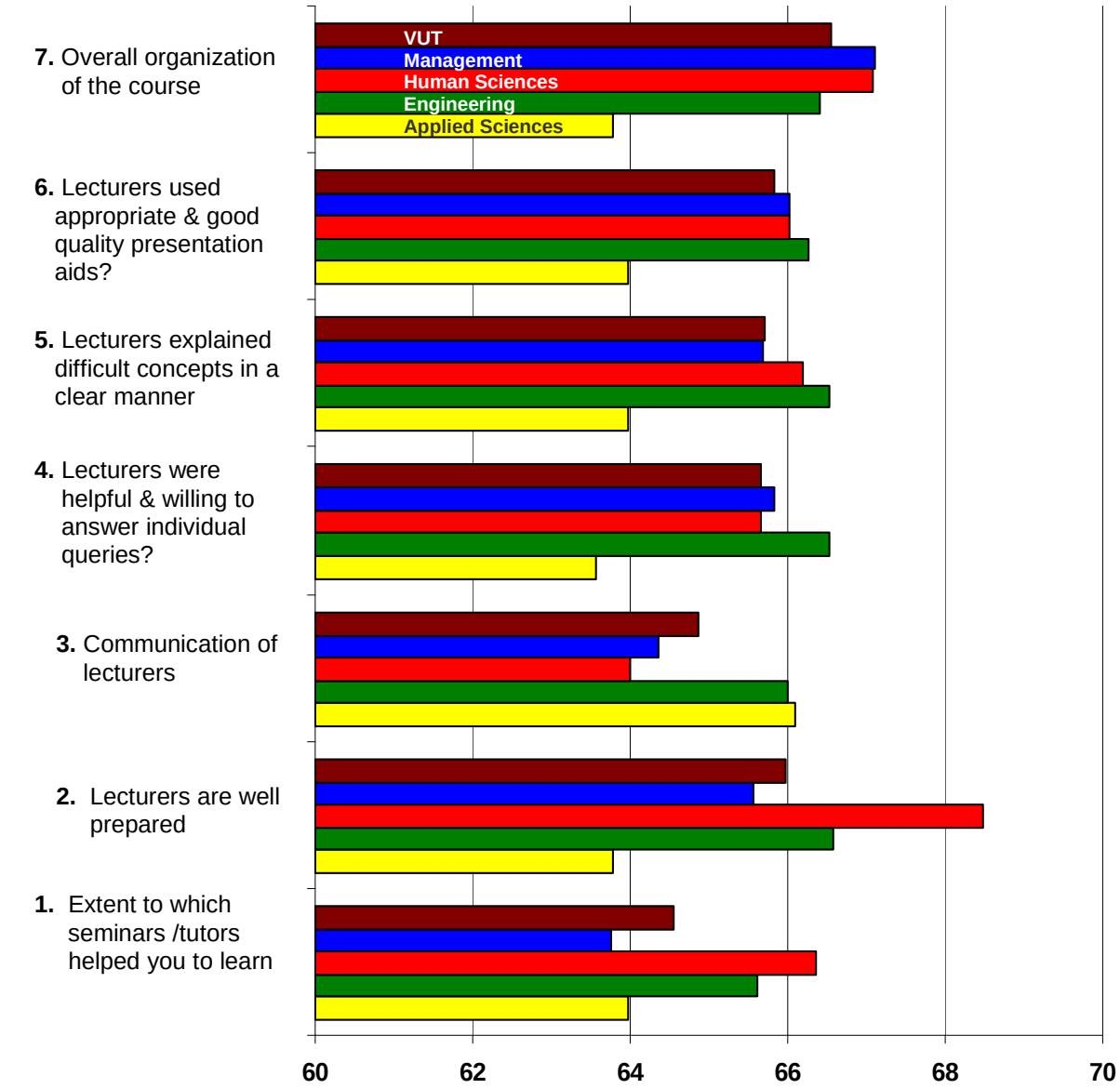
	1	2	3	4	5	6
VUT	66	65	49	65	65	65
Management Sciences	66	64	50	62	65	65
Human Sciences	67	65	47	69	64	66
Engineering	68	68	54	69	69	66
Applied & COmputer Sciences	64	61	43	67	62	63

3.2 Quality of facilities



	1	2	3	4	5
VUT	63	63	66	65	63
Management Sciences	62	63	65	64	61
Human Sciences	63	65	67	66	64
Engineering	65	65	69	68	67
Applied & Computer Sciences	62	61	66	65	63

3.3 Quality of instruction



	1	2	3	4	5	6	7
VUT	65	66	65	66	66	66	67
Management Sciences	64	66	64	66	66	66	67
Human Sciences	66	68	64	66	66	66	67
Engineering	66	67	66	67	67	66	66
Applied & Computer Sciences	64	64	66	64	64	64	64

4 CONCLUSION

While the graduate unemployment problem in itself is not substantial in relative terms, it is a concern as it goes against expectations and points at serious problems in the South African education system.

Some key lessons and policy considerations include the following:

- *Quality of institutions and academic courses*: A proper investigation into the quality of the curricula (including staff, course design, methods of instruction and assessment) is needed. Good education starts with properly trained lecturers who are able to continuously modernize and adapt their courses so that they remain relevant. Poor funding and poor management are often to blame.
- *Training versus education*: Research is needed to identify the needs in the labour market with regards to technical (diplomas and certificates) and nontechnical (degrees) training. In the traditional context, Universities are traditionally institutions where students receive more general education of a highly academic nature, while FET colleges and UoTs focus more directly on the technical training of students, which should adequately prepare them for the job market. These lines seem to have become blurred, with universities trying to introduce more job-relevant training, while UoTs are enrolling more students in general fields of study such as arts and humanities. It needs to be debated whether this situation is ideal.
- *Career guidance and support*: One of the issues that came to the fore in the graduate tracer studies is a lack of assistance to students in selecting the right courses and fields of study. The question is how should the signals from the labour market be passed on to students? At present it appears as if students are more likely to enroll in areas with poor employment prospects. The problem also perhaps relates to the fact that many students fail to meet the entry requirements of many of the more scientific fields of study. Therefore, despite the fact that job prospects of students in scientific fields of study are better, poor secondary schooling and incompetence in areas such as mathematics prevents school leavers to follow these types of courses. This highlights the need for Foundation programmes.
- *Work experience*: The labour market appears to have a preference for more experienced, older employees. There is a need to look at options for ensuring that graduates acquire relevant work experience prior to them formally entering the labour market, perhaps in the form of vocational training, holiday work experience etc.

5. BREAKDOWN OF RESULTS PER QUALIFICATION

5.1 Employment

APPLIED & COMPUTER SCIENCES	EMPLOYED	
QUALIFICATION	**NO**	**YES**
B TECH: CHEMISTRY	33%	67%
B TECH: OFFICE MANAGEMENT AND TECHNOLOGY	0%	100%
B. TECH: BIOMEDICAL TECHNOLOGY	0%	100%
B. TECH: BIOTECHNOLOGY	33%	67%
B. TECH: COMM. NURSING	0%	100%
N DIP: ANAL. CHEM.	28%	72%
N DIP: BIOMEDICAL TECHNOLOGY	9%	91%
N DIP: BIOTECHNOLOGY	67%	33%
N DIP: INFO. TECH.	30%	70%
N DIP: NON-DEST. TEST.	0%	100%
N DIP: OFFICE MANAGEMENT AND TECHNOLOGY	55%	45%
APPLIED & COMPUTER SCIENCES AVERAGE	**35%**	**65%**

ENGINEERING	EMPLOYED	
QUALIFICATION	**NO**	**YES**
B TECH: ENG.: CHEMICAL	0%	100%
B TECH: ENG.: CIVIL	0%	100%
B TECH: ENG.: ELECTRICAL	6%	94%
B TECH: ENG.: IND.	33%	67%
B TECH: ENG.: METAL.	0%	100%
B TECH: OPERATIONS MANAGEMENT	0%	100%
COMPUTER SYSTEMS: N. DIP.	7%	93%
N DIP: BUILDING	77%	23%
N DIP: CHEM. ENG.	0%	100%
N DIP: ELEC. ENG.	31%	69%
N DIP: ENG. CIV.	13%	87%
N DIP: ENG.: MECH.	18%	82%
N DIP: IND. ENG.	25%	75%
N DIP: OPERATIONS MAN.	91%	9%
N DIP: PROD. MAN.	50%	50%
N. DIP.: METAL. ENG.	29%	71%
POWER ENGINEERING	0%	100%
ENGINEERING AVERAGE	**26%**	**74%**

FACULTY OF HUMAN SCIENCES

QUALIFICATION	EMPLOYED	
	NO	YES
B TECH: FASHION	60%	40%
B TECH: FOOD AND BEVERAGE MANAGEMENT	0%	100%
B TECH: PUBLIC RELATIONS MANAGEMENT	33%	67%
B TECH: TOURISM MANAGEMENT	43%	57%
M TECH: FASHION	100%	0%
M TECH: GRAPHIC DESIGN	0%	100%
N DIP. CLOTHING	63%	38%
N DIP. FASHION	88%	13%
N DIP.: POLICING	95%	5%
N DIP: FINE ART	50%	50%
N DIP: FOOD AND BEVERAGE MANAGEMENT	100%	0%
N DIP: GRAPH. DES.	0%	100%
N DIP: HOSPITALITY MANAGEMENT	73%	27%
N DIP: SAFE. MAN.	55%	45%
N DIP: TOURISM MANAGEMENT	65%	35%
N. DIP.: PUBLIC REL. MANAGEMENT	40%	60%
FACULTY OF HUMAN SCIENCES AVERAGE	**65%**	**35%**

MANAGEMENT SCIENCES	EMPLOYED	
QUALIFICATION	**NO**	**YES**
B TECH: BUSINESS ADMINISTRATION	33%	67%
B TECH: COST AND MANAGEMENT ACCOUNTING	38%	63%
B TECH: HUMAN RESOURCES DEVELOPMENT	0%	100%
B TECH: HUMAN RESOURCES MANAGEMENT	52%	48%
B TECH: INTERNAL AUDITING	50%	50%
B TECH: LABOUR RELATIONS MANAGEMENT	100%	0%
B TECH: LOGISTICS	50%	50%
B TECH: MARKETING	71%	29%
N D: SPORT MANAGEMENT	73%	27%
N DIP: COMMERCIAL ADMIN.	0%	100%
N DIP: COST AND MAN. ACC.	75%	25%
N DIP: FIN. INF. SYSTEMS	86%	14%
N DIP: HUMAN RESOURCES MANAGEMENT	83%	17%
N DIP: INT. AUDIT.	63%	38%
N DIP: INT. AUDITING	74%	26%

MANAGEMENT SCIENCES	EMPLOYED	
QUALIFICATION	**NO**	**YES**
N DIP: LABOUR RELATIONS	79%	21%
N DIP: LOGISTICS	82%	18%
N DIP: MANAGEMENT OF TRAINING	88%	12%
N DIP: MARKETING	60%	40%
N DIP: PURCHASING MANAGEMENT	50%	50%
N DIP: RETAIL BUSINESS MANAGEMENT	76%	24%
N DIP: SMALL BUSINESS MANAGEMENT	50%	50%
MANAGEMENT SCIENCES AVERAGE	**73%**	**27%**

5.2 EXTENT TO WHICH STUDIES IS WORK RELATED

FACULTY OF APPLIED & COMPUTER SCIENCES - WORK RELATED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: CHEMISTRY	0%	0%	100%
N DIP: ANAL. CHEM.	0%	17%	83%
N DIP: BIOMEDICAL TECHNOLOGY	0%	10%	90%
N DIP: BIOTECHNOLOGY	50%	0%	50%
N DIP: INFO. TECH.	4%	19%	77%
N DIP: NON-DEST. TEST.	0%	0%	100%
N DIP: OFFICE MANAGEMENT AND TECHNOLOGY	11%	44%	44%
B. TECH: BIOTECHNOLOGY	0%	50%	50%
B. TECH: COMM. NURSING	0%	0%	100%
M TECH.: BIOTECHNOLOGY	0%	0%	100%
B. TECH: BIOMEDICAL TECHNOLOGY	0%	0%	100%
B TECH: OFFICE MANAGEMENT AND TECHNOLOGY	0%	0%	100%
Grand Total	**4%**	**19%**	**77%**

FACULTY OF ENGINEERING - WORK RELATED

QUALIFICATION	Limited	Absolutely
COMPUTER SYSTEMS: N. DIP.	0%	100%
N DIP: BUILDING	0%	100%
N DIP: CHEM. ENG.	21%	79%
N DIP: ELEC. ENG.	3%	97%
N DIP: ENG. CIV.	15%	85%
N DIP: ENG.: MECH.	25%	75%
N DIP: IND. ENG.	0%	100%

QUALIFICATION	Limited	Absolutely
N DIP: OPERATIONS MAN.	100%	0%
N DIP: PROD. MAN.	0%	100%
N. DIP.: METAL. ENG.	0%	100%
POWER ENGINEERING	0%	100%
B TECH: ENG.: CIVIL	0%	100%
B TECH: ENG.: IND.	0%	100%
B TECH: OPERATIONS MANAGEMENT	0%	100%
B TECH: ENG.: ELECTRICAL	6%	94%
B TECH: ENG.: METAL.	0%	100%
B TECH: ENG.: CHEMICAL	0%	100%
Grand Total	**8%**	**92%**

FACULTY OF HUMAN SCIENCES - WORK RELATED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: FASHION	0%	0%	100%
N DIP. CLOTHING	0%	50%	50%
N DIP. FASHION	0%	100%	0%
N DIP.: POLICING	0%	0%	100%
N DIP: FINE ART	0%	0%	100%
N DIP: GRAPH. DES.	0%	25%	75%
N DIP: HOSPITALITY MANAGEMENT	0%	14%	86%
N DIP: SAFE. MAN.	0%	20%	80%
N DIP: TOURISM MANAGEMENT	0%	0%	100%
N. DIP.: PUBLIC REL. MANAGEMENT	0%	0%	100%
B TECH: PUBLIC RELATIONS MANAGEMENT	0%	0%	100%
B TECH: TOURISM MANAGEMENT	25%	25%	50%
B TECH: FOOD AND BEVERAGE MANAGEMENT	0%	0%	100%
M TECH: GRAPHIC DESIGN	0%	0%	100%
Grand Total	**2%**	**14%**	**84%**

FACULTY OF MANAGEMENT SCIENCES - WORK RELATED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: BUSINESS ADMINISTRATION	0%	0%	100%
B TECH: COST AND MANAGEMENT ACCOUNTING	0%	20%	80%
B TECH: HUMAN RESOURCES MANAGEMENT	31%	8%	62%
B TECH: MARKETING	0%	100%	0%
N D: SPORT MANAGEMENT	0%	33%	67%
N DIP: COMMERCIAL ADMIN.	0%	0%	100%
N DIP: COST AND MAN. ACC.	13%	38%	50%

QUALIFICATION	Not at all	Limited	Absolutely
N DIP: FIN. INF. SYSTEMS	0%	0%	100%
N DIP: HUMAN RESOURCES MANAGEMENT	23%	31%	46%
N DIP: INT. AUDIT.	33%	33%	33%
N DIP: INT. AUDITING	15%	19%	65%
N DIP: LABOUR RELATIONS	67%	17%	17%
N DIP: LOGISTICS	0%	60%	40%
N DIP: MANAGEMENT OF TRAINING	50%	50%	0%
N DIP: MARKETING	13%	33%	53%
N DIP: PURCHASING MANAGEMENT	100%	0%	0%
N DIP: RETAIL BUSINESS MANAGEMENT	0%	0%	100%
N DIP: SMALL BUSINESS MANAGEMENT	0%	100%	0%
B TECH: INTERNAL AUDITING	50%	0%	50%
B TECH: LOGISTICS	33%	0%	67%
B TECH: HUMAN RESOURCES DEVELOPMENT	0%	0%	100%
Grand Total	**19%**	**25%**	**56%**

5.3 EXTENT TO WHICH STUDIES ADEQUATELY PREPARED THEM FOR THE WORLD OF WORK

FACULTY OF APPLIED & COMPUTER SCIENCES - PREPARED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: CHEMISTRY	0%	0%	100%
N DIP: ANAL. CHEM.	0%	8%	92%
N DIP: BIOMEDICAL TECHNOLOGY	0%	0%	100%
N DIP: BIOTECHNOLOGY	50%	0%	50%
N DIP: INFO. TECH.	0%	23%	77%
N DIP: NON-DEST. TEST.	0%	0%	100%
N DIP: OFFICE MANAGEMENT AND TECHNOLOGY	0%	33%	67%
B. TECH: BIOTECHNOLOGY	0%	0%	100%
B. TECH: COMM. NURSING	0%	0%	100%
M TECH.: BIOTECHNOLOGY	0%	0%	100%
B. TECH: BIOMEDICAL TECHNOLOGY	0%	0%	100%
B TECH: OFFICE MANAGEMENT AND TECHNOLOGY	0%	100%	0%
Average for Applied and Computer Sciences	**1%**	**16%**	**83%**

FACULTY OF ENGINEERING - PREPARED

QUALIFICATION	Not at all	Limited	Absolutely
COMPUTER SYSTEMS: N. DIP.	0%	14%	86%
N DIP: BUILDING	0%	0%	100%
N DIP: CHEM. ENG.	7%	14%	79%
N DIP: ELEC. ENG.	0%	9%	91%
N DIP: ENG. CIV.	0%	8%	92%
N DIP: ENG.: MECH.	0%	17%	83%
N DIP: IND. ENG.	0%	11%	89%
N DIP: OPERATIONS MAN.	0%	100%	0%
N DIP: PROD. MAN.	0%	0%	100%
N. DIP.: METAL. ENG.	0%	20%	80%
POWER ENGINEERING	0%	0%	100%
B TECH: ENG.: CIVIL	0%	0%	100%
B TECH: ENG.: IND.	0%	0%	100%
B TECH: OPERATIONS MANAGEMENT	0%	0%	100%
B TECH: ENG.: ELECTRICAL	0%	6%	94%
B TECH: ENG.: METAL.	0%	0%	100%
B TECH: ENG.: CHEMICAL	0%	14%	86%
Average for Engineering	**1%**	**11%**	**89%**

FACULTY OF HUMAN SCIENCES - PREPARED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: FASHION	0%	0%	100%
N DIP. CLOTHING	0%	0%	100%
N DIP. FASHION	100%	0%	0%
N DIP.: POLICING	0%	0%	100%
N DIP: FINE ART	0%	0%	100%
N DIP: GRAPH. DES.	0%	25%	75%
N DIP: HOSPITALITY MANAGEMENT	0%	14%	86%
N DIP: SAFE. MAN.	0%	20%	80%
N DIP: TOURISM MANAGEMENT	0%	0%	100%
N. DIP.: PUBLIC REL. MANAGEMENT	0%	50%	50%
B TECH: PUBLIC RELATIONS MANAGEMENT	0%	0%	100%
B TECH: TOURISM MANAGEMENT	0%	50%	50%
B TECH: FOOD AND BEVERAGE MANAGEMENT	0%	0%	100%
M TECH: GRAPHIC DESIGN	0%	0%	100%
Average for Human Sciences	**2%**	**14%**	**84%**

FACULTY OF MANAGEMENT SCIENCES - PREPARED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: BUSINESS ADMINISTRATION	0%	0%	100%
B TECH: COST AND MANAGEMENT ACCOUNTING	0%	60%	40%
B TECH: HUMAN RESOURCES MANAGEMENT	15%	23%	62%
B TECH: MARKETING	0%	50%	50%
N D: SPORT MANAGEMENT	0%	0%	100%
N DIP: COMMERCIAL ADMIN.	0%	0%	100%
N DIP: COST AND MAN. ACC.	0%	50%	50%
N DIP: FIN. INF. SYSTEMS	0%	0%	100%
N DIP: HUMAN RESOURCES MANAGEMENT	0%	54%	46%
N DIP: INT. AUDIT.	0%	67%	33%
N DIP: INT. AUDITING	12%	19%	69%
N DIP: LABOUR RELATIONS	17%	67%	17%
N DIP: LOGISTICS	10%	50%	40%
N DIP: MANAGEMENT OF TRAINING	50%	50%	0%
N DIP: MARKETING	0%	33%	67%
N DIP: PURCHASING MANAGEMENT	100%	0%	0%
N DIP: RETAIL BUSINESS MANAGEMENT	0%	0%	100%
N DIP: SMALL BUSINESS MANAGEMENT	0%	100%	0%
B TECH: INTERNAL AUDITING	50%	0%	50%
B TECH: LOGISTICS	0%	33%	67%
B TECH: HUMAN RESOURCES DEVELOPMENT	0%	33%	67%
Average for Management Sciences	**9%**	**34%**	**57%**

5.4 SATISFACTION WITH STUDENT EXPERIENCE AT VUT

FACULTY OF APPLIED & COMPUTER SCIENCES - SATISFIED

QUALIFICATION	Limited	Absolutely
B TECH: CHEMISTRY	33%	67%
N DIP: ANAL. CHEM.	0%	100%
N DIP: BIOMEDICAL TECHNOLOGY	30%	70%
N DIP: BIOTECHNOLOGY	0%	100%
N DIP: INFO. TECH.	31%	69%
N DIP: NON-DEST. TEST.	0%	100%
N DIP: OFFICE MANAGEMENT AND TECHNOLOGY	11%	89%
B. TECH: BIOTECHNOLOGY	0%	100%
B. TECH: COMM. NURSING	0%	100%
B. TECH: BIOMEDICAL TECHNOLOGY	0%	100%
B TECH: OFFICE MANAGEMENT AND TECHNOLOGY	0%	100%
Average for Applied and Computer Sciences	**19%**	**81%**

FACULTY OF ENGINEERING - SATISFIED

QUALIFICATION	Limited	Absolutely
COMPUTER SYSTEMS: N. DIP.	21%	79%
N DIP: BUILDING	0%	100%
N DIP: CHEM. ENG.	21%	79%
N DIP: ELEC. ENG.	9%	91%
N DIP: ENG. CIV.	0%	100%
N DIP: ENG.: MECH.	8%	92%
N DIP: IND. ENG.	11%	89%
N DIP: OPERATIONS MAN.	100%	0%
N DIP: PROD. MAN.	0%	100%
N. DIP.: METAL. ENG.	20%	80%
POWER ENGINEERING	0%	100%
B TECH: ENG.: CIVIL	0%	100%
B TECH: ENG.: IND.	0%	100%
B TECH: OPERATIONS MANAGEMENT	0%	100%
B TECH: ENG.: ELECTRICAL	6%	94%
B TECH: ENG.: METAL.	0%	100%
B TECH: ENG.: CHEMICAL	14%	86%
Average for Engineering	**11%**	**89%**

FACULTY OF HUMAN SCIENCES - SATISFIED

QUALIFICATION	Limited	Absolutely
B TECH: FASHION	0%	100%
N DIP. CLOTHING	0%	100%
N DIP. FASHION	0%	100%
N DIP.: POLICING	0%	100%
N DIP: FINE ART	0%	100%
N DIP: GRAPH. DES.	25%	75%
N DIP: HOSPITALITY MANAGEMENT	14%	86%
N DIP: SAFE. MAN.	20%	80%
N DIP: TOURISM MANAGEMENT	11%	89%
N. DIP.: PUBLIC REL. MANAGEMENT	0%	100%
B TECH: PUBLIC RELATIONS MANAGEMENT	0%	100%
B TECH: TOURISM MANAGEMENT	25%	75%
B TECH: FOOD AND BEVERAGE MANAGEMENT	0%	100%
M TECH: GRAPHIC DESIGN	0%	100%
Average for Human Sciences	**12%**	**88%**

FACULTY OF MANAGEMENT SCIENCES - SATISFIED

QUALIFICATION	Not at all	Limited	Absolutely
B TECH: BUSINESS ADMINISTRATION	0%	0%	100%
B TECH: COST AND MANAGEMENT ACCOUNTING	0%	0%	100%
B TECH: HUMAN RESOURCES MANAGEMENT	0%	8%	92%
B TECH: MARKETING	0%	0%	100%
N D: SPORT MANAGEMENT	0%	0%	100%
N DIP: COMMERCIAL ADMIN.	0%	0%	100%
N DIP: COST AND MAN. ACC.	0%	38%	63%
N DIP: FIN. INF. SYSTEMS	0%	0%	100%
N DIP: HUMAN RESOURCES MANAGEMENT	8%	23%	69%
N DIP: INT. AUDIT.	33%	33%	33%
N DIP: INT. AUDITING	12%	15%	73%
N DIP: LABOUR RELATIONS	0%	33%	67%
N DIP: LOGISTICS	0%	20%	80%
N DIP: MANAGEMENT OF TRAINING	0%	50%	50%
N DIP: MARKETING	7%	13%	80%
N DIP: PURCHASING MANAGEMENT	0%	0%	100%
N DIP: RETAIL BUSINESS MANAGEMENT	0%	0%	100%
N DIP: SMALL BUSINESS MANAGEMENT	0%	100%	0%
B TECH: INTERNAL AUDITING	50%	25%	25%
B TECH: LOGISTICS	0%	67%	33%
B TECH: HUMAN RESOURCES DEVELOPMENT	33%	0%	67%
Average for Management Sciences	**7%**	**18%**	**75%**

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