# THE GUIDE TO A QS PROFESSION

**STUART GRAHAM** 

#### THE GUIDE TO A QS PROFESSION

By: Stuart Graham

Submitted in fulfilment of part of the requirements for the Degree of B.Sc (Hons)(Quantity Surveying)

In the faculty of Engineering, built Environment and Information

Technology

University of Pretoria

Study Leader: Mr J H Cruywagen

Submission Date: October 2010

#### **Declaration by student**

I, the undersigned, hereby confirm that the attached treaties in my own work and that any sources are adequately acknowledged in the text and listed in the bibliography

Signature of acceptance and confirmation by student

#### <u>Abstract</u>

Title of treatise: The guide to a quantity surveying profession

Name of author: Mr. S M Graham

Name of study leader: Mr. J H Cruywagen

Institution: Faculty of Engineering, Built Environment

and Information Technology

Date: October 2010

Many scholars leave school not knowing what they should do with their lives and when given a career line to follow they don't know what it is, how to get there and what it involves.

The objective of this treatise is to assist scholars and students with a guideline on what the career line of quantity surveying is about. It diversifies from what it is about, where one could study, what alternative job opportunities one could follow and what type of salary one could earn in different part of South Africa and the world.

#### **TABLE OF CONTENTS**

Chapter 1:	INTRODUCTION
Ollabici I.	

1.1	Introduction	1
1.2	Main Problem	1
1.3	Statement of sub-problems	1
1.3.	.1 What is a Quantity Surveyor?	2
1.3.	.2 What is required from a high school scholar in order for	
	them to study at the different universities and colleges in	
	South Africa and which institutions would be of greater	
	recommendation?	2
1.3.	.3 What are the different career sectors within which a	
	quantity surveyor can perform?	2
1.3.	.4 What are the dynamics that can be encountered when	
	faced with salary one can earn as a quantity surveyor and	
	what types of lifestyles can one experience from that?	3
1.4	Delimitations	3
1.5	Definitions of terms	4
1.6	Assumptions	5
1.7	Importance of the study	5
1.8	Research Methodology	6
Chap	oter 2: WHAT IS QUANTITY SURVEYING?	
2.1	Introduction	7
2.2	Definition of a quantity surveyor	7
2.3	History of the quantity surveyor	8
2.4	Working Environment	9
2.5	What type of work does a quantity surveyor perform?	9
2.5.	.1 Estimating and cost advice	10
2.5.	.2 Cost Planning	11
2.5.	.3 Property Development advice	11

2.5	.4	Advice	on	tendering	procedures	and	contractual	
		arranger	nent .					11
2.5	5.5	Activities	durir	ng the cours	e of a project.			12
2.5	6.6	A list of a	activit	ies which fo	llow the stages	of a p	roject	12
2.6	Di	ifferent bo	odies,	councils an	d acts that pro	tect the	quantity	
	SU	ırveyor						13
2.6	5.1	SACQSF	·					13
2.6	5.2	ASAQS.						14
2.6	5.3	Other bo	dies.					15
2.6	5.4	Quantity	Surve	eying Profes	ssional Act			15
2.7	E	xample of	a Jol	o description	າ			15
2.8	Sı	ummary						17
2.9	Te	esting of h	nypoth	nesis				17
		•						
2.9	.2	Hypothe	sis					17
2.9	.3	Acceptar	nce/D	ismissal of r	my hypothesis			18
					NIVERSITIES DURSE IN SOL			n study
	QL	JANTITY	SUR	VEYING CO		JTH AF	RICA.	
THE	<b>Q</b> L In	JANTITY troduction	<b>SUR'</b>	VEYING CC	URSE IN SOL	JTH AF	RICA.	19
<b>THE</b> 3.1	QL In Ca	JANTITY troductionape Penir	SUR n nsula	VEYING CO	OURSE IN SOL	JTH AF	RICA.	19 19
3.1 3.2	In Ca	JANTITY troductior ape Penir entral Uni	SUR' n nsula iversit	University o	f Technology.	JTH AF	RICA.	19 19 23
3.1 3.2 3.3	In Ca Ca Da	JANTITY troduction ape Penir entral Uni urban Un	SURY n nsula iversit iversit	University on the control of the con	f Technology .	JTH AF	RICA.	19 19 23
3.1 3.2 3.3 3.4	In Ca Ca Di M	JANTITY troduction ape Penir entral Uni urban Uni angosuth	SURY n nsula iversit iversit u Uni	University on the control of the con	f Technology .	JTH AF	RICA.	192327
3.1 3.2 3.3 3.4 3.5	In Ca Ca Da Ma	JANTITY troduction ape Penir entral Uni urban Uni angosuth elson Mai	SURY n nsula iversit iversit u Uni ndela	University on the street of Technology	f Technology	JTH AF	RICA.	19232730
3.1 3.2 3.3 3.4 3.5 3.6	In Ca Ca Di M. Ne Ts	JANTITY troduction ape Penir entral Uni urban Uni angosuth elson Mai	SURY n nsula iversit iversit u Uni ndela Inivers	University of Technology	f Technology	JTH AF	RICA.	1923273030
3.1 3.2 3.3 3.4 3.5 3.6 3.7	In Ca Di M. Na Ts	troduction ape Penir entral Unicarban Unicarban Maishwane Unicarban Maishwane Unicarban Maishwane University of the North Peniversity of the North	SURY n nsula iversit iversit u Uni ndela Iniversit of Cap	University of y of Technology	f Technology	JTH AF	RICA	
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8	In Ca Ca Di M. Na Ts Ui	troduction ape Penir entral Unicangosuth elson Marshwane Unicangosuth elson Marshwane University on the elson Marshwane University of the elso	SURY n nsula iversit iversit u Unit ndela Iniversit of Cap	University of y of Technology	f Technology	JTH AF	RICA	1927303942
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 3.10 3.11	In Ca Ca Di M. Na Ui Ui Ui Ui Ui	troduction ape Penir entral Uniterban Uniterban Marshwane Uniterban Marshwane University on the control of the	SURY numbers iversite iversite iversite u Unit andela Iniversite of Cap of Fre of Kwa of Pre	University of y of Technology	f Technology	JTH AF	RICA	
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 3.10 3.11 3.12	In Ca Ca Di M. Na Ui Ui Ui Ui Ui Ui	troduction ape Penir entral Uniterban Uniterban Marshwane Uniterban Marshwane University on iversity on iversity on iversity on iversity on iversity of the iv	SURY  number  nsula  iversit  iversit  u Unit  ndela  Iniversit  of Cap  of Fre  of Kwa  of Pre  of With	University of y of Technology	f Technology	JTH AF	RICA	

3.14	Johannesburg University of Technology	69
3.15	Summary	73
3.16	Testing of hypothesis	77
3.16	.1 Synthesis:	77
3.16	.2 Hypothesis	77
3.16	.3 Acceptance/Dismissal of my hypothesis	78
Chapt	er 4: WHAT ARE THE DIFFERENT CAREER SECTORS WITHIN	I
WHIC	H A QUANTITY SURVEYOR CAN PERFORM?	
4.1	Introduction	79
4.2	Building Industry	79
4.2.1	Project Management	79
4.2.2	2 Arbitration	81
4.2.3	3 Cost Engineering	83
	Property Sector	
4.3.1	Facilities Management	85
4.3.2	2 Maintenance Management	87
4.3.3	Property and Retail Management	88
4.3.4	Project Consulting	90
4.3.5	Property Development	92
4.3.6	Real Estate Sale/Consulting	94
4.4	Engineering Sector	95
4.4.1	Civil/Process Engineering Estimating	95
4.4.2	2 Value Engineering	97
4.5	Financial & Insurance Sector	98
4.5.1	General Asset Management	98
4.5.2	Pinancial management	99
4.5.3	B Loss Consultant/Adjuster	101
4.6	Testing of hypothesis	102
4.6.1	Synthesis:	102
4.6.2	P Hypothesis	102
4.6.3	Acceptance/Dismissal of my hypothesis	103

Chapter 5: WHAT ARE THE DYNAMICS THAT CAN BE ENCOUNTERED
WHEN FACED WITH THE SALARY ONE CAN EARN AS A QUANTITY
SURVEYOR AND WHAT TYPES OF LIFESTYLE CAN ONE EXPERIENCE
FROM THAT?

5.1	Intro	oduction	104
5.2	Are	as of the country	104
5.3	Uni	versity vs. Technikon	107
5.4	Yea	ars of experience	109
5.5	The	working environment overseas	111
5.6	Tes	ting of Hypothesis	116
5.6	.1 S	Synthesis:	116
5.6	.2 F	Hypothesis	116
5.6	.3 A	Acceptance/Dismissal of my hypothesis	117
Chap	oter (	6: SUMMARY, CONCLUSION & RECOMMENDATION	
6.1	Bac	ckground	118
6.2	Sta	tement of main problem	118
6.3	The	research	119
6.4	Cor	nclusion & Summary	121
6.5	Red	commendation	123
List	of ta	bles:	
Table	1:	Cape Peninsula University of Technology point allocation	
		for matric marks	20
Table	2:	Cape Peninsula University of Technology course subjects	
		for years one to four	21
Table	3:	Cape Peninsula University of Technology National	
		Diploma Statistics	22
Table	4:	Cape Peninsula University of Technology B Tech (QS)	
		Statistics	23

Table 5:	Central University of Technology point allocation for matric	
	marks prior to 2008	24
Table 6:	Central University of Technology point allocation for a	
	National Senior Certificate	24
Table 7:	Central University of Technology course subjects for years	
	one to four	25
Table 8:	Durban University of Technology point allocation for matric	
	marks	27
Table 9:	Durban University of Technology course subjects for years	
	one to four	28
Table 10:	Nelson Mandela Metropolitan University point allocation	
	for matric marks prior to 2008	31
Table 11:	Nelson Mandela Metropolitan University point allocation	
	for a National Senior Certificate	31
Table 12:	Nelson Mandela Metropolitan University course subjects	
	for years one to four in BSc (Construction Economics) and	
	BSc Hons QS degree	34
Table 13:	Nelson Mandela Metropolitan University course subjects	
	for years one to four in National Diploma: Building and (B	
	Tech)	35
Table 14:	Nelson Mandela Metropolitan University BSc	
	(Construction Economics) Statistics	37
Table 15:	Nelson Mandela Metropolitan University BSc Hons QS	
	degree Statistics	38
Table 16:	Nelson Mandela Metropolitan University National Diploma	
	(Building) Statistics	38
Table 17:	Nelson Mandela Metropolitan University B Tech (QS)	
	Statistics	39
Table 18:	Tshwane University of Technology point allocation for	
	matric marks	40
Table 19:	Tshwane University of Technology course subjects for	
	years one to four	41
Table 20:	University of Cape Town point allocation for matric marks	
	prior to 2008	43

Table 21:	University of Cape Town point allocation for a National	
	Senior Certificate	43
Table 22:	University of Cape Town course subjects for years one to	
	four	45
Table 23:	University of Free State point allocation for matric marks	
	prior to 2008	48
Table 24:	University of Free State point allocation for a National	
	Senior Certificate	48
Table 25:	University of Free State subjects for years one to four	50
Table 26:	University of KwaZulu Natal allocation for matric marks	
	prior to 2008	53
Table 27:	University of KwaZulu Natal allocation for a National	
	Senior Certificate	53
Table 28:	University of KwaZulu Natal subjects for years one to four	55
Table 29:	University of Pretoria point allocation for matric marks	58
Table 30:	University of Pretoria subjects for years one to five	59
Table 31:	University of Witwatersrand point allocation for matric	
	marks	63
Table 32:	University of Witwatersrand subjects for years one to four	64
Table 33:	Walter Sisulu University allocation for a National Senior	
	Certificate	66
Table 34:	Walter Sisulu University allocation for a National Senior	
	Certificate	68
Table 35:	Walter Sisulu University subjects for years one to two in	
	Building: National Diploma (Extended Program)	68
Table 36:	Johannesburg University of Technology point allocation	
	for matric marks	70
Table 37:	Johannesburg University of Technology subjects for years	
	one to four	71
Table 38:	Summary of all the Universities	75
Table 39:	Evaluation of all the Universities	76
Table 40:	Median R, Current prices of different years of experience	
	in different provinces	104

Table 41: Technikon: Median R, Current prices of different years of	
experience in different provinces	105
Table 42: No formal education: Median R, Current prices of different	
years of experience in different provinces	105
List of figures:	
Figure 1: Time line of the quantity surveyors involvement within a	
typical project	12
Figure 2: Supply and demand	106
Figure 3: Average annual remuneration, by qualification and	
experience, National	108
Figure 4: University Experience/Salary graph	122
Figure 5: Technikon Experience/Salary graph	122
BIBLIOGRAPHY	
Bibliography	124

#### **ANNEXURE**

Annexure A: Alternative career lines

Annexure B: Quantity surveying in foreign countries

#### **Chapter 1: INTRODUCTION**

#### 1.1 Introduction

Many high school students approach working Quantity Surveyors, so as to get an insight to what Quantity Surveying is all about. There are many books and web sites available in the market, which give ample information on what a Quantity Surveyor does and the profession is all about. But we all know that many of these matrics of today don't like reading books, yet, most don't know what they want to study and end up going overseas, or spending their parents' money jumping from course to course trying to find and identify a suitable field of study, that would balance their personal interest along with the lifestyle they want. There is a need for gathering and assembling core essential information, which could give to them an insight into the life of a Quantity Surveyor. An exposure to the possibilities and to assist scholars to make a better and informed decision on what kind of life they want to experience and essential information on how to get them there.

#### 1.2 Main Problem

What, how, when and why about a quantity surveyor as needed by a scholar when making the decisive decision of choosing a career line as a quantity surveyor.

#### **Hypothesis**

The Internet can only show a certain degree of information about a subject and with the assistance of this thesis one will be able to capture all required information about one topic in one book. By the end of your reading one will be able to decide on all the pro's and con's that one will encounter when approaching the line of quantity surveying as a student. As well as a student making a lifetime decision on what line of quantity surveying career one will want to follow.

#### 1.3 Statement of Sub- Problems

1.3.1 Synthesis: What is a Quantity Surveyor?

**Hypothesis** 

As the general public would say "it's the person who counts bricks". That allegation is correct, but to be more accurate in defining what the job entails, a Quantity Surveyor is the financial advisor/accountant

for the built environment.

**1.3.2 Synthesis:** What is required from a high school scholar in order for

them to study at the different universities and colleges in

South Africa and which institutions would be of greater

recommendation?

Hypothesis

There are many Institutions in South Africa where one can master the art of becoming a Quantity Surveyor. The question is, which one would provide for a better structured education? By showing the breakdown of the syllabi of the institutions one will be able to determine for oneself which one would be best suited for their

individual circumstances.

1.3.3 Synthesis: What are the different career sectors within which a

quantity surveyor can perform?

**Hypothesis** 

Quantity Surveying as an occupation, can be performed in many different lines which include:

The building industry

Property sector

• Engineering sector

• The financial and insurance sector

2

With the use of the following headings: general, skills required, overlapping with quantity surveying, qualifications/experience, registration requirements, income ratio and feasible rating, the different lines of works will be subdivided into the suitable information required so anyone can do a comparison between them. Each line of work provides a person with a completely different lifestyle, which one could chose from an early age, as long as they have been informed within sufficient time. At least a person would know what they getting themselves into with the information provided.

1.3.4 Synthesis: What are the dynamics that can be encountered when faced with salary one can earn as a quantity surveyor and what types of lifestyles can one experience from that?

#### **Hypothesis**

Due to financial benefits being the driving force behind employment, it is crucial for one to determine what you would want to eventually achieve one day. With the required information one could also determine the type of lifestyle that they could afford. A person can never be too young to have structure and have a plan in life. The monthly salary can be affected by certain factors, including where you studied, geographical factors and years of experience.

#### 1.4 Delimitations

- Majority of the questions within this thesis will be bound within boundaries of South Africa. Of such questions one would include the different studying institutions, different career lines and definition of a QS.
- However there are job descriptions within which one can see what is required of quantity surveyors to perform their jobs in more developed countries such including: Australia, England, United States of America and Canada.

#### 1.5 Definitions of terms

"ASAQS" – "The Association of Quantity Surveyors (ASAQS) is a body which represents the quantity surveyor as a professional and has the duty to perform the following duties:

Advance and promote the science and practice of quantity surveying and cognate matters. Uphold the dignity of the quantity surveying profession. Watch over, promote and protect the interest of its members. Afford opportunity for the interchange and recording of the body of knowledge and experience of quantity surveying. Promote the high standards of professional competence and integrity." (www.asaqs.co.za, 2010) The institution is only a body by which one has the choice to join, which provide benefits in the form a numerous amount of advantages required by a professional.

"SACQSP" – South African Council for the Quantity Surveying Profession (SACQSP). "Setting and auditing of academic standards for purposes of registration through a process of accreditation of quantity surveying programmes at universities and technikons. They also prescribe a Code of Conduct and Codes of Practice, and enforcing such conduct through an Investigating Committee and a Disciplinary Tribunal" (www.sacqsp.co.za, 2010). The council is a law enforced setup required by the government to ensure that all professional persons within the quantity surveying line withhold their discipline and integrity as a professional. All quantity surveyors have to by law be a member of the council in order for them to practise.

"Bill of Quantities" – Documentation created by the quantity surveyor with which contractors are provided with in order to price for every single item found in the building. Totals are quantified and such total would be used as the contract value with which the contractor should build the building.

"Feasibility study" – A study initiated by the quantity surveyor in the early stages of the project. Such study would determine if the building would be feasible to build and at what return the investor would gain a return.

"Procurement" – It is pre-contract documentation that needs to be adhered to in order for a contractor to qualify for a specific job. Such documentation is largely used on Government projects.

#### 1.6 Assumptions

- All information that has been obtained for this thesis is only relevant to the specific period within which it was written. Alterations can exist in periods following and prior to the period within which the thesis was written.
- Assuming that in the eye of a first year student the working conditions stay the same for the next couple of years and nothing drastic changes like for example the scope of quantity surveying work changes.

#### 1.7 Importance of the study

Before one enters into a field of study one needs to know one hundred percent sure that what ever it is that they are entering into they need to now that they will be practising that field for the rest of their lives. Many people get to the end of their course to realise that what they studied isn't actually what they thought it would be when they got to the working environment. If only one could go back in time and find out a bit more about the line of studies and working conditions before they entered.

By reading this thesis one would be able to know exactly what they would be getting themselves into and what to expect later on in the working environment.

One can also use this thesis to find out what type of career line they would want to follow and then use that to structure life goals and know what exactly to do to in order to get there.

#### 1.8 Research Methodology

Various forms of data collection will be conducted by means of The Internet, books (Electronic and hard copy), emails and interviews.

**Factual based data** will be captured with the use of The Internet, e-books, hard copy books and the emailing of information from the required institution.

- The required data will be collected from different web pages including the ASAQS, Wikipedia and SACQSP.
- The use of Journals and Databases provided by the University will be used to gain as much relevant info as possible.
- Info obtained from all the different Universities will be access with the aid of emails and their dedicated web sites.

The use of data that has already been captured and placed within an accessible location will be used to build up the required information to deliver the final product.

#### Chapter 2: WHAT IS QUANTITY SURVEYING?

#### 2.1 Introduction

Quantity surveying is a broad topic, which has a vast line in which it diversifies into many different career lines, employment working environments, protective bodies, etc. The question actually is "What exactly does a quantity surveyor do and what make his/her work worth while?"

#### 2.2 Definition of a quantity surveyor

As stated on the ASAQS web site (<a href="http://www.asaqs.co.za/public/history.html">http://www.asaqs.co.za/public/history.html</a>, 2010): A quantity surveyor is a financial consultant within the construction industry who provides a service within the lines of costing and contractual arrangements.

They work with a group of building consultants, which includes the architect, a variety of engineers, the project manager and the principal agent (often the architect). As the professional team they have to "safe guard" the client's interests to the best of their ability.

With in the laws of the country, it states that "The title quantity surveyor was reserved under the Quantity Surveyors' Act of 1970 for exclusive use by those who had obtained the necessary qualifications and experience prescribed under the Act. In terms of it, such persons must register with the South African Council for Quantity Surveyors before they may offer their service as consultants to the public". (http://www.asaqs.co.za/public/history.html, 2010))

The regulations of a quantity surveyor stated by the ASAQS on their web site (http://www.asaqs.co.za/public/history.html, 2010): "A quantity surveyor has to comply with a strict code of professional conduct, which includes responsibility to their employers or clients and to their profession. They need to have full regard to the public interest, conducting themselves so as to uphold the dignity and reputation of the

profession and discharging their duties to their employers and clients in an efficient and competent manner with complete fidelity and without undue delay".

Prospects' is a job search web site which gives their perspective of what a Quantity surveyor is (Livermore, 2008) "They run all management costs relating to building projects from the initial calculations to the final figures. They seek to minimise the costs of a project and enhance value for money, while still achieving the required standards and quality. Many of these are specified by statutory building regulations, which the surveyor needs to understand and adhere to".

#### 2.3 History of quantity surveying

As described on the ASAQS web site (http://www.asaqs.co.za/public/history.html, 2010):

It all started in England at the start of the nineteenth century. The term "quantity surveying" was first used by a firm called Henry Cooper & Sons in 1859.

In the early days a quantity surveyor worked for the master tradesman. The work involved measuring the work after completion and submitting partial final account to the building owner. This caused for an increase of building owners to have work executed under contracts and to call for tenders before the work commenced. The procedure then developed where the building owners designed buildings through an architect and the specification and drawings were distributed to selected builders who would then send in their tenders for the total project price. This was a better procedure, as one would submit tenders for the total price rather than a collection of prices from master tradesman.

Each builder needed to prepare a bill, which caused problems as all bills received back of the same project were of different content and measures. They realised that it would be cheaper to employ a single surveyor to determine the quantities for all tenderers. They would share the costs and have the benefit of receiving the same bill of quantities

(List of items that make up a building, incl. bricks, labour, etc) this allowed for them to all tender on the same basis. It was realised by the owner that it would be to his/her advantage to appoint and pay the fees of the quantity surveyor.

#### 2.4 Working Environment

The quantity surveyor has different working environments where he/she may find work. The more common jobs that one might include:

- Working on site One will find themselves in dirty and muddy conditions depending on the weather. One would also have to move around to where ever the work lies, which would mean relocating to a different site every couple of months, depending on the size of the project. With the larger income received in such a location it would make it work while to sacrifice a clean cosy office.
- Working within an office One has the stability of knowing that you
  go to a central office everyday. You are not affected by the weather
  except when you go out to a planned site inspection every one or two
  weeks. As one benefits from a good working environment one cannot
  really complain about the lower salary earned, compared to what gets
  earned onsite.

Obviously everyone has a different perspective on what working conditions they would prefer and what psychological benefit they would like to gain from the job.

#### 2.5 What type of work does a quantity surveyor perform?

A list of work activities found on a website (Livermore, 2008):

- Different areas of the building industry need their costs managed, and these areas include works like: residential development, sport stadiums, roads and brides, schools, hospitals, offices and factories.
- Determine the costs for repair and maintenance projects.
- Preparing a feasibility study to obtain the clients required return and budget.

- Preparing a cost estimate for natural cause claims like for example a fire damage claim.
- At regular intervals provide risk and value management and cost control.
- Determining a suitable procurement strategy and help to enforce it.
- Preparing tender and contract documentation.
- Preparing the bills of quantity for a project.
- Providing a suitable recommendation on what subcontractors to use.
- Provide advice on contractual claims.
- Preparing cashflows, which will help to predict when a project will complete and determine if the project will be able to stay with budget.
- Evaluating the work that has been completed and provide suitable payment for such work.
- Providing the best contractual advice possible and give advice on the best possible contracts available.
- Providing the client with alternative means of obtaining suitable funds to perform the required project

A list of work activities found on the ASAQS web site (http://www.asaqs.co.za/public/history.html, 2010):

#### 2.5.1 Estimating and cost advice

- They provide estimates for proposed projects and should the project materialise due to good indication of the returns, the estimate value would be used as a budget for the development of the project.
- Cost advice gets provided from the concept stage to final completion stage of a project. So it is essential to always have a quantity surveyor on hand at all times.
- For the quantity surveyor to provide reliable cost advise one needs to have a broad knowledge base on things like sophisticated techniques, building science, building and construction economics, cost data banks, etc.

#### 2.5.2 Cost Planning

- One needs to provide the client with value for money with services regarding the capital cost, the running and the maintenance of the project.
- Alternative designs must be evaluated and constantly monitored to provide the client with up to date details on how it would affect the budget.

#### 2.5.3 Property Development advice

- A building must be built to a suitable design were the functional, dimensional and technological requirements are still maintained and stay within the clients budget.
- One should be able to do pre-design feasibility studies, which it
  involves technical and economical investigations with the client
  having the free choice of the shape, the finish, functionality, etc.

#### 2.5.4 Advice on tendering procedures and contractual arrangements

- Each project has unique criteria (the nature of the project, conditions under which the work need to be carried out and the needs of the client) which would influence the type of contract that the quantity surveyor would have to implement for the best control of the project.
- With the assistance of the architect the best possible procurement methods are recommended to the client, which provide the best advantageous outcomes.
- Some of the alternative documents and bills of quantity contracts that can be used for the different projects include the builders quantities, elemental bills of quantities, specified bills of quantities, traditional bill of quantities, provisional bill of quantities, schedule of rates and multiple procurement.
- Bills of quantity are based as the most reliable method of obtaining a competitive price from the tenderers. Alternative

methods need a more detailed examination by the quantity surveyor and the architect before a decision can be made.

#### 2.5.5 Activities during the course of a project

- Financial control is monitored by maintaining an up to date cash flow, and always being in the right place in the right to time to hear of any changes within the project that could affect the cost.
- The quantity surveyor needs to evaluate the work that the contractor has completed. Should the contractor receive too little money for what has actually been done the chances of going bankrupt is quite good which would also cause the project to come to a stand still and cause delays. This can also be prevented by selecting a suitable contractor with suitable security in the bank that could help carry them in a month that they didn't receive the suitable payment. But if the quantity surveyor pays too much to the contractor, the contractor could disappear with the money and then the quantity surveyor will be held liable for the amount that was overpaid.
- Should the project for some reason get delayed the person responsible or cause for the fault should be identified by the professional team and then the final value of the project should be altered to the correct financial ratio and extension of time needs to be adjusted.
- At the end of a project the quantity surveyor is required to prepare
  a final account which is the final closing off of the project with the
  final payment made to the contractor and all adequate
  documentation completed.

#### 2.5.6 A list of activities which follow the stages of a project



Figure 1: Time line of the quantity surveyors involvement within a typical project (Potgieter, 2009).

- 1. Tender Date: One would determine how much a project would esculate for the period before and during the construction period.
- 2. Acceptance/Award of the contract: Determine +- the duration for which it would take to perform a specific project.
- 3. Site hand over: Contractor can claim for costs and extension of time for the late site hand-over, which the quantity surveyor will have to adjust the completion date.
- 4. Commence on site: Effect the extension of time.
- 5. Works completion: Every month a certificate needs to be completed for the work that has been completed by the contractor. The certificate is given to the client who in turn pays the contractor an amount as stated on the certificate.
- 6. Contract completion Date:
- 7. Practical Completion: The building gets declared as being fit for use. The client can move into the building, who in turn looks for defects, which can be reported to the contractor for repairs. Depending on the contract esculation and penalties to the contractor will stop.
- 8. Extended Completion date: Penalties need to be worked out and the prelims need adjusting.
- 9. Final Completion: The final payment certificate gets paid to the contractor.

### 2.6 Different bodies, councils and acts that protect the quantity surveyor

Councils and bodies with in the borders of South Africa control the profession of quantity surveying. According to Potgieter (2009):

#### **2.6.1 SACQSP**

It is by law that a quantity surveyor be registered with the SACQSP (South African Council for the Quantity Surveying Profession) in order to practise. It works the same as doctors where they have to be

registered in order to practise, which keeps the interests of the public in hand. It stops people from practising quantity surveying who don't have the correct qualifications and experience. The SACQSP is a statutory body appointed by the minister. The Council ensures that professionals act within reasonable practise, honesty and integrity. It is essential that as a quantity surveyor, you provide suitable respect towards the other quantity surveying professionals and you will not put their professional qualification into jeopardy. One will never be able to open your own practise or act as a partner of a firm without following the correct procedures stated in the act. The Council ensures that the professional persons stay alert by providing suitable continuous professional development. This includes getting points for attending seminars and keeping up to date with the latest trends found into all types of proscribed books and magazines. The Council also ensures that the academic institutions maintain a standard to obtain the highest level of education, which provides a candidate quantity surveyor with the knowledge required to start their new working environment. Up to date fees and tariffs are adjusted to the best marketable value to ensure that the quantity surveyor is accurately rewarded for their work practised. The Council has the right to cancellation of registrations should one of the cancellation criteria be broke

#### 2.6.2 **ASAQS**

This body is just a voluntary organisation, but due to its many advantages majority of quantity surveyors partake in this body. The sole reasons for the body is: to advance the outcomes of quantity surveying with regards to science and practise; uphold the dignity of the quantity surveyor; the quantity surveyors interests are looked after, like how one would write a JBCC document; recording a database of knowledge and sharing of that knowledge and promoting high standards of competence and integrity. The ASAQS are made up of voluntary persons who represent the association.

2.6.3 Other Bodies

Royal Institution of Charted Surveyor (RICS) is a United Kingdom

based institution with the same relevance as the ASAQS in South

Africa.

Chartered Institute of building (CIOB)

Quantity Surveyors International (QSI)

• Institution of Civil Engineering Surveyors (CES)

International Cost Engineering Council (ICEC)

2.6.4 Quantity Surveying Professions Act (Act 49 of 2000)

The act is the backbone for the Council, which provides all the do's

and don'ts that a quantity surveyor needs to follow as a professional.

The aim of the act is to get professionals to register; this includes

candidate quantity surveyors, quantity surveyors and professional

quantity surveyors. This act enables a relationship between the

SACQSP and the CBE so that they can interact with each other to

form suitable norms within the building industry.

2.7 Example of a job description

An example of a job description that was obtained on the web site

(http://www.gumtree.com/london/27/55563827.html: 2010):

"Company: Space Solutions Scotland

Job Title: Quantity Surveyor

Based: Glasgow / Edinburgh (Central Belt)

The ideal candidates will ideally be a MRICS chartered quantity surveyor

and have pre and post contract experience who will be involved in full

cost planning of projects through to completion, becoming the primary

contact for the client. There will be a focus on professional work on a

wide variety of selected projects.

These will include high specification fit outs and commercial new build fit

out and refurbishment projects for well established developers.

15

The candidate will also have experience of a wide variety of procurement routes and construction methodologies as well as a strong commercial acumen and a technical knowledge base.

#### Responsibilities:

- Preparation of tender and contract documents for contractors / subcontractors
- Post contract administration
- Estimating Interim valuations
- Final accounts
- Site checking
- Knowledge of various construction contracts
- Demonstration of cost estimating techniques
- Able to show experience of tasks required in taking a project from inception to final account
- Experience of liasing with internal and external clients
- Assisting in establishing a client's requirements and undertaking feasibility studies
- Preparing early stage budgets and detailed cost plans
- Performing risk and value management and cost control
- Advising on procurement strategy
- Preparing tender and contract documents, including bills of quantities
- Identifying, analysing and developing responses to commercial risks
- Preparing and analysing costing for tenders
- Establishing and operating cost and financial control systems
- Allocating work to subcontractors
- Negotiating to ensure budgets are not exceeded
- Providing advice on contractual claims
- Valuing completed work and arranging payments
- Maintaining awareness of the different building contracts in current use

Understanding the implications of health and safety regulations

In return you can expect a generous basic salary, an excellent benefits package and the potential to develop within this role to progress your career.

To apply for this post email your CV detailing recent experience with covering letter and current salary details to...."

#### 2.8 Summary

Quantity surveying is one of the most, if not the most important jobs in the building industry. Anything to do with finances and contractual documentation the quantity surveyor has to manage, which means that there is a large responsibility on their shoulders. As any other professional job they are governed by the law and have suitable bodies and councils to provide protection to the general public and provide required services to the quantity surveyor. There are so many skills and such large knowledge databases that a quantity surveyor needs to obtain to achieve a self satisfaction that one would be able to perform ones job as a quantity surveyor at the best of their ability. But once one has reached that point of times when a suitable standard is achieved the job satisfaction is well rewarding.

#### 2.9 Testing of hypothesis

#### 2.9.1 Synthesis

What is a Quantity Surveyor and what work does he/she perform?

#### 2.9.2 Hypothesis

As the general public would say "it's the person who counts bricks". That allegation is correct, but to be more accurate in defining what the job entails, a Quantity Surveyor is the financial advisor/accountant for the built environment.

#### 2.9.3 Acceptance/Dismissal of the hypothesis

This has partially been achieved as the job quantity surveying, has been broken down into: where it came from; what the job requirements are; how they are protected as a professional and what laws need to be followed. Not as specifically stated in the hypothesis as a job title of financial accountant for the built environment.

## Chapter 3: THE DIFFERENT UNIVERSITIES WHERE ONE CAN STUDY THE QUANTITY SURVEYING COURSE IN SOUTH AFRICA.

#### 3.1 Introduction

When a scholar leaves high school they want to know that the University with which they going to peso their life ambition of becoming a Quantity Surveyor is of the utter best for which they have the standards. Each person has their own perspective on what they would like out of the course and by assessing the different Universities one would be able to determine exactly where they would fit in the best.

#### 3.2 Cape Peninsula University of Technology

Notes: Contents of this subheading was obtained from the website of the Department of Engineering (http://info.cput.ac.za/prospectus\_3/cluster.php?f=6); and an email conversation on 20 May 2010, with Management of Information Services at CPUT, Anthea Karra; and an email conversation on 20 May 2010, with at CPUT, Julie Medhurst.

This course is presented on two campuses:

Bellville Campus

www.cput.ac.za

Symphony Way

Bellville

7530

(021) 460 3028

Cape Town Campus

www.cput.ac.za

Keizergracht St

Zonnebloem

8001

(021) 460 3028

#### What is the "M score" requirement? How does the "M score" work within

#### your University?

Rating code	Marks %
7	80-100
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 1: Cape Peninsula University of Technology point allocation for matric marks (<a href="www.cput.ac.za">www.cput.ac.za</a>, 2010)

 A min of 18 points is required for the course. One can still be accepted for the course with a minimum score of 11, but then will not be allowed to complete the B Tec (QS) course. (study programmes and admission requirements,2010)

### What school subjects does one need to have in order to be accepted for the course?

- Required: Mathematics = Minimum 3 Symbol
- Recommended: Accounting(3), Business Studies(4), Economics(3),
   Civil Technology(3), Engineering Graphics and Design(3), Computer
   Applications Technology(3), Physical Sciences(3) (study programmes and admission requirements, 2010)

### How many years study is the Diploma, Degree and Honours course? The course consists of:

3 year National Diploma course in Building
 There is a minimum pass mark requirement of 60% in the final year of the National Diploma. Should this not be achieved one would need to work for a full year with in the construction industry, before acceptance to study the BTech or NHD course.

 1 year Baccalaureus in Technology (BTech) or to a National Higher Diploma (NHD) in Quantity Surveying.

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

Year 1: Study full time

Year 2: Cape Town Campus - Work full time and study part time

Bellville Campus - Work the first six months and study the last six months.

Year 3: Study full time

Year 4: Study full time or Part-Time (Minimum two years)

### What are the different subjects that one can expect with in each year of study?

First Year: (National Diploma)	Second Year: (National Diploma)			
Construction management 1	Construction management 2			
Quantity Surveying 1	Quantity Surveying 2			
Site Surveying 1	Construction Technology 2			
Applied Building Science 1	Building Practice 1			
Communications 1				
Computer Applications 1				
Third Year: (National Diploma)	Fourth Year: (BTech)			
Construction management 3	Construction Economics 4			
Quantity Surveying 3	Construction Law & Procedures 4			
Construction Technology 3	Building Entrepreneurship 4			
Structures and Concrete (Concrete	Research methodology			
Module)				
Structures and Concrete (Structures	Quantity Surveying 4 (building			
Module)	module)			
Construction Accounting 3	Quantity Surveying 4 (civil module)			
Price Analysis and Estimating 3	Market Valuations 4			

Table 2: Cape Peninsula University of Technology course subjects for years one to four (<a href="www.cput.ac.za">www.cput.ac.za</a>, 2010)

#### What is the cost of each year of study?

For year 2010

Year 1: R 14,575.00 Year 2: R 4,195.00 Year 3: R 14,075.00

Total: R 32,845.00 (National Diploma)

Year 4: R 14,555.00

Total: R 47,400.00 (BTech)

### How many students apply for the course and how many do you accept in the first year?

2006: 165 2007: 191 2008: 198 2009: 203 2010: 263

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

#### National Diploma:

Year of	Year	Number of	Number	Through	Dropout
Course		Students	Graduated	Put rate	Rates
1	2006	141	2	1.42%	0%
2	2007	109	3	3.55%	17.02%
3	2008	101	54	41.84%	24.11%
	2009	38	22	57.45%	30.50%
	Average			15.6%	
	percentage				

complete		
the course		

Table 3: Cape Peninsula University of Technology National Diploma Statistics (<a href="https://www.cput.ac.za">www.cput.ac.za</a>, 2010)

#### B Tech (QS):

Year of	Year	Number of	Number	Through	Dropout
Course		Students	Graduated	Put rate	Rates
1	2008	81	41	50.62%	0%
2	2009	30	13	66.67%	12.35%
	Average				
	percentage			48.65%	
	complete			+0.00/0	
	the course				

Table 4: Cape Peninsula University of Technology B Tech (QS) Statistics (www.cput.ac.za, 2010)

#### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

### <u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

Cape Town Campus was recognised by the council up until 2008. At moment they are not recognised, but they are in the process of improving their course so that they can form part of the council in future.

#### 3.3 Central University of Technology

Notes: Contents of this subheading was obtained from the website of the School for Civil Engineering and Built Environment

(http://www.cut.ac.za/web/academics/faculties/eng/scebe/homepage,

2010); and an email conversation on 20 May 2010, with The Programme Head of Built Environment, P Fonternell;

Private Bag X20539 Bloemfontein 9300

What is the "M score" requirement? How does the "M score" work within your University?

#### Persons Matriculated in 2007 and earlier

Symbols	in	Α	В	С	D	Е	F
Grade 12							
Higher		8	7	6	5	4	3
grade							
Standard		6	5	4	3	2	1
Grade							

Table 5: Central University of Technology point allocation for matric marks prior to 2008 (<a href="https://www.cut.ac.za">www.cut.ac.za</a>, 2010)

A person is required to score a minimum of 27 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 20 and 26 will be evaluated and tested for approval.

### Persons Matriculated in 2008 until current date (National Senior Certificate):

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 6: Central University of Technology point allocation for a National Senior Certificate (<a href="www.cut.ac.za">www.cut.ac.za</a>, 2010)

A person is required to score 27 and more points per your matric marks. Dependant on the availability of space for the course, persons with a score between 20 and 26 will be evaluated and tested for approval.

(Admission Requirements, 2010)

What school subjects does one need to have in order to be accepted for the course?

Prerequisite Subjects: Old Senior Certificate:

D symbol on SG or E symbol on HG in

Mathematics

National Senior Certificate:

A minimum of 50% (Rating 4) in Mathematics or 70% (Rating 6) in

Mathematical Literacy.

Recommended Subjects: A pass mark in Physical Science (HG

or SG)

How many years study is the Diploma, Degree and Honours course?

The course consists of:

• 3 year National Diploma course in Building

1 year Baccalaureus in Technology (BTech)

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

Year 1: Study full time

Year 2: Work full time and study part time

Year 3: Study full time

Year 4: Study full time or Part-Time (two years)

(Admission Requirements, 2010)

### What are the different subjects that one can expect with in each year of study?

First Year (National Diploma)	Second Year (National Diploma)
Applied Building Science I	Construction Management II
Computer Applications I (Sem 1)	Construction Technology II

Communication Skills I (Sem 2)	Quantity Surveying II
Construction Management I	Building Practice I
Construction Technology I	Building Practice
	II
Quantity Surveying I	
Site Surveying I	
English Proficiency	
Third Year (National Diploma)	Fourth Year (BTech)
Construction Accounting III	Quantity Surveying IV
Construction Management III	Building Entrepreneurship IV
Construction Technology III	Construction Law and Procedures IV
Price Analysis & Estimating III	Construction Economics IV
Quantity Surveying III	Market Valuations IV
Structures & Concrete III	Research Methodology I
	Real Estate Development IV
	Development Management IV

Table 7: Central University of Technology course subjects for years one to four (<a href="www.cut.ac.za">www.cut.ac.za</a>, 2010)

#### What is the cost of each year of study?

This information could not be obtained due to unforeseen reasons.

#### How many students do you accept in the first year?

This information could not be obtained due to unforeseen reasons.

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

This information could not be obtained due to unforeseen reasons

### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

<u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

No

### 3.4 Durban University of Technology

**Note:** Contents of this subheading was obtained from the website of the Department of Engineering (<a href="http://www.dut.ac.za/pages/22383">http://www.dut.ac.za/pages/22383</a>, 2010);

41 Centenary Road Durban 4001 (031) 373 2143

What is the "M score" requirement? How does the "M score" work within your University?

Rating code	Marks %
7	80-100
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 8: Durban University of Technology point allocation for matric marks (www.dut.ac.za, 2010)

"National Senior Certificate (NSC) as certified by Umalusi Council for Quality Assurance in General and Further Education and Training provided that a minimum of 4 recognised NSC 20-credit subjects must be passed." (Entrance requirements, 2010).

What school subjects does one need to have in order to be accepted for the course?

English = Minimum 5 Symbol

Math's = Minimum 4 Symbol

and two 20 credit subjects (not more than one language) (3)

OR

Mathematics HG E or SG C, OR N3 Mathematics (60% or higher) (Entrance requirements, 2010).

## How many years study is the Diploma, Degree and Honors course? The course consists of:

· 3 year National Diploma course in Building

There is a minimum pass mark requirement of 60% in the final year of the National Diploma and a minimum pass mark requirement of 60% for Quantity Surveying 3. Should one or both these not be achieved, one would need to work for a full year with in the construction industry, before acceptance to study the BTech Quantity Surveying course.

• 1 year Baccalaureus in Technology (BTech) in Quantity Surveying.

# How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

Year 1: Study full time

Year 2: Work the first six months and study the last six months.

Year 3: Study full time

Year 4: Study full time

# What are the different subjects that one can expect with in each year of study?

First Year (National Diploma)	Second Year (National Diploma)
Applied Building Science 1	Work Integrated Learning/
	Interpretation of Doc.
Communication 1	Experiential Learning #
	(Industry Placement)

Construction Management 1	Construction Technology 2				
Construction Technology 1	Quantity Surveying 2				
Quantity Surveying 1					
Site Surveying 1					
Third Year (National Diploma)	Fourth Year (BTech)				
Construction Accounting 3	Building Entrepreneurship 4				
Construction Management 3	Construction Economics 4				
Construction Technology 3	Construction Law and				
	Procedures 4				
Price Analysis and	Development Management 4				
Estimating 3					
Quantity Surveying 3	Market Valuations 4				
Structures and Concrete 3	Quantity Surveying 4				
	Real Estate Management 4				
	(Optional)				
	Research Methodology (Optional)				

Construction Management 2

Table 9: Durban University of Technology course subjects for years one to four (<u>www.dut.ac.za</u>, 2010)

#### What is the cost of each year of study?

Computer Applications 1

This information could not be obtained due to unforeseen reasons.

#### How many students do you accept in the first year?

This information could not be obtained due to unforeseen reasons.

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

This information could not be obtained due to unforeseen reasons.

What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

<u>Is the course provided recognized by the South Africa Council for the</u> Quantity Surveying Profession?

Yes

#### 3.5 Mangosuthu University of Technology

Due to insufficient information available from the university's website and a lack of response from the department, an evaluation of this studying institution was impossible.

### 3.6 Nelson Mandela Metropolitan University

**Note:** Contents of this subheading was obtained from the website of The Department of Building and Quantity Surveying (<a href="http://www.nmmu.ac.za/default.asp?id=5911&bhcp=1">http://www.nmmu.ac.za/default.asp?id=5911&bhcp=1</a>, 2010); and an email conversation on 25 March 2010, with Prof and Head of Department: Building and Quantity Surveying, F. Buys.

Summerstrand Campus (North)
University Way
Port Elizabeth
041 504 2023 / 504 2669

Nelson Mandela Metropolitan University provides two courses in which one can obtain a qualification in Quantity Surveying:

- BSc Construction Economics (3 Years) and BSc Hons QS degree (1 Year).
- National Diploma Building (3 Years) and BTech QS (1Year).

What is the "M score" requirement? How does the "M score" work within your University?

Persons Matriculated in 2007 and earlier

Symbols	in	Α	В	С	D	Е	F
Grade 12							
Higher		8	7	6	5	4	3
grade							
Standard		6	5	4	3	2	1
Grade							

Table 10: Nelson Mandela Metropolitan University point allocation for matric marks prior to 2008 (<a href="https://www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

#### BSc (Construction Economics)

A person is required to score a minimum of 34 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 24 and 33 will be evaluated and tested for approval.

(Baccalaureus Scientiae in Construction Economics, 2010)

#### National Diploma: Building

A person is required to score a minimum of 26 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 18 and 25 will be evaluated and tested for approval.

(National Diploma: Building, 2010)

## Persons Matriculated in 2008 until current date (National Senior Certificate):

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 11: Nelson Mandela Metropolitan University point allocation for a National Senior Certificate (<a href="www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

#### **BSc** (Construction Economics)

A person is required to score a minimum of 36 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 26 and 35 will be evaluated and tested for approval.

(Baccalaureus Scientiae In Construction Economics, 2010)

#### National Diploma: Building

A person is required to score a minimum of 30 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 22 and 30 will be evaluated and tested for approval.

(National Diploma: Building, 2010)

What school subjects does one need to have in order to be accepted for the course?

#### Persons Matriculated in 2007 and earlier

#### **BSc** (Construction Economics)

- Mathematics SG=C or HG=E
- Candidates may be required to pass an entrance examination.

(Baccalaureus Scientiae in Construction Economics, 2010)

### National Diploma: Building

- Mathematics SG=E OR
- National Certificate (N3) with at least 4 subjects, 2 of which are languages at Grade 12 level.
- Science is not a prerequisite, but will be an advantage to applicants.
- Woodwork and Technical Drawing will also be beneficial.

(National Diploma: Building, 2010)

## Persons Matriculated in 2008 until current date (National Senior Certificate):

#### **BSc** (Construction Economics)

• "Minimum NSC requirements for degree entry must be met.

- English, Afrikaans or isiXhosa (home language or first additional language) = 3 (40-49%).
- Mathematics = 4 (50-59%).

#### Recommended NSC subjects:

- Design
- Engineering Graphics
- Physical Sciences"

(Baccalaureus Scientiae in Construction Economics, 2010)

#### National Diploma: Building

- "Minimum NSC requirements for diploma entry must be met.
- English, Afrikaans or isiXhosa (home language or first additional language) = 3 (40-49%) minimum.
- Mathematics = 3 (40-49%) or Mathematical Literacy = 5 (60-69%)
   min."

(National Diploma: Building, 2010)

#### How many years study is the Diploma, Degree and Honors course?

- National Diploma Building: 3 years
- Baccalaureus in Technology (BTech) in Quantity Surveying: 1 year
- Baccalaureus Science (Construction Economics): 3 years
- Baccalaureus Science (Hons) Quantity Surveying: 1 year

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

BSc (Construction Economics)

Year 1: Study full time

Year 2: Study full time

Year 3: Study full time

BSc Hons QS degree:

Year 4: Study full time

National Diploma: Building

Year 1: Study full time

Year 2: Work full time, study part time

Year 3: Study full time

B Tech QS:

Year 4: Study full time or Part-Time (two years)

# What are the different subjects that one can expect with in each year of study?

### BSc (Construction Economics) and BSc Hons QS degree

Year 1 - BSc (Construction	Year 2 - BSc (Construction
Economics)	Economics)
Introduction to Micro-economics	Introduction to Business Management
(Special) (Sem1 & 2)	and Entrepreneurship 1
Commercial Law 121	Introduction to the Business
	Functions 1
Commercial Law (Building	Building Science (Environment &
Disciplines)	Services) (Sem 1 & 2)
Building Science (Environment &	Building Science (Materials &
Services) (Sem 1 & 2)	Methods) (Sem 1 & 2)
Basic Surveying 1A	Building Economics
Building Science (Materials &	Information Technology for Building
Methods) (Sem 1 & 2)	Disciplines
Information Technology for Building	Quantities 2
Disciplines	
Quantities	Quantity Surveying 2
Quantity Surveying	Accounting (Special) (Sem 1 & 2)
Computing Fundamentals 1.1 (Sem 1	
& 2)	

Year 3 - BSc (Construction	Year 4 - BSc Hons QS degree		
Economics)			
Marketing Management 2	Professional Practice (Sem 1 & 2)		
Logistics and Purchasing	Business Management: Financial		
Management 2	Management		
Building Science (Environment &	Business Management: General &		
Services) (Sem1 & 2)	Strategic Management		
Building Science (Materials &	Building Economics 4		
Methods) (Sem 1 & 2)			
Mathematics for Accounting	Information Technology for Building		
	Disciplines 4		
Building Economics	Property Economics 4		
Quantities	Quantities 4		
Quantity Surveying	Quantity Surveying 4		
Information Technology for Building	Treatise 4		
Disciplines			
Research Methodology &			
Techniques 3 (attendance module)			
Business Statistics			

Table 12: Nelson Mandela Metropolitan University course subjects for years one to four in BSc (Construction Economics) and BSc Hons QS degree (<a href="https://www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

### National Diploma: Building and (B Tech)

Year 1 (National Diploma)	Year 2 (National Diploma)
Applied Building Science I	Construction Management II
Communication I	Construction Technology II
Construction Management I	Building Practice II (Semester 1)
Computer Applications I	Building Practice II (Semester 2)
Construction Technology I	Quantity Surveying II
Quantity Surveying I	

Site Surveying I	
Year 3 (National Diploma)	Year 4 (BTech in Quantity
	Surveying)
Construction Accounting III	Research Methods And Techniques
	(Semester 1)
Construction Management III	Project (Semester 2)
Structures & Concrete III	Building Entrepreneurship IV
Construction Technology III	Construction Economics IV
Price Analysis & Estimating III	Construction Law and Procedures IV
Quantity Surveying III	Market Valuation IV
	Quantity Surveying IV

Table 13: Nelson Mandela Metropolitan University course subjects for years one to four in National Diploma: Building and (B Tech) (www.nmmu.ac.za, 2010)

#### What is the cost of each year of study?

#### **BSc (Construction Economics)**

For year 2010

Year 1: R 16,300.00

Year 2: R 17,230.00

Year 3: R 20,360.00

Total: R 53,890.00 (Construction Economics)

Year 4: R 25,620.00

Total: R 79,510.00 (BSc Hons QS degree)

(Fees per a Module, 2010)

National Diploma: Building

For year 2010

Year 1: R 9,860.00

Year 2: R 1,980.00

Year 3: R 3,950.00

Total: R 15,790.00 (National Diploma: Building)

Year 4: R 5,920.00

Total: R 21,710.00 ((BTech) in Quantity Surveying

How many students do you accept in the first year?

BSc (Construction Economics) = 50

National Diploma: Building = 100

BTech QS & CM: 60

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

### **BSc (Construction Economics)**

Year of	Year	Number of	Number	Through	Dropout
Course		Students	Graduated	Put rate	from
		Start	In	from	starting
			required	starting	year
			year	year	
1	2005	26	12 (2007)	69.00%	8
2	2006	35	18 (2008)	66.00%	7
3	2007	41	14 (2009)	34.00%	9
	Average percentage complete the course			56.33%	

Table 14: Nelson Mandela Metropolitan University BSc (Construction Economics) Statistics (<a href="www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

### BSc Hons QS degree

Year of	Year	Number of	Number	Through	Dropout
Course		Students	Graduated	Put rate	from
		Start	In	from	starting
			required	starting	year
			year	year	
1	2006	15	13	87.00%	2
2	2007	15	7	53.00%	4
	Average percentage complete the course			70.00%	

Table 15: Nelson Mandela Metropolitan University BSc Hons QS degree Statistics (<a href="www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

### National Diploma (Building):

Year of	Year	Number of	Number	Through	Dropout
Course		Students	Graduated	Put rate	from
		Start	In	from	starting
			required	starting	year
			year	year	
1	2005	106	25 (2007)	43.40%	48
2	2006	73	16 (2008)	35.62%	31
3	2007	78	26 (2009)	33.33%	22
	Average percentage complete the course			37.45%	

Table 16: Nelson Mandela Metropolitan University National Diploma (Building) Statistics (<a href="www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

### B Tech (QS):

Year of	Year	Number of	Number	Through	Dropout
Course		Students	Graduated	Put rate	from
		Start	In	from	starting
			required	starting	year
			year	year	
1	2006	19	12	50.62%	3
2	2007	32	17	66.67%	4
	Average percentage complete the course			84.65%	

Table 17: Nelson Mandela Metropolitan University B Tech (QS) Statistics (<a href="https://www.nmmu.ac.za">www.nmmu.ac.za</a>, 2010)

#### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

# <u>Is the course provided recognized by the South African Council for the Quantity Surveying Profession?</u>

BSc (Construction Economics): Accredited SACQSP & RICS

BSc Hons QS: Accredited SACQSP & RICS

National Diploma (Building): Accredited SACQSP

BTech QS: Accredited SACQSP

### 3.7 Tshwane University of Technology

Note: Contents of this subheading was obtained from the website of The Faculty Engineering and The Built Environment (http://www.fe.tut.ac.za/UploadedFiles/Brochures%202010/Building%202010.pdf, 2010); and a telephone conversation on 9 July 2010, with K. de Villiers.

#### 183 Staatsartillerie Road

Tshwane University Of Technology Pretoria West Pretoria.

Tel: 012 382 5242

# What is the "M score" requirement? How does the "M score" work within your University?

HG	SG
A (80-100%) = 7	A (80-100%) = 6
B (70-79%) = 6	B (70-79%) = 5
C (60-69%) = 5	C (60-69%) = 4
D (50-59%) = 4	D (50-59%) = 3
E (40-49%) = 3	E (40-49%) = 2
F (30-39%) = 2	F (30-39%) = 1
G (0-29%) = 1	G (0-29%) = 0

Table 18: Tshwane University of Technology point allocation for matric marks (<u>www.fe.tut.ac.za</u>, 2010)

A person is required to score a minimum of 23 (6 Subjects excluding Life orientation) points per your matric marks.

# What school subjects does one need to have in order to be accepted for the course?

Maths = Minimum 4 Symbol (Not Maths Literacy)

Physics = Minimum 3 Symbol

English = Minimum 4 Symbol

The total acceptance points are calculated with the above subjects with additional three subjects, excluding life orientation.

### How many years study is the Diploma, Degree and Honors course?

National Diploma: Building = 3 years

Bachelor's Degree: Quantity Surveying = 1 year

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

Year 1: Study full time

Year 2: Work full time, with part time studies

Year 3: Study full time Year 4: Study full time

# What are the different subjects that one can expect with in each year of study?

First Year (National Diploma)	Second Year (National Diploma)
Applied Building Science I	Experiential Learning 1
Communication 1	Experiential Learning 2
Computer Applications 1	Construction Management 2
Construction Management 1	Construction Technology 2
Construction Technology 1	Quantity Surveying 2
Quantity Surveying 1	
Site Surveying Applications 1	
Site Surveying Practical 1	
Year 3 (National Diploma)	Year 4 (B Tech QS/CM)
Construction Accounting III	Development management IV
Construction Management III	Building Entrepreneurship IV
Structures & Concrete: Structures III	Construction Economics IV
Construction Technology III	
Construction recimology in	Construction Law and Procedures IV
Price Analysis & Estimating III	Market Valuation IV/Maintenance Management IV
	Market Valuation IV/Maintenance
Price Analysis & Estimating III	Market Valuation IV/Maintenance Management IV

Table 19: Tshwane University of Technology course subjects for years one to four (<a href="www.fe.tut.ac.za">www.fe.tut.ac.za</a>, 2010)

What is the cost of each year of study?

For year 2010

Year 1: R 10,390.00

Year 2: R 9,350.00

Year 3: R 8,400.00

Total: R 28,140.00 National Diploma: Building

Year 4: R 12,100.00

Total: R 40,240.00 Bachelor's Degree: Quantity Surveying

How many students do you accept in the first year?

120

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

On average about 60% of students finish the course.

What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

<u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

Yes

3.8 University of Cape Town

**Note:** Contents of this subheading was obtained from the website of the Department of Construction Economics and Management (www.cons.uct.ac.za); and an email conversation on 21 May 2010, with Programme Convener (Construction and Property Studies), Assoc.

Professor D. Root.

University of Cape Town

Private Bag X3

Rondebosch

7701

South Africa

What is the "M score" requirement? How does the "M score" work within your University?

#### Persons Matriculated in 2007 and earlier

Symbols	in	Α	В	С	D	Е	F
Grade 12							
Higher		8	7	6	5	4	3
grade							
Standard		6	5	4	3	2	1
Grade							

Table 20: University of Cape Town point allocation for matric marks prior to 2008. (www.cons.uct.ac.za, 2010)

One would need to calculate a score with subjects: English, Mathematics, Physical Science and the next three best subjects. A person is required to score 38 and more points per your matric marks. Dependant on the availability of space for the course, persons with a minimum score of 35 and more will be evaluated (based on gender and diversity targets) and tested for approval. (Faculty of Engineering & the Built Environment 2009 Entry Requirements for applicants who wrote matric before 2008, 2010)

### Persons Matriculated in 2008 until current date (National Senior Certificate):

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
0	30-39
0	0-29

Table 21: University of Cape Town point allocation for a National Senior Certificate (<a href="www.cons.uct.ac.za">www.cons.uct.ac.za</a>, 2010)

One would need to calculate a score with subjects: Mathematics and Physical Science, and the next best four subjects. A person is required to score 36 and more points per your matric marks. Dependant on the availability of space for the course, persons with a minimum score of 30 and more will be evaluated and tested for approval. (Entrance requirements, 2010)

What school subjects does one need to have in order to be accepted for the course?

#### Persons Matriculated in 2007 and earlier

D (HG) or A (SG) English

D (HG) or A (SG) Maths

E (HG) or B (SG) Science

(Faculty of Engineering & the Built Environment 2009 Entry Requirements for applicants who wrote matric before 2008, 2010)

#### Persons Matriculated in 2008 until current date:

Mathematics = Minimum 5 Symbol

Physical Science = Minimum 4 Symbol

(Entrance requirements, 2010)

#### How many years study is the Diploma, Degree and Honours course?

- 3 year Construction Studies (BSc)
  - There is a minimum pass mark requirement of 60% "weighted average over the full Construction studies degree for automatic admission into the Honours degree. Students who do not achieve this may be advised to gain further development, either through academic achievement or industry experience before re-applying for admission into Honours." (Root, 2010)
- 1 year Quantity Surveying (BSc Honours). (Quantity Surveying is an Honours level degree that follows on forma common Construction Studies degree).

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

Construction Studies: 3 years full time

BSc Honours: 1 year full time

# What are the different subjects that one can expect with in each year of study?

Year 1 (Construction Studies)	Year2 (Construction Studies)
Evidence based Management	Financial Accounting 1A
Building Science 1	Elementary Surveying
Construction Technology 1	Business Law 1
Practical Training	Labour Law 1
Construction Information Systems	Professional Communication Studies
Microeconomics	Construction Technology 2
Macroeconomics	Practical Training
Engineering Drawing	Construction Management 1
Statistics 101	Measurement and Design Appraisal 1
Year 3 (Construction Studies)	Year 4 (BSc Honours)
Construction Technology 3	Management Accounting 1
Practical Training	Property Studies 2
Construction Costing	Measurement and Design Appraisal 3
Measurement and Design Appraisal 2	Applied Contract Law 2
Applied Contract Law 1	Professional Practice
Property Studies 1	Practical Training
Construction Management 2	Research Report
Cost Engineering under Uncertainty	Civil Engineering Measurement
	Statistics 100
	Electives:
	(Minimum of 32 credit points from:)
	Advanced Construction Management

(16)		
Integrated Management Project (16)		
Housing Development &		
Management 1T (16)		
Treatise(32)		
Construction Innovation (16)		
Approved Elective (16)		

Table 22: University of Cape Town course subjects for years one to four (www.cons.uct.ac.za, 2010)

#### What is the cost of each year of study?

For year 2010

Year 1: R 31,050.00

Year 2: R 31,050.00

Year 3: R 32,170.00

Total: R 93,370.00 Construction Studies

Year 4: R 32,816.00

Total: R 126,546.00 **BSc Hons QS** 

(Fees, 2010)

### How many students do you accept in the first year?

Construction Studies – "There is no specific limit, but the programme aims to accept 55 Students into the first year of study as a target. This includes matric entrants, transferees from other programmes within UCT and from other institutions."

BSc Honours – "Between 30 and 40 persons apply for BSc Honours, this varies from year to year as it is dependent on the graduation numbers from the BSc degrees and the graduation performance. is the norm." (Root, 2010)

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the

different years in the course (Thus being year 1 to final year in year 2009)?

With the information that was obtained such analysis could be evaluated:

 On average 70% of scholars will complete their Construction Studies within the minimum allocated time of three years.

 On average 95% of scholars will complete their Quantity Surveying BSc Honours Studies within the minimum allocated time.

What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?

The course is also accredited by the CIOB and the RICS, but only at the Honours qualification level. The CIOB ad RICS recognise the 3+1 model course as a 4 year programme. The BSc degree does not obtain recognition from the CIOB and RICS as it is not separately accredited.

3.9 University of The Free State

**Note:** Contents of this subheading was obtained from the website of The Department of Quantity Surveying and Construction Management (http://www.uovs.ac.za/faculties/index.php?FCode=04&DCode=115, 2010); and an email conversation on 26 March 2010, with Senior Lecturer, F. Berry.

Department of Quantity Surveying and Construction Management

Faculty of Natural and Agricultural Sciences

University of the Free State

PO Box 339

Bloemfontein

9300

Tel: +27-(0)51-4013322

The University of The Free State's Open Learning programme for Quantity Surveying is the only programme outside the United Kingdom that is accredited by the RICS (Royal Institution of Chartered Surveyors). This course is also presented in a residential form.

What is the "M score" requirement? How does the "M score" work within your University?

#### Persons Matriculated in 2007 and earlier

Symbols	in	Α	В	С	D	Е	F
Grade 12							
Higher		8	7	6	5	4	3
grade							
Standard		6	5	4	3	2	1
Grade							

Table 23: University of Free State point allocation for matric marks prior to 2008 (<a href="https://www.uovs.ac.za">www.uovs.ac.za</a>, 2010)

A person is required to score a minimum of 35 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 30 and 34 will be evaluated and tested for approval.

(Admission Requirements for study at the University of The Free State, 2010)

## Persons Matriculated in 2008 until current date (National Senior Certificate):

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39

Table 24: University of Free State point allocation for a National Senior Certificate (<a href="www.uovs.ac.za">www.uovs.ac.za</a>, 2010)

A person is required to score a minimum of 28 points per your matric marks. (Admission Requirements for study at the University of The Free State, 2010)

What school subjects does one need to have in order to be accepted for the course?

#### Persons Matriculated in 2007 and earlier

"An endorsed Senior Certificate plus

Mathematics HG = E or SG = D plus

One of Physical Science or Economics or Business

Economics or Accounting SG = F"

(Admission Requirements for study at the University of The Free State, 2010)

## Persons Matriculated in 2008 until current date (National Senior Certificate):

Required:

"Language of tuition (Eng or Afr) = Achievement level 4

Mathematics = Achievement level 4

One of the following:

Physical Sciences = Achievement level 3

Economics - Achievement level 3

Business Studies = Achievement level 3

Accounting - Achievement level 3"

(Admission Requirements for study at the University of The Free State, 2010)

### How many years study is the Diploma, Degree and Honours course?

#### Residential

BSc Degree: 3 years BSc Honours: 1 year

#### **Open Learning course**

BSc Degree: 3 years BSc Honours: 2 years How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

#### Residential

BSc Degree: 3 years full time BSc Honours: 1 year full time

### **Open Learning course**

BSc Degree: 3 years part time BSc Honours: 2 years part time

# What are the different subjects that one can expect with in each year of study?

First year (BSc Degree)	
Compulsory Modules	Optional modules (any 16 credits)
Descriptive Quantification	Culture-understanding ourselves and others(16)
Accounting for B.Sc.(Q.S) and B.Sc. Construction Management	Introduction to Philosophy, world view interpretation and ethical decision-making(16)
Building Economics	Aspects of the world, argumentation theory and philosophical anthropology(16)
Physics for students in the Building	Logic and cohesion in Afrikaans
Sciences	texts(8)
Introductory calculus and statistics	Strategies for persuasion in Afrikaans(8)
Entrepreneurship	Business English(8)
Introduction to economics and microeconomics	Architecture(8)
Property Development Economy	Engineering Science(8)
Second Year (BSc Degree)	
Compulsory Modules	Optional modules (any 16 credits)

Descriptive Quantification	Introduction to Statistics II(16)
Building Science	Introduction to macroeconomics(16)
Building Economics	General Management(16)
Property Development Economics	Architecture(8)
Construction Science	Engineering Science(8)
Introduction to Statistics I	
Commercial Law	
Third Year (BSc Degree)	
Compulsory Modules	Optional modules (any 16 credits)
Descriptive Quantification	Marketing(16)
Building Science	Fundamentals of financial
	management(16)
Building Contracts Law	Labour Law(16)
Building Economics	Production and operational
	management(16)
Property Development Economics	
Construction Science	
Descriptive Quantification Project	
Fourth Year (BSc Honours)	
Compulsory Modules	Optional modules (any 16 credits)
Descriptive Quantification	Property Valuation Practice(16)
Management of Information and Communication Systems	Property Facilities Management(16)
Building Economics	Construction Finance(16)
Professional Practice	
Property Development Economics	
Construction Science	
Advanced Project Management	
Integrated Project	

Table 25: University of Free State subjects for years one to four (<a href="www.uovs.ac.za">www.uovs.ac.za</a>, 2010)

#### What is the cost of each year of study?

For year 2010 (On average 8 credits = R 1,200.00; 16 credits = R 2,200)

Year 1: R 2,200 x 7 + R 1,200 x 2 = R 17,800.00

Year 2: R 2,200 x 7 + R 1,200 x 2 = R 17,800.00

Year 3: R 2,200 x 7 + R 1,200 x 2 = R 17,800.00

Total: R53,400.00 BSc Degree QS

Year 4: R 2,200 x 7 + R 1,200 x 2 = R 17,800.00

Total: R 71,200.00 **BSc Hons QS** 

#### How many students do you accept in the first year?

On average about 60 persons in the residential programme.

# On average how many students start in the first year and how many finishes in their final year?

Stated by F. Berry "Approx. 70% if we take it over a four year period"

# What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

Stated by F. Berry "Not possible to determine due to the fact that students can fail a subject and carry on with the next year"

#### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

# <u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

Yes

### 3.10 University of KwaZulu Natal

**Note:** Contents of this subheading was obtained from the website of The School of Civil Engineering Surveying and Construction (<a href="http://propertydev.ukzn.ac.za/CareerPaths400.aspx#q1">http://propertydev.ukzn.ac.za/CareerPaths400.aspx#q1</a>, 2010); and an

email conversation on 30 March 2010, with Programme Coordinator (Property Development Programme), anonymous.

King George V Avenue Durban 4001

What is the "M score" requirement? How does the "M score" work within your University?

#### Persons Matriculated in 2007 and earlier

Symbols Grade 12	in	Α	В	С	D	Е	F
Higher grade		8	7	6	5	4	3
Standard Grade		6	5	4	3	2	1

Table 26: University of KwaZulu Natal allocation for matric marks prior to 2008 (<a href="https://www.ukzn.ac.za">www.ukzn.ac.za</a>, 2010)

A person is required to score a minimum of 35 points per your matric marks.

(Entrance Requirements, 2010)

## Persons Matriculated in 2008 until current date (National Senior Certificate):

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 27: University of KwaZulu Natal allocation for a National Senior Certificate (www.ukzn.ac.za, 2010)

A person is required to score a minimum of 33 points per your matric marks.

(Entrance Requirements, 2010)

What school subjects does one need to have in order to be accepted for the course?

#### Persons Matriculated in 2007 and earlier

- "Applicants must have passed English as Home Language or First Additional Language with at a minimum of 50%
- A pass corresponding to a minimum of a C symbol on the HG for both Mathematics and Physical Science/Physics"

Persons Matriculated in 2008 until current date (National Senior Certificate):

# "DoE NSC Requirements for entrance into Degree Study (NSC DEG):

- 7 Subjects must be taken
- Passes in 4 subjects from designated list at minimum level 4.
- Passes in 2 other subjects
- Compulsory subjects are Life Orientation, Mathematics or Maths Literacy and
- 2 languages, one at Home Language (HL) level and a second language at either HL or First Additional Level (FAL).

Please note the subject choice restrictions for the NSC: Learners may not offer:

- both Maths and Maths Literacy
- more than four languages
- similar languages
- a language at more than one level

#### **General NSC Entrance Requirements - UKZN Degree Study**

#### NSC Deg (Requirements as above) with passes in:

- English and Life Orientation Level at minimum level 4
- Relevant subjects Faculty dependant on Programs offered
- Relevant points score from six subjects (excluding Life Orientation)

# Faculty of Engineering Minimum Entrance Requirements NSC Deg (Requirements as above) with passes in:

- Mathematics at level 6
- Physical Sciences at level 6
- English at level 4
- Life Orientation at level 4

3 other subjects with at least 2 from the designated list, with the minimum of 33 points excluding the points from Life Orientation. (To be confirmed)"

(Entrance Requirements, 2010)

### How many years study is the Diploma, Degree and Honours course?

Property Development: 3 Years

Honours in Quantity Surveying: 1 Year

# How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

Property Development: 3 years full time

Quantity Surveying Honours: 1 year full time

# What are the different subjects that one can expect with in each year of study?

Year 1 (Property Development)	Year 2 (Property Development)
Quantitative Methods	Design Appraisal & Measurement 2A
Economics 1A	Design Appraisal & Measurement 2B
Economics 1B	Construction Economics &
	Management 2A
Accounting 1A	Construction Economics &

	Management 2B		
Accounting 1C	Construction Technology &		
	Processes 2A		
Introduction to the Built Environment	Construction Technology &		
	Processes 2B		
Intro to Design Appraisal &	Introduction to Law		
Measurement			
Construction Drawing	Aspects of South African Law		
Construction Technology &			
Processes 1A			
Construction Technology &			
Processes 1B			
Year 3 (Property Development)	Year 4 Honours in Quantity		
	Surveying		
Construction Contracts	Law of Building Contracts		
Design Appraisal & Measurement 3A	Cost Engineering		
Design Appraisal & Measurement 3B	Applied Construction Management		
Construction Economics &	Advanced Construction Technology		
Management 3A			
Project Planning	Advanced Design Appraisal &		
	Measurement		
Project Management	Project Administration		
Property Studies	Property Development Economics		
Property Law	Professional Practice		
Project Planning & Management	Property Valuations		
Control			
Construction Technology &	Research Methodology		
Processes 3A			
	Research Report		
	Simulated Office Project		

Table 28: University of KwaZulu Natal subjects for years one to four (<a href="www.ukzn.ac.za">www.ukzn.ac.za</a>, 2010)

#### What is the cost of each year of study?

Stated by N.Harinarain "Between R13000 to R15000 per a year"

For year 2010

Year 1: R 14,000.00 Year 2: R 14,000.00

Year 3: R 14,000.00

(**Note:** An average of R 14,000.00 will be taken for all the years one to four)

Total: R 42,000.00 **Property Development** 

Year 4: R 14,000.00

Total: R 56,000.00 Honours in Quantity Surveying

#### How many students do you accept in the first year?

About 30 students

On average how many students start in the first year and how many finishes in their final year?

99% complete the course

What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

92% being the average for years one to four.

#### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

<u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

Yes, and they are also accredited by The Royal Institution of Chartered Surveyors (RICS).

#### 3.11 University of Pretoria

**Note:** Contents of this subheading was obtained from the website of The Department of Construction Economics (<a href="http://web.up.ac.za/default.asp?ipkCategoryID=3295&sub=1&parentid=3289&subid=3294&ipklookid=7">http://web.up.ac.za/default.asp?ipkCategoryID=3295&sub=1&parentid=3289&subid=3294&ipklookid=7</a>, 2010); and an email conversation on 29 June 2010, with Administrative Officer/PA to the HOD, T. Toerien; and an email conversation on 30 June 2010, with Information Manager, A. De Bruyn.

University of Pretoria

Dept of Construction Economics

Building Nr 5, Room 3-5, South Campus

Pretoria

012 420-4972

What is the "M score" requirement? How does the "M score" work within your University?

Rating code	Marks %
7	80-100
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 29 University of Pretoria point allocation for matric marks (www.ukzn.ac.za, 2010)

A person is required to score a minimum of 28 points per your matric marks.

What school subjects does one need to have in order to be accepted for the course?

One of these languages must be Afrikaans OR English at level 5 (60-69%) and more.

- Mathematics 4 (50-59%) and more
- Life orientation 4 (50-59%) and more (Excluded when calculating the APS)
- Physical science 4 (50-59%) and more for any one of the following subjects: Physical science and/ or Accounting
- 2 Other subjects (Any)
   (Construction Economics Undergraduate Degrees in, 2010)

### How many years study is the Diploma, Degree and Honours course?

BSC (Quantity Surveying): 3 Years

BSC (Quantity Surveying)(Hons): 2 Year

# How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

BSC (Quantity Surveying): 3 years full time

BSC (Quantity Surveying)(Hons): 2 Years full time. A student would be required to attend lectures full time, but when not at class one would be required to work for a registered quantity surveyor with tasks required by the Quantity Surveying Profession Act.

# What are the different subjects that one can expect with in each year of study?

Year 1 BSC (QUANTITY	Year 2 BSC (QUANTITY
SURVEYING)	SURVEYING)
Building Drawings 111	Building Science 210
Building Science 110	Economics 110
Computer Literacy 111	Financial Accounting 111
Academic Literacy 110	Building Services 212
Building Services 112	Quantities 200
Quantities 101	Reinforced Concrete Structures 210
Introduction to Structures 110	Site Surveying 213
Statistics 110	Building Science 220

Precalculus 133	Economics 120		
Industrial and Organisational	Financial Accounting 121		
Psychology 181			
Building Organisation 121	Building Services 222		
Building Drawings 121	Quantities 200		
Building Science 120	Informatics 181		
Information Literacy 121	History of the Environment 224		
Academic Literacy 120	Civil Engineering Services 220		
Building Services 122			
Quantities 101			
Structures 120			
History of the Environment 122			
Statistics 161			
Year 3 BSC (QUANTITY	Year 4 BSC (HONS) (QUANTITY		
SURVEYING)	SURVEYING):		
Business Law 310	Building Cost Estimation 700		
Quantity Surveying Practice 300	Quantity Surveying Practice 700		
Building Science 310	Management Practice 700		
Building Services 312	Property Financial Mathematics 710		
Quantities 300	Quantities 700		
Community-based Project 201	Building Cost Estimation 700		
Construction Information Technology	Quantity Surveying Practice 700		
and Communication 311			
Housing 320	Management Practice 700		
Quantity Surveying Practice 300	Quantities 700		
Building Science 320			
Introduction to Property Law 320			
Building Services 322			
Quantities 300			
Community-based Project 201			

Year 5 BSC (HONS) (QUANTITY	
SURVEYING):	
Research Report 785	
Feasibility Studies 700	
Construction Contract Law 730	
Construction Project Management	
730	
Research Report 785	
Feasibility Studies 700	
Construction Contract Law 740	
Practical Development Feasibility 720	

Table 30: University of Pretoria subjects for years one to five (www.ukzn.ac.za, 2010)

### What is the cost of each year of study?

For year 2010

Year 1: R 26,330.00

Year 2: R 24,490.00

Year 3: R 25,170.00

Total: R 75,990.00 BSc Degree QS

Year 4: R 21,880.00 Year 5: R 22,480.00

Total: R 120,350.00 **BSc Hons QS** 

#### How many students do you accept in the first year?

2008 - 79

2009 - 112

2010 - 123

# On average how many students start in the first year and how many finishes in their final year?

BSC (Quantity Surveying): On average about 65-70% finish their course

BSC (Quantity Surveying)(Hons): On average about 90-95% finish their course

What are the achieved pass rates for the different years in the course?

Graduates:

BSc: Quantity Surveying (3Years)

2007: 532008: 522009: 65

BSc(Hons): Quantity Surveying

2007: 20 2008: 35 2009: 38

What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

<u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

Yes, and they are also accredited by The Royal Institution of Chartered Surveyors (RICS).

#### 3.12 University of Witwatersrand

**Note:** Contents of this subheading was obtained from the website of The School of Construction Economics and Management (<a href="http://web.wits.ac.za/Academic/EBE/CEM/Courses/Undergraduate/BScQuant.htm">http://web.wits.ac.za/Academic/EBE/CEM/Courses/Undergraduate/BScQuant.htm</a>, 2010);

School of Construction Economics & Management Faculty of Engineering & the Built Environment John Moffat Building (Ground Floor)

1 Jan Smut AvenueBraamfonteinJohannesburg

What is the "M score" requirement? How does the "M score" work within your University?

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
0	30-39
0	0-29

Table 31: University of Witwatersrand point allocation for matric marks (<a href="https://www.wits.ac.za">www.wits.ac.za</a>, 2010

Score Mathematics and Physical Science, and your next best four subjects. A person is required to score a minimum of 36 points per your matric marks. Dependant on the availability of space for the course, persons with a score between 30 and 35 will be evaluated and tested for approval.

(Wits admission Requirements, 2010)

What school subjects does one need to have in order to be accepted for the course?

Maths = Level 5 and more

English = Level 5 and more

(Wits admission Requirements, 2010)

How many years study is the Diploma, Degree and Honours course?

BSc in Quantity Surveying Studies BSc (QSS): 3 Years

BSc in Quantity Surveying Honours BSc (Hons) CMS: 1 Year

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

BSc in Quantity Surveying Studies BSc (QSS):

Year 1: Full Time Study

Year 2: First 6 months full time study & second 6 months full time work

Year 3: First 6 months full time study & second 6 months full time work

BSc in Quantity Surveying Honours BSc (Hons) CMS:

1 Year: Full Time Study

### What are the different subjects that one can expect with in each year of study?

Year 1 BSc Degree QS	Year 2 BSc Degree QS				
Applied Mathematics (BQ)	Construction Planning and Design II				
Construction Planning and Design I	Theory and Practice of Quantity				
	Surveying II				
Theory and Practice of Quantity	Building Science I				
Surveying I					
Mathematics (BQT)	Civil Engineering Theory I				
Physics I (Building)	Economics I				
	Commercial Law I				
	Surveying for Engineers (half-course)				
Year 3 BSc Degree QS	Year 4 BSc Hons QS				
Business Accounting	Commercial Procedures including				
	Relevant Legislation				
Operations Research (half course)	Introduction to Construction Project				
	Management				
Building Science II	Year 4 BSc Hons QS  Commercial Procedures including Relevant Legislation Introduction to Construction Project				
	(half course)				
Construction Technology (half	Property Finance and Investment				
course)					
course)					

Surveying III	Surveying IV
Principles of Design and Planning	Cost Evaluation and Control
(half course)	
Commercial Law II	Discourse
Research Report (half course)	
Civil Engineering Theory II	

Table 32: University of Witwatersrand subjects for years one to four (<a href="www.wits.ac.za">www.wits.ac.za</a>, 2010)

#### What is the cost of each year of study?

For year 2010

Year 1: R 30,370.00 Year 2: R 30,370.00

Year 3: R 30,370.00 (Note: An average of R 30,370.00 will be

taken for all the years one to four)

Total: R 91,110.00 BSc Degree QS

Year 4: R 30,370.00

Total: R 121,480 BSc Hons QS

#### How many students do you accept in the first year?

This information could not be obtained due to unforeseen reasons.

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

This information could not be obtained due to unforeseen reasons.

#### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

<u>Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?</u>

Yes

#### 3.13 Walter Sisulu University

Note: Contents of this subheading was obtained from the website of The Faculty of Science, Engineering and Technology (<a href="http://www.wsu.ac.za/academic/images/resources/FSET%20general/schools/WSU%20School%20ef%20Enggineering">http://www.wsu.ac.za/academic/images/resources/FSET%20general/schools/WSU%20School%20ef%20Enggineering INSIDE.pdf</a>, 2010)

#### **Buffalo City campus:**

Chiselhurst Delivery Site

Department of Construction Management & Quantity Surveying

Contact person: Ms F Ramela: Academic Secretary

Tel: 043 709 4009;

#### **Butterworth campus:**

Ibika Delivery Site

Department of Construction Management & Quantity Surveying

Contact person: Ms K Fiyani: Academic Secretary

Tel: 047 401 6122;

What is the "M score" requirement? How does the "M score" work within your University?

### Persons Matriculated in 2008 until current date (National Senior Certificate):

Rating code	Marks %
8	90-100
7	80-89
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 33: Walter Sisulu University allocation for a National Senior Certificate (www.wits.ac.za, 2010)

A person is required to score a minimum of 29 points per your matric

marks. (Faculty of Science, Engineering and Technology, 2010)

What school subjects does one need to have in order to be accepted for

the course?

Required NSC Subjects (Compulsory):

• English = Minimum 3 Symbol

Mathematics = Minimum 3 Symbol

• Physical Science = Minimum 3 Symbol

Recommended NSC Subjects (Not Compulsory):

• Engineering Graphics & Design

Woodwork

Accounting

(Faculty of Science, Engineering and Technology, 2010)

How many years study is the Diploma, Degree and Honours course?

3 year National Diploma

The National Diploma: Building Extended Programme targets

applicants who are deemed to be "under-prepared" for the National

Diploma programmes. 2 year National Diploma: Building Extended

Programme

How does the course layout consist? (Example: In what year does one

study full time, part time or work full time).

National Diploma:

Year 1: Study full time

Year 2: Study part time, work full time

Year 3: Study full time

National Diploma: Building Extended Programme:

Year 1: Study full time

67

Year 2: Study full time

## What are the different subjects that one can expect with in each year of study?

Year 1 (National Diploma)	Year 2 (National Diploma)
Construction Management I	Work Integrated Learning : Building
	Practice
Construction Technology I	Construction Management II
Quantity Surveying I	Construction Technology II
Applied Building Science	Quantity Surveying II
Site surveying	
Computer Applications (Sem. 1)	
Communication (Sem. 2)	
Year 3 (National Diploma)	
Construction Management III	
Construction Technology III	
Quantity Surveying III	
Analysis of Pricing and Estimating	
Structures and Concrete	
Construction Accounting	

Table 34: Walter Sisulu University subjects for years one to three in Building: National Diploma (<a href="www.wits.ac.za">www.wits.ac.za</a>, 2010)

Year 1 (National Diploma: Building	Year 2 (National Diploma: Building
Extended Programme)	Extended Programme)
Construction Management I	Quantity Surveying I
Construction Technology I	Applied Building Science
Computer Applications (Semester 1)	Site surveying
Communication (Semester 2)	

Table 35: Walter Sisulu University subjects for years one to two in Building: National Diploma (Extended Program) (www.wits.ac.za, 2010)

What is the cost of each year of study?

This information could not be obtained due to unforeseen reasons.

How many students do you accept in the first year?

This information could not be obtained due to unforeseen reasons.

On average how many students start in the first year and how many finishes in their final year? & What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

This information could not be obtained due to unforeseen reasons.

What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?

Yes

#### 3.14 Johannesburg University of Technology

**Note:** Contents of this subheading was obtained from an email conversation on 26 May 2010, with Senior Lecturer, F. Fester.

Faculty of Engineering and the Built Environment
University of Johannesburg
PO Box 17911

**DOORNFONTEIN 2028** 

What is the "M score" requirement? How does the "M score" work within your University?

Rating code	Marks %
7	80-100
6	70-79
5	60-69
4	50-59
3	40-49
2	30-39
1	0-29

Table 36: Johannesburg University of Technology point allocation for matric marks (Fester, 2010)

A person is required to score a minimum of 32 points per your matric marks.

What school subjects does one need to have in order to be accepted for the course?

Maths = Minimum 5 Symbol

Physics = Minimum 5 Symbol

English (first language) = Minimum 5 Symbol

English (second language) = Minimum 6 Symbol

How many years study is the Diploma, Degree and Honours course?

National Diploma = 3 years plus

BTech = 1 year

How does the course layout consist? (Example: In what year does one study full time, part time or work full time).

National Diploma =

- Year 1: Class full time
- Year 2: Classes are full-time for one semester after which 8 months practical is required
- Year 3: Class full time

#### **BTech**

- Full time except or
- Part time with three subjects in each year

# What are the different subjects that one can expect with in each year of study?

First year (National Diploma)	Second year (National Diploma)
COMMUNICATION STUDIES 1	QUANTITY SURVEYING 2 (year
(semester)	course)
COMPUTER APPLICATIONS 1	CONSTRUCTION TECHNOLOGY
(Semester)	2
	Broken into 4 quarters
	Applied Electrical Theory
	Applied Plumbing Theory
	Applied HVAC Theory
	Applied Lift theory
CONSTRUCTION MANAGEMENT	APPLIED CONSTRUCTION
1 (year course)	MICRO ECONOMICS (semester)
CONSTRUCTION TECHNOLOGY	STATISTICS 1 (semester)
1 (year course)	
Civil construction Materials	CIVIL CONSTRUCTION
(semester)	METHODS 1 (semester)
APPLIED MATHS (semester)	BUILDING PRACTICE
APPLIED BUILDING SCIENCE:	
PRACTICAL (semester)	
APPLIED BUILDING SCIENCE	
(THEORY)	
(year course)	
QUANTITY SURVEYING 1(year	
course)	
SITE SURVEYING 1(year course)	
Third year (National Diploma)	Fourth year (BTech)
CONSTRUCTION TECHNNOLOGY	Project Management 4 (semester)
3 (year course)	

Engineering Geology (semester)	Construction Management 4
	(Semester)
Soil Mechanics (semester)	Development Management 4
	(quarter)
CONSTRUCTION MANAGEMENT	H&S Management 4 (quarter)
3 (year course)	
Applied CONSTRUCTION Macro-	Contract law 4 (Semester
Economics (semester)	
STRUCTURES	Tenders, variations and payments 4
Structural Detailing	(Semester)
Theory of Structures	
Basic structural design	
(year course)	
Concrete (semester)	Building entrepreneurship 4 (year
	course)
QUANTITY SURVEYING 3 (year	Building Quantity Surveying 4
course)	(semester)
PRICE ANALYSIS AND	Civil, mechanical and electrical
ESTIMATING 3 (year Course)	quantities 4 (semester)
CONSTRUCTION ACCOUNTING 3	Construction economics 4 (year
(semester)	course)
Financial Management (Semester)	Research (year course)

Table 37: Johannesburg University of Technology subjects for years one to four (Fester, 2010)

#### What is the cost of each year of study?

For year 2010

Year 1: R 26,000.00 Year 2: R 26,000.00

Year 3: R 26,000.00 (Note: Approximately R26000 per year will be

taken for all the years, one to four)

Total: R 78,000.00 (National Diploma: building)

Year 4: R 26,000.00

Total: R 104,000.00 (BTech)

#### How many students do you accept in the first year?

56 students entered in the first year and 45 into the extended programme

### On average how many students start in the first year and how many finishes in their final year?

On average about 96 students start with the course and about 35 complete at the end of the fourth year.

### What are the achieved pass rates for the different years in the course (Thus being year 1 to final year in year 2009)?

First year 73%
Second Year 68%
Third year 72%
Fourth Year 84%

#### What is the pass mark (%) required?

A 50% pass mark is required for the individual subjects.

### Is the course provided recognized by the South Africa Council for the Quantity Surveying Profession?

It is not accredited by SACQSP, but students have worked on diverse sites such as, Hong Kong and Heathrow airports.

#### 3.15 Summary

All universities that provide a course that is recognised by SACQSP (The South African Council for the Quantity Surveying Profession) is of out most importance. Without this recognition one is not recognised world wide.

With the word of mouth, a BSc Degree and BSc Honours is of better recognition than a National Diploma and B Tech.

The reason for the higher M score at certain universities results in them obtaining better students, and this results in better passing achievements by the universities.

Obviously cost would be one of the first factors, which one would have to take into consideration. This all depends on the ability of that person's availability to finances.

As evaluation of the different Universities is required, the scoring of the different categories will be as follows:

- M Score
  - o 0-20=1
  - 0 21-25=2
  - o 26-30=3
  - 0 31-36=4
- Level of course
  - National Diploma and B Tech = 2
  - o BSc Degree & BSC Honours = 4
- Years of course
  - o 5 and more years = 1
  - o 4 and less years = 2
- Cost
  - o R100 001 R130 000 = 1
  - o R70 001 R100 000 = 2
  - o R50 001 R70 000 = 3
  - $\circ$  R0 R50 000 = 4
- Average start and finish the course
  - 0 0% 30% = 1
  - 0 31% 50% = 2
  - 0 51% 80% = 3
  - 0 81%- 100% = 4
- Council recognised
  - $\circ$  No = 0
  - o Yes = 4

The best scores are based on the cheapest, highest "M score", shortest time period, best pass rate and most important of all would be the acceptance by the council.

University'	M Score	Min M Score	Required Subjects	Level of course	Years of the cours e	Cost	Averag e Start and finish	Council Recogni sed
Cape Peninsula University of Technology	18	11	Maths (3)	National Diploma & B Tech	3 + 1=4	R47,400	15.6% & 48.65%	No
Central University of Technology	27	20	Mathematics =4 or Mathematical Literacy = 6	National Diploma & B Tech	3 + 1=4	?	?	No
Durban University of Technology	?	?	English = 5 Maths = 4	National Diploma & B Tech	3 + 1=4	?	?	Yes
Mangosuthu University of Technology	?	?	?	?	?	?	?	No
	30	22	1st Language (Eng, Afri) = 3 Maths = 3	National Diploma & B Tech	3 + 1=4	R29,570	37.45% & 84.65%	Yes
Nelson Mandela Metropolitan University	36	26	Home language or first additional language) = 3 Mathematics = Min 4.	BSc Degree & BSC Honours	3 + 1=4	R79,510	56.33% & 70%	Yes
Tshwane University of Technology	26	26	Maths = 4 (Not Maths Literacy) Physics = 3 English = 4	National Diploma & B Tech	3 + 1=4	R40,240	60%	Yes
University of Cape Town	36	30	Maths= 5 Physical Science =4	BSc Degree & BSC Honours	3 + 1=4	R129,000	70% & 95%	Yes
University of Free State	28	28	English = 4 Maths = 4	BSc Degree & BSC Honours	3 + 1=4	R71,200	70%	Yes
University of KwaZulu Natal	33	33	Compulsory: Life Orientation, Mathematics or Maths Literacy	BSc Degree & BSC Honours	3 + 1=4	R56,000	99%	Yes

University of Pretoria	28	28	1st Language (Eng, Afri) = 5 Maths = 4 Life orientation = 4 Physical science = 4	BSc Degree & BSC Honours	3 + 2=5	R120,350	70% & 95%	Yes
University of Witwatersra nd	36	30	English = 5 Maths = 5	BSc Degree & BSC Honours	3 + 1=4	R121,480	?	Yes
Walter Sisulu University	29	29	English = 3 Maths = 3 Science = 3	National Diploma	2 & 3	?	?	Yes
Johannesbu rg University of Technology	32	32	Maths = 5 Physics = 5 English (first language) = 5 English (second language) = 6 and more	National Diploma & B Tech	3 + 1=4	R104,000	37%	No

Table 38: Summary of all the Universities

University's	M Score	Level of course	Years of the course	Cost	Avera ge Start and finish	Council Recognised	Total
Cape Peninsula University of Technology	1	2	2	4	2	0	11
Central University of Technology	3	2	2	0	0	0	7
Durban University of Technology	0	2	2	0	0	4	8
Mangosuthu University of Technology	0	0	0	0	0	0	0
Nelson Mandela Metropolitan	3	2	2	4	3	4	18
University	4	4	2	2	3	4	19
Tshwane University of Technology	3	2	2	4	3	4	18
University of Cape Town	4	4	2	1	3	4	18

University of Free State	3	4	2	2	3	4	18
University of KwaZulu Natal	4	4	2	3	4	4	21
University of Pretoria	3	4	0	1	3	4	15
University of Witwatersrand	4	4	2	1	0	4	15
Walter Sisulu University	3	2	2	0	0	4	11
Johannesburg University of Technology	4	2	2	1	2	0	11

Table 39: Evaluation of all the Universities

A recommendation based on the above mentioned scores would be:

- Nelson Mandela Metropolitan University
- Tshwane University of Technology
- University of Cape Town
- University of Free State
- University of KwaZulu Natal

The University of Pretoria and University of Witwatersrand are also highly approved, but due to the high level of tuition fees this brings the score level to a lower scale with in reference to the other universities.

#### 3.16 Testing of hypothesis

#### 3.16.1 Synthesis:

What is required from a high school scholar in order for them to study at the different universities and colleges in South Africa and which institutions would be of greater recommendation?

#### 3.16.2 Hypothesis

There are many Institutions in South Africa where one can master the art of becoming a Quantity Surveyor. The question is, which one would provide for a better structured education? By showing the breakdown of the syllabi of the institutions one will be able to

determine for oneself which one would be best suited for their individual circumstances.

#### 3.16.3 Acceptance/Dismissal of the hypothesis

This has been achieved as the table above is proof as to what exactly each individual would look at when face with the challenge of choosing a University.

# Chapter 4: WHAT ARE THE DIFFERENT CAREER SECTORS WITHIN WHICH A QUANTITY SURVEYOR CAN PERFORM?

#### 4.1 Introduction

As the recession has had quite a big impact on the industry, one would find it hard to find work as a Quantity Surveyor. So if there weren't to be any work available one would have to find work in other parts of the industry as to stay afloat. The different lines of work are subdivided into: the building Industry, property sector, engineering sector and the financial and insurance sector.

#### Note:

- The bulk of this chapter was obtained from Eleine Human's thesis 2003.
- In Annexure A, extra information of the different work categories are included. Each being broken down into relevant information that is required. This information was obtained from <a href="http://www.payscale.com">http://www.payscale.com</a>.

#### 4.2 The Building Industry

#### 4.2.1 Project management

#### General

Project management is used to find companies corporate problems and find ways on how to rectify it. Project management is so diverse that it can be used in industries such including: pharmaceutical, chemical, banking and accounting, advertising, law and construction. Traditional methods of management can't be used as we live in such a diverse environment where things are constantly changing. But with project management a temporary management structure is used, which respond quickly to a specific situation. The main aim for management is to ensure activities to be within budget, time and

quality. This is achieved by allocating required resources and a good customer relationship.

#### Cost control:

They determine what professional persons will be required at different stages of the project as full employment would cause unnecessary costs. Employment of a professional quantity surveyor would help govern the suitable financial control of the project.

#### Communication:

The PM acts as a link between all parties involved, these parties include; the professional teams, local architects, and the construction team. At all times the PM must ensure the teams keep to the brief and maintain performance.

#### Skills Required

As mentioned in Project Management, a multidisciplinary approach:

- People management skills
- · Teambuilding skills
- Communication skills
- Negotiation skills
- Health and safety

#### Overlapping with Quantity Surveying

- Preparing feasibility studies and budgets.
- Preparing BOQ and tender documentation.
- Attain a fair method of obtaining contractors.
- Negotiating contracts
- Preparing contract documents and have a good contract understanding.
- Monitor costs and report to the client during construction and design.
- Determining the final account.
- Both QS and PM can be employed as a principal agent.

#### **Experience and qualifications**

At the University of Pretoria "Candidates for the MSc degree must be in possession of a BSc honours degree in a suitable scientific field" (Masters Programme in Engineering Management, 2010).

#### Registration Requirements

Registration with SACPCMP (South African Council for the Project and Construction Management Professions) is essential.

- Professional 4 year Bachelors degree and 3 years experience.
- Candidate Under the supervision of a professional.

#### Income Ratio

For the purposes of this thesis, the value 10 was used as an indicator of an average QS income and all other professions will follow with ratio relevance. An income value of 11. So one would receive more or less the same as a QS, maybe a little more. But if you find PM is a better line of calling then all the extra work of obtaining and studying would be worth while.

#### Feasible Rating

So one would receive more or less the same as a QS, maybe a little more. But if you find PM is a better line of calling then all the extra work of obtaining and studying would be worth your while.

#### 4.2.2 Arbitration

#### <u>General</u>

Arbitration Act No 42 of 1965 is the governing clause through which one needs to maintain a professional standard within the profession of Arbitration. Arbitration is a method through which disputes can be resolved. This method is of less expense and of little time consumption comparison to the court systems. Agreements such as the JBCC Principal Building Agreement provide arbitration as one of

the preferred methods through which problems can be resolved. This specific agreement states that Arbitrators can be self appointed or the assistance of the Association of Arbitrators can appoint one. The loosing party tends to pay for expenses of the Arbitration process. The arbitrator's decision is final and binding, but should there be feeling of unfair decision it can be taken to the South African Court of Law.

#### **Skills Required**

One needs to have expert knowledge in a specific field with which the case is having a dispute on. The wider your knowledge in different fields of construction the better judgement one can provide on a specific case as well as have the benefit of providing your services to many different types of cases. You would need to provide trust at all times and one can't provide preferential treatment to the party and not the other. With the sufficient trust comes the authority that one needs to obtain when providing your service within the case.

#### Overlapping with Quantity Surveying

- Knowledge within the construction industry.
- Knowledge of contracts, contract laws and South African common law.

#### Qualifications/Experience

- The longer one has been in the field the more experience one obtains, but as a junior, one has far to go before being in a position where it would be beneficial.
- University of Pretoria & AFSA (Arbitration Foundation of South Africa) provide a course in Alternative Dispute Resolution Diploma course (Dip ADR).
- Correspondence Courses in Arbitration 2010 "These courses are offered to both existing members and new members of the Association. Associate membership encompasses all who

consider arbitration a positive alternative procedure for settling disputes; including advocates and attorneys as well as those without qualifications in law i.e. businessmen and members of the construction industry; architects, accountants and quantity surveyors" (Correspondence Courses in Arbitration, 2010)

#### Registration Requirements

- Arbitration registration is not compulsory. Studying the ADR diploma course automatically includes you as part of the Arbitration Foundation of South Africa.
- The Association of Arbitrators (Southern Africa) is not compulsory but beneficial.

#### **Income Ratio**

Depending how often you provide your services, arbitrators earn between 13-14 on a full time scale, and 10-13 on a part time scale (Thus QS's earn on average of 10 in a ratio scale).

#### Feasible Rating

With being so young it would be real difficult to get into such a position. But once you have reached a position with the adequate skills it would be rewarding. Therefore as a person who has just completed their QS course would not find it a suitable place to start.

#### 4.2.3 Cost Engineering

#### General

This profession is mostly found in America. Capital and operating cost assessment used for investment funding and project control. One would work in the fields such as construction and production, but differs to QS in the way of obtaining your qualification.

#### **Skills Required**

Computer Literacy

- Statistical and probability analysis skills
- Productivity Management
- Human Relations
- Measurement
- Cost Estimating
- Cost Control
- Planning and Scheduling
- Contract Management
- Business Planning

#### Overlapping with Quantity Surveying

QS work scope in South Africa revolves around the construction industry, but over sea's one would find it a wider scope. QS has training in technical skills for example measurement where as with cost engineering it is more in the lines of commercial skills (Management).

#### Qualifications/Experience

QS's already have the skills to become a cost engineer, but just needs to adjust to the countries method of doing things in order to function fully.

#### **Registration Requirements**

ICEC – The International cost engineering council is a world wide organisation, which is made up of national and international associations. The members consist of QS, cost engineering and project management. A South African association consists of ASAQS (Association South African Quantity Surveyors).

#### **Income Ratio**

Dependent on the country, living expenses could differ a lot. As it is within the borders of South Africa one cant give a fair representation between the two.

#### Feasible Rating

Cost engineering in USA is competitive and acceptance of South Africans is not as much as it is in the UK market.

#### 4.3 The property Sector

#### 4.3.1 Facilities Management

#### General

The aim is to add value during the function and also to the life cycle of the building. A subsection of facilities management is maintenance management which involves the upkeep of the building. An example of such would be the running of a shopping centre with different shops to provide a service to.

#### Skills Required

One needs to have passion for ones work, as one would always need to be able to adjust in changing environment.

- Financial Knowledge
- Communication Skills
- Able to analyse a situation
- Have an understanding on the ins and outs of buildings functionality.
- Out going personality
- Be able to negotiate
- Technical Skills
- Knowledge of design

#### Overlapping with Quantity Surveying

A QS has the understanding on how the building functions and how the different elements are put together with their different characteristics. A brief overview of financial management is normally found in the standard BSc courses and diplomas, which contains subjects like economics, accounting, statistics and business management.

Life cycle costing helps to ensure that the building is built as economical as possible. Due to the lack of communication skills learnt during work experience one should pay attention to this.

#### Qualifications/Experience

As recommended by Mark Dicey as per Human(2003): "post graduate course in property management... and an MBA to provide one with all round good business skills" which is offered by the University of Johannesburg. Also recommended, by Juri Hausmann as per Human(2003): "CSCM (Certificate in Shopping Centre Management)".

#### Registration Requirements

- There are no compulsory registration requirements.
- SAFMA (South African Facilities Management Association) is not compulsory.
- Shopping centre managers don't have a compulsory registration, but can make use of information provided by SAPOA (South African Property Owners Association) and South African Council of Shopping Centres.

#### Income Ratio

There are two levels of Facilities Management, which consists of one managing a building and the other is running a whole portfolio.

Shopping centre management could earn in the same region of a quantity surveyor as 10.

Running a portfolio is a high ranked position, therefore one would earn a lot more, which is in the region of 15, but it would also be dependent on the level of experience. (Thus QS's earn on average of 10 in a ratio scale).

#### Feasible Rating

It is a highly recommended line as majority of all facilities managers have some sort of quantity surveying background. Quantity surveyors benefit from having the edge with the knowledge in technical and financial matters.

#### 4.3.2 Maintenance Management

#### General

One would need to ensure that a building is in full maintenance order to prevent the building from loosing it value. All requirements need to be fulfilled as it could cause poor performance by the building. Normally a budget is allowed for a building and it is the responsibility of the maintenance management to ensure that it is fits within budget. Bigger companies can afford to have a maintenance team working full time as with smaller companies the services are normally rented out.

#### **Skills Required**

One must have good technical and financial knowledge, which one needs to be able to communicate to the persons involved in such projects.

Job requirements would require one to: create a design brief for the building, assist in creating as built drawings and maintenance manuals, provide continuous information on the building condition which provides financial requirements that can be budgeted for and ensure at all times that cost, time and quality are adhered to.

#### Overlapping with Quantity Surveying

Quantity surveyors don't normally have suitable knowledge as a young professional, but with sufficient experience, the job challenges become easier. Each type of building has its own form of

characteristics which one can only learn when challenged with the problem/job of maintaining it.

#### Qualifications/Experience

Any additional courses done in civil, mechanical or electrical engineering could be of great advantage.

There are also software products which one can acquaint them selves with, which could make ones life a lot simpler, for instance:

"AMPRO is a CMMS (computerised maintenance management software) application that allows the structuring of your assets (plant, equipment, vehicles etc) in an organised and logical manner. You are able to prepare and document the maintenance history, schedule work that needs to be done on a routine basis, prepare unscheduled jobs that need to be carried out, and record work already completed. In each scenario, recording the information will assist you in managing and maintaining your assets in the future including budgeting and labour requirements."

(http://www.thirdcitysolutions.com.au/, 2010)

#### Registration Requirements

There are no compulsory registration requirements.

#### Income Ratio

On average one would earn less than an average quantity surveyor with a ratio of 9-10. (Thus QS's earn on average of 10 in a ratio scale).

#### Feasible Rating

It appears to be of less preferred line than a quantity surveyor as its financial reward is of less value. But for a person who likes a hands on approach it would be feasible to tackle such an opportunity.

#### 4.3.3 Property and Retail Management (Property Asset management) General

#### Services would include:

- Collection of rent and providing credit services
- Lease management and tenant liaison
- Paying accounts which would include water, electricity and taxes.
- Report feedback in which the client understands
- Contract management, between the lessor and lessee.

#### As explained by Human (2003):

Financial institutions use money from investors. Investors being people who want to invest in JSE stocks as wells as property, without owning it. Property units are placed on the JSE as PUTS (Property Unit Trusts) or PLS (Property Vehicles). Such an example would be of Sasol's units used as pension funds, which don't have any involvement in property. The advantage of such would be that pension funds can be altered with ease, from properties to shares or change the portfolio from offices to shopping centres. The main focus is more on the yearly return on investments than the actual development costs. This is done by analysing the management, rental contracts, rental arrears and by thus determine if it would be worth while keeping the portfolio.

Retail management manages a retail property portfolio. Some retail management companies focus just on managing retail buildings and shopping malls.

#### Skills Required

- Be able to analyse a situation and be able to predict of what the outcome could be when face with a new building.
- Entrepreneur and negotiating skills are required as to make as large profits as possible.
- One needs to have a passion for working with data and figures.

#### Overlapping with Quantity Surveying

Property development is present in the B.Sc (QS) degree courses, but just a basic idea is given. A brief overview of financial management is normally found in the standard BSc courses and diplomas, which contains subjects like economics, accounting, statistics and business management that could help in understanding the marketing sector.

#### **Qualifications/Experience**

- One learns a fair amount of property development within the B.Sc (QS) degree, but it is not enough as one would need to complete a post graduate degree course or obtain as much experience as possible.
- Financial qualification
- Post graduate degree in real estate (Offered by the University of Pretoria).

#### Registration Requirements

No registration is required, but it would be beneficial to join SAPOA (South African Property Owners Association) as well as SARC (South African Retail Council) as one could get up to date information on the property and retail sector.

#### Income Ratio

A property manager will have an income of average 14-15. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

A QS is provided with more than enough background knowledge and with this, one can build a career opportunity in property management.

#### 4.3.4 Project Consulting

#### General

The work involves:

- Bringing buyers and sellers together as well as organises financing and legal elements (With the aid of lawyers).
- Determine what the client wants, and provide the options of leasing, purchasing/selling, financing and tenant installations.
- Do feasibility studies to determine what would be the best outcome. This includes finding open pieces of land on which development can be developed.
- Advised on what consultants would be required for that specific development.

#### Skills Required

Skills required in the line of negotiation, financial and legal understanding. Be able to interpret the client's needs and fulfil it in that specific development.

#### Overlapping with Quantity Surveying

- Feasibility studies with financial background.
- Legal system with common law as well as the building laws and contracts.

#### **Qualifications/Experience**

- You would need about 2 years experience to get an understanding of what the requirements of the job would be.
- A post graduate degree in MSc Property Development can provide suitable information.
- MSc Degrees in real estate (Offered by the University of Pretoria).

#### Registration Requirements

No registration is required, but it would be beneficial to join SAPOA (South African Property Owners Association) as one could get up to date information on the property sector. Such information includes: Rental rates in certain areas and the availability of rentable areas.

#### Income Ratio

It is all dependant on the level of business skills and success, therefore a score of 5-30 can be achieved. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

One of the most recommended lines one can go into, but one needs years of experience before one would be at their prime so one could learn of all the fine detail requirements.

#### 4.3.5 Property Development

#### <u>General</u>

One would develop the property on behalf of the client on times where they don't have the knowledge or they want a specific building to be part of their portfolio, but don't want to have to have a direct commitment to the property.

#### Process involved:

- Determine the type of building that is required in the market (Desirability Study).
- Find a site, rezone it, have all municipality requirements fulfilled (Register Servitudes).
- Do a traffic study and geotechnical study.
- Do road changes and pay bulk services contribution.
- Get suitable professionals to design of the projects.
- Anchor tenants are obtained to have documented proof of agreement.
- Do the marketing by funding a purchaser for the project. Only once the financing has been received, purchase the land and professional team is appointed.
- It is the contractors' responsibility to find an available main contractor to perform the job. As well as acting as a letting agent, where he/she finds tenants for the building.

 The developer can join in with the client and benefit from the long term or take the short term option by just taking the profit of the building the building.

#### Skills Required

- One must be able to calculate risk.
- Be able to determine if a project will make money or not.
- Negotiation and communication skills as one would need to interact with many different persons.
- Be able to do financial control of the project.

#### Overlapping with Quantity Surveying

Quantity Surveyors work for developers, as they are able to fulfil the developer's requirements.

As building and financial understanding is the basis of property development, the quantity surveyors job is very similar.

#### Qualifications/Experience

Financial background is beneficial as well as a post graduate degree in real estate (MSc (Real Estate)).

#### Registration Requirements

No registration is required, but it would be beneficial to join SAPOA (South African Property Owners Association) as one could get up to date information on the property sector. Such information includes: Rental rates in certain areas and the availability of rentable areas.

#### Income Ratio

On estimation one can receive on average of about 18. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

It is a good alternative choice after building industry quantity surveying. In times of recession this choice of work isn't the best advised, but when the times turn a property developer can be well rewarded for the effort.

#### 4.3.6 Real Estate Sales

#### General

Real estate sale = Residential property sold to the general public (eg. Houses)

Property Consultant = Commercial or industrial units (eg Shopping centres).

One needs to be registered with the EAB (Estate Agents boards) to protect the interest of the general public.

#### Skills Required

Marketing and communication skills are real important.

#### Overlapping with Quantity Surveying

Both have understanding of immovable property, all legal requirements and financial control.

#### **Qualifications/Experience**

In order for one to have full status as an estate agent one needs to:

- Pass the Estates Agent Affairs Board Examination.
- Work as a candidate under the supervision of the qualified estate agent.
- As long as one passes the Estate Agent Board exam it wouldn't be necessary for a QS to have to require something else.

#### Registration Requirements

Registration with the Estate Agent Board at the Institute Of Estate Agents Of South Africa and maintain your membership by paying a yearly subscription to the Fidelity Fund Certificate.

#### Income Ratio

It depends on the supply and demand of the market, the interest rate as to lend money, the competition and the marketing mechanism. One would earn more or less 8-10. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

As long as one has good communication, marketing and communication skills, one can be very successful. The same applies to an Estate Agent as it does with a Property Developer with regards to playing your cards right in times of recession.

#### 4.4 Engineering Sector

#### 4.4.1 Civil/Process Engineering Estimating

#### General

An example of work would be of Sasol's refineries (Plant development) of which consists of piping, plate metal work, mechanical, electrical and instrumental installations. A quantity surveyors job would consist of measuring and producing bills of quantities, negotiating contractor roles, final account measurements and final account settlement". Administration for pre-contract phase is done by the engineers, and co-ordinates the post-contract phase should a QS not be employed. A quantity surveyor in such a role would need to be positioned on site to maintain the cost control. But on a regular occurrence quantity surveyors services are required to check the final account as the contractors often tend to disapprove of the final value brought forward.

#### Skills Required

The quantity surveyors skills are beneficial, but one needs to have the ability and willingness to work on site. Have a good general knowledge on all trades involved. Be able to make decisions and take responsibility for such decision. In different situations one should be able to apply your mind as to suits that situation

#### Overlapping with Quantity Surveying

All traditional quantity surveyors works should overlap with the engineering works. Even though both the traditional and engineering works have the same function in common with regards to financial analysis, they differ with regards to the type of works.

#### Qualifications/Experience

- Scope of work changes from traditional quantity surveying (Structural) to something more sophisticated (Civil). Therefore it would be beneficial for one to have qualifications in project management, cost engineering, arbitration.
- Have an understanding on how planning software works.
- The best results that one can achieve would be through experience, which one would need to work as a site quantity surveyor for training and be monitored by an experienced quantity surveyor.

#### Registration Requirements

There are no registration requirements, but it would be beneficial to join the ASAQS (Association of South African Quantity Surveyors).

#### Income Ratio

As there are only a few persons able to work within such a line, this causes the income level to be real high 7 - 20. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

If one has got sufficient experience, one would never have a problem with getting work in South Africa as the civil and mine industry is one

of the bigger industries in the country. Other works include government projects, which consists of roads, building water supplies, etc.

#### 4.4.2 Value Engineering

#### <u>General</u>

A career very similar to Value Management as previously mentioned. But, this is based on engineering and not building. "A procedure directed towards achievement of the required functions at the least cost" (Elaine, 2003). That is if the parties share the same understanding of the works involved and all alternatives provide the same performance, which then allows it to be valued on the cost.

#### Skills Required

See Value Management

#### Overlapping with Quantity Surveying

See Value Management

#### Qualifications/Experience

See Value Management, but one is required to have an understanding of the engineering industry.

#### Registration Requirements

See Value Management

#### Income Ratio

Based on the same seniority as with a quantity surveyor one would earn in the region of 10. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

As one does not have knowledge in engineering, but have the required knowledge in value management, one still needs sufficient

experience in engineering to make it worth while. But a person who has already advanced in the building industry would find it difficult to change fields, which would cause that person to work from the bottom again. It would be more feasible for an Engineer.

#### 4.5 Financial and Insurance Sector

## 4.5.1 General Asset Management

#### General

One would manage any possible risks that could affect a long term investment. For example a pension fund. One would need to ensure the client that the best possible return on their invested money. Certain strategies need to be worked out as well as predictions need to be determined as to what could happen in the future.

#### Skills Required

- Know what's happening in the market with the different trends.
- Be able to make quick independent decisions, but still be able to interact with a team.
- Be able to apply your mind in different scenarios.
- Be able to manage a team.
- Financial understanding is of real importance.
- There is enormous stress level, but if done correctly one is well rewarded.

#### Overlapping with Quantity Surveying

- The quantity surveying course involves subjects like statistics, accounting and financial management, which gives a basis for the asset management work line.
- A feasibility study is very similar to the method through which return on investment is determined.
- The understanding of the property sector assists in determining portfolio's within the asset management.

#### Qualifications/Experience

The best supplementary degree which a quantity surveyor can study is the Masters in Business Administration degree. Experience can never be enough, as one becomes better and better every day.

#### Registration Requirements

No registration is required.

#### **Income Ratio**

There are exceptions where one could earn up to 200% more, but this would mean the necessary qualifications and experience. But to be on a more reasonable size, 15 would be suitable. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

The Quantity surveying course sure wouldn't be enough to support your line of work as an Asset Manager, therefore many more skills are required as well as courses. Therefore a person who feels they have the drive to pursue more years of studies to achieve such goals, would be best suited. But for the number of years of additional studies, wouldn't make it feasible.

# 4.5.2 Financial Management

#### General

One controls all decision making within a firm which involves branch and assistant managers by providing suitable rules of financial management. The roles could include: "Statutory control, tax legislation and international General Accepted Accounting Principles (GAAP)" (Human, 2003).

Financial Management and Auditing are both done with the intension of becoming a chartered accountant. Accountants have the role of four services, such includes Auditing, Tax Management, Management Advisory Services and sectional and accounting services.

# **Skills Required**

Communication needs to be done in a technical and a professional manor. One should also be able to work with numbers quickly and accurately.

#### Overlapping with Quantity Surveying

Quantity Surveyors are financially orientated, therefore providing suitable skills. A basic induction to accounting in the BSc (QS) course provides a platform for one to have a basic understanding to begin the accounting course.

## **Qualifications/Experience**

A course provided by CICT:

- Accountants conversion course (1 Year).
- Post graduate Diploma in Accounting (1 Year).
- Either Auditing (TIPP) or financial management (TOPP) (3 years) training and then write a QE1 in the first year.
- Then write QE2 for either course taken as mentioned above only after 18 months of the training contract and also passed the QE1.

#### Registration Requirements

Registration with the South African Institution of Charted Accountants, thus only done when one has passed all exams and training.

#### Income Ratio

Auditing = 18 - 30 and can earn up to 20 - 50. (Thus QS's earn on average of 10 in a ratio scale)

#### Feasible Rating

The one year full time conversion course is 3 years crammed into one. This creates a lot of pressure on one, but if you have the ability

to study after a four to five year quantity surveying course then one should attempt the challenge of another four years to become a professional charted accountant. Financially one's benefit would surpass that of an ordinary quantity surveyor.

# 4.5.3 Loss Consultant/Adjuster

#### General

One provides an evaluation service to insurance companies who receive claims form their clients/customers. Certain categories in which one can claim within the construction industry includes:

## **Public Liability**

- Cover all plant risks
- Lateral support
- Machinery breakdown/loss of profit
- Professional indemnity (QS, Architect, Engineer)
- Fire and theft

## **Skills Required**

- Construction and Insurance industry knowledge.
- Be able to communicate all necessary information.
- Have the public's interests at heart (Act with prejudice).
- Contract condition understanding.
- Knowledge of cost which makes up a rate.

#### Overlapping with Quantity Surveying

- Understanding of the construction industry.
- Cost evaluation
- Able to understand and interpret contracts

#### Qualifications/Experience

Provided by Insurance Institute of Southern Africa:

Diploma in Insurance

Advance diploma in Insurance Management

Higher certificate in Insurance

• Obviously the more experience one can obtain the better.

## Registration Requirements

Require: Registration with Institute of Loss Adjusters of Southern Africa.

#### Income Ratio

One should receive more or less the same amounts as per a normal quantity surveyor, but depending on your inputs and commitments one could benefit immensely should you open your own business and pull in a big company like Outsurance. (Thus QS's earn on average of 10 in a ratio scale)

# Feasible Rating

Depending on what type of course one takes to obtain additional insurance knowledge. It could be quite a rewarding line of work to work in. One doesn't really have to learn much more in terms of construction as one has got the basis of construction knowledge from the quantity surveying course.

# 4.6 Testing of hypothesis

## 4.6.1 Synthesis:

What are the different career sectors within which a quantity surveyor can perform?

#### 4.6.2 Hypothesis

Quantity Surveying as an occupation, can be performed in many different lines which include:

- The building industry
- Property sector
- Engineering sector

#### The financial and insurance sector

With the use of the following headings: general, skills required, overlapping with quantity surveying, qualifications/experience, registration requirements, income ratio and feasible rating, the different lines of works will be subdivided into the suitable information required so anyone can do a comparison between them. Each line of work provides a person with a completely different lifestyle, which one could chose from an early age, as long as they have been informed within sufficient time. At least a person would know what they getting themselves into with the information provided.

# 4.6.3 Acceptance/Dismissal of the hypothesis

All information required within the different lines of a quantity surveyor profession has been briefly discusses. One would be able to assess each and individual career line with different expectations in mind. One can make use the information to link up what skills and requirements one would needs to obtain in order for one to obtain a future goal.

Chapter 5: WHAT ARE THE DYNAMICS THAT CAN BE ENCOUNTERED WHEN FACED WITH THE SALARY ONE CAN EARN AS A QUANTITY SURVEYOR AND WHAT TYPES OF LIFESTYLE CAN ONE EXPERIENCE FROM THAT?

#### 5.1 Introduction

As any person would do when adventuring into a new or different career line, one would do the research of finding what benefits one can encounter should they pursue that line. One of the main self-satisfying requirements of a job would be to have security and then have the self-satisfaction of what one does.

#### Note:

The content of this Chapter was obtained from a salary survey provided by the ASAQS (Association of South African Quantity Surveyors) for the period 2 December 2009, this including the tables and graphs to follow.

# 5.2 Areas of the country

Province / Area	Start	0 -2	3 – 5	6 - 10	11 - 20	21 - 30	31+
Eastern Cape		138,700	252,000	322,866		420,000	
Free State		165,500	285,600				
Gauteng	124,900	198,814	323,031	435,600	522,603	647,500	599,260
KZN	120,000	144,000	216,532	498,307	786,775		406,708
Lesotho			270,000		600,000		
Limpopo		183,000		284,000			
Mpumalanga							
Namibia							
Northern Cape	156,000						
North-West				421,365		455,000	
Western cape	162,500	175,000	240,310	424,441	686,749	710,000	774,140

Table 40: University: Median R, Current prices of different years of experience in different provinces (ASAQS, 2009)

Province / Area	Start	0 -2	3 – 5	6 - 10	11 - 20	21 - 30	31+
Eastern Cape			209,400	176,274			
Free State				270,000			
Gauteng	97,500	255,000	293,000	339,400	713,251	530,000	601,248
KZN	102,000	92,813	155,253	299,946	390,159	385,250	
Lesotho	108,000	135,000	270,000				
Limpopo			245,920				
Mpumalanga			221,000				
Namibia			350,000	320,400			
Northern Cape							
North-West		290,000	362,203		550,000	390,000	
Western Cape	94,250	130,000	240,000	395,000	400,000	405,877	410,000

Table 41: Technikon: Median R, Current prices of different years of experience in different provinces (ASAQS, 2009)

Province / Area	Start	0 -2	3 – 5	6 - 10	11 - 20	21 - 30	31+
Eastern Cape		26,400	36,000	114,000	211,200		
Free State							
Gauteng		170,920	275,180	71,772	326,033	332,300	489,541
KZN		71,208	72,546		180,835		
Lesotho							
Limpopo						130,000	
Mpumalanga	48,000		222,200				
Namibia							
Northern Cape							
North-West			75,010		136,941	630,930	
Western Cape	58,500	93,000	103,020	306,460	230,999	470,000	607,760

Table 42: No formal education: Median R, Current prices of different years of experience in different provinces (ASAQS, 2009)

As one can see from the survey that there is one distinct location which pays a higher salary than the rest, this being Gauteng. Gauteng described as the Mecca of Africa is one of the most productive locations which creates majority of South Africa's economic turnover.

Quantity surveying is one of those advantageous jobs which if you are employed by the client one would only have to go to site on a weekly basis and not be there permanently. Thus resulting in a large number of quantity surveying firms found in Gauteng. This producing easy access to transport facilities which can transport (Airport) one anywhere within the country or the world where one can gain access to ones sites.

Gauteng has also got one of the fastest growing markets with regards to building. This resulting in a large need for quantity surveyors on site. All depending on the size of the project one can expect from one quantity surveyor, who checks every other day, to a project with three to five professional quantity surveyors based on site.

The economy also plays a major factor on the availability of jobs, as if there were to be no finances to fund projects, it would then result in there being an oversupply of quantity surveyors without jobs.

This situation can be explained with the aid of the "Supply and Demand" graph, which to an extent can also explain the level of the salary ratio, which a person can receive depending on the location and the economic situation.

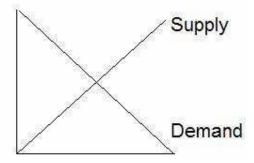


Figure 2: Supply and demand graph (Economics, 2010)

Due to the high level of work available within Gauteng there is not enough quantity surveyors to perform such work. Should they increase the value of wage value a lot more quantity surveyors would migrate to Gauteng in search of a better lifestyle supported by the higher income.

As living conditions within Gauteng are of different dynamics to those of other provinces, one's salary tends to be higher. Factors which could affect the price would be the cost of food, accommodation prices, long travelling distances to work and obviously the major factor would be the stress levels that one has to live with at work and within the living environment

Government is one of the strongest money suppliers in infrastructure in our country, which diversifies from building houses, to bridges, to dams, pipelines, etc. The countries population is forever growing which requires constant service delivery to be updated at regular intervals. Major government offices are based in large cities or towns, therefore for one to gain access to such work supply one would need to be within the facenity to have easy access.

# 5. 3 University vs. Technikon

Even though all technicians have merged into University institutions in today's terms, the data found in such figure below represents the data from previously studied scholars at technikons and universities before all study institutions merge to universities.

Previously known as technikons:

- Cape Peninsula University of Technology
- Mangosuthu University of Technology
- Durban University of Technology
- Tshwane University of Technology
- Johannesburg University of Technology

# Central University of Technology

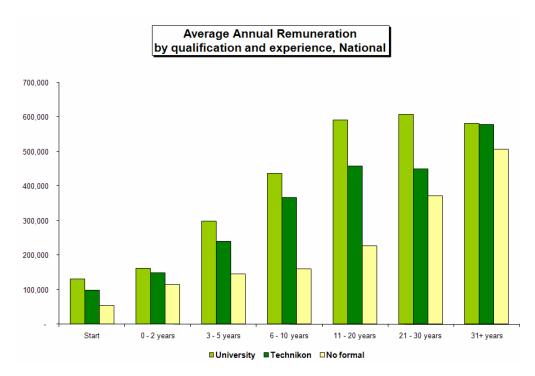


Figure 3: Average annual remuneration, by qualification and experience, National (ASAQS Salary Survey, 2009)

As indicated on the graph, the universities are the better choice when it comes down to the material remuneration. Every category indicates even though one pays dearly for ones fees at the University, one only receives it back later on in life when you are working within the industry. With higher fees for tuition one obtains better training from people who are good at what they do. There are many students who enter into the market who don't have a clue on how to do certain exercises which is required from them.

But there is a certain factor that gives the Technikon that edge, thus being that their students are required to work on site for a year, this mainly being in their second year. This assists students to put all practical experience into logical understanding when doing the theory in class.

Numerous amount of individuals in the industry have the opinion that the level of knowledge learnt at the universities are of higher value than the students at the Technikons. But with the Technikons converting to Universities, the standard of education is increasing and the level of performance is increasing.

There are many study institutions that are merging in order to provide a better structure for that University. An example of such would be Cape Peninsula University of Technology Bellville Campus merging with the Cape Town Campus.

The number of students that study at the Technikons normally end up working for the contractor within their first few years of qualifying as they normally gain experience from that company within their year of practical experience. The conditions on site and the fact of moving every time a project comes to an end results in the Quantity Surveyor being paid more, to make it worth while, and to encourage them to stay on at their job. Therefore the quantity surveyor's working on site are generally offered about 30% more income than a person who works for the client. It is generally ones personal opinion in which type of lifestyle one would like to live in.

One last reason for studying through certain universities and not others would be the quicker time of gaining access to ones quantity surveying qualification. An example of such would be of the University of Pretoria where one has to study for five year where as with the other universities one would only have to study four years to gain your qualification.

#### 5.4 Years of Experience

Obviously with more time within the industry the better understanding on learns on how things operate within the working environment. The more one specialises within a certain field the more valued your skills are and the better ones time would be rewarded financially.

As seen on tables 38 to 40 your income gradually grows the more you are within the industry. The chances of getting value for money would be better with a more experienced person costing you more than a person who has just come out of studying, which in the long run would cost you more money than what it originally lost.

An essential factor that one always needs to keep up with is technology. Due to time is money concept, technology is the ultimate edge over all persons who have been left behind on the old system. In the past it would normally take months on end to compile a full sized building bill of quantity, but now days it can take up to three weeks depending on the size of the project. Now days within a job description it is really essential to have experience in computer aided programs, without such knowledge the younger generation has as an advantage over the older generation quantity surveyors.

When one obtains your professional status in quantity surveying one automatically benefits financially and in the manor of being able to open your own business. With the different study institutions the process on getting there is more complicated, but with the University of Pretoria one is required to do your part time studies in your fourth and fifth year with additional two years working experience, before one can apply for your professional quantity surveying status.

Should you choose the field within the quantity surveying line, one should ensure what they are doing is actually what they would be happy to do for the rest of their life. Should one decide to change after years in such line it would mean starting from the bottom and working yourself all the way up again.

The longer one works for a company the better position you would be put in, thus providing you with authority, which would ensure a greater reward. But some times staying at one company doesn't always ensure that a person would be rewarded to their true value as one tends to find a comfort zone where you find it unbearable to change the scenery and have the unbearable challenge of starting all over again. Thus providing the owners of the business the advantage to pay you just enough to encourage you to stay, but which is not of your true reward for such work compiled.

# 5.5 The working environment overseas

Refer to **Annexure B** for examples of different job specifications of a QS in other country's.

The five major countries within which one could adventure your skills include:

- Australia
- England
- Canada
- USA
- New Zealand

South Africans are renowned for their ability to plug and play. We have been brought up in such a dynamic environment that when faced with another countries differences, we are able to adjust to such. The systems in the different countries are of similar structure, but when they are different, like for instance in the USA one would just specialise in cost estimating. Thus being one of the elements that should be taught in the quantity surveying course.

#### Australia

From the word of mouth the general perception of Australia is quite good. The environment and living conditions are of similar qualities as one would encounter here in South Africa. Quantity Surveying is also one of the jobs that can be found on the short list, thus providing a guarantee that of getting a job when moving abroad.

A brief job description found on the internet site called simply hired (2010):

"This consultancy provides expert advice and services covering estimating, cost planning, engineering services cost management, BoQ's, contract management, tax depreciation schedules, contract claims advice, risk management and independent certification and review.

Due to growth within the company, they currently require an experienced intermediate Quantity Surveyor to become an integral part of their Canberra based team. In this small office you will work under one of the directors and be involved from concept to the final account. A large portion of the job will be client facing and on site visits and meetings.

You will bring to the team of professionals your:

- Proven ability and success in quantity surveying
- Focus and ability to effectively manage the cost and variations on a variety of projects and sectors
- 2-3 years experience in the Sydney or Canberra market
- 5 years + experience with a PQS consultancy in total
- Buildsoft and CostX software experience
- Bachelor of Construction Management
- Sound written and verbal communication skills
- Professional approach and attitude"

## **United Kingdom**

If one can overcome the miserable weather encountered in the United Kingdom, thus including Scotland, England, Wales and Northern Ireland, one could benefit greatly in the form of finance.

Where we work on the "Standard System" to measure and create Bills of Quantities they make use of the "Pomi" system, which is based more on a linear measuring system. Our system works on a very similar basis to theirs, therefore for a South African moving abroad would find it very easy to adjust to their systems. It would just be a matter of changing the units of measurement for instance when we use "kg" they would use "stone".

One would eighty percent of the time be based in London, due to the easy access to the transport system.

A brief job description found on the internet site called Gumtree (2010):

"We are currently looking for a Quantity Surveyor/Snr Quantity Surveyor with demonstrable knowledge of working on multi-million pound residential, commercial and mixed use development projects. All projects to be undertaken will be based in London/Greater London.

You will need to be very comfortable working on complex and challenging projects. Knowledge of working on New-Build projects is ESSENTIAL.

You MUST have a stable work history and demonstrable knowledge of working in the construction industry from a Quantity Surveying perspective.

#### Key skills:

- Procurement
- Multiple package management
- Tender Allocation/Putting detailed enquiry packs together
- Working directly from drawings when required to do so
- Knowledge of Estimating from first principle
- Knowledge of working with RC Frames
- Strong sub-contractor management skill-sets
- Some knowledge of working with M+E packages
- Demonstrable managerial experience
- Strong Estimating/Cost-Planning skill-sets

- Excellent commercial awareness
- Excellent reporting and presentational skill-sets

Solid knowledge of the UK construction industry would be ideal but if you have an excellent track record gained in a foreign jurisdiction you will be considered. The ideal candidate will have 1st class numerical, time management, organisational and communication skill-sets. construction based degree is desirable but not essential. Your construction knowledge, drive, intellect, work ethic and ambition will be the primary factors in gaining employment with my clients. My client is looking for candidates with stable working а history.

You must eligible to work on a full-time basis in the UK. This is non-negotiable.

My client offers an excellent package incorporating a basic salary, car allowance, health care and pension contributions. My client also offers a genuine career trajectory and the opportunity to progress at a rapid rate within the company structure."

#### Canada

A brief job description found on the internet site called working.com (2010):

- "Apply Company and project specific HSE policies and related standards
- Achieve an accident and incident free performance
- Development and validation of project cost estimates for the facilities
- Analysis of data to maximize estimate accuracy including estimate quantities, benchmarking, pricing, adjustments and methodologies
- Oversee the EP contractor's consistency of data and reporting standards

- In close cooperation with PRO EST ensure adequate quality assurance of all deliverables meeting the format and general requirements of our client
- Keep the agreed schedule for all deliverables
- Communicate effectively with peers, colleagues, contractors and customers

Create a positive team spirit and ensure adequate workload and professional development"

#### USA

A brief job description found on the internet site called Energy Central Jobs.com (2010):

"Typical Responsibilities:

The successful candidate will work in Cost Estimating in TDBU. The primary function is performing cost analysis, and developing recommendations in support of substation and transmission line projects. Typical responsibilities include: performing cost estimates, applying SCE cost estimating standards to all elements of the estimate, ensuring cost estimates are controlled, updated and communicated per SCE guidelines, using actual data to conduct lessons learned analysis to update assumptions and methodologies. The candidate will also provide peer review for cost estimators and perform other duties and responsibilities as assigned."

#### New Zealand

A brief job description found on the internet site called New Zealand Institute of Quantity Surveyors (2010):

- "The preparation of Bills and/or Schedules of Quantities of materials, labour and services required in the construction and equipment of building, or engineering works, and;
- The preparation and valuation of progress and final payments in connection with any contract or sub-contract, and;

- The appraisal of the value of proposed constructions or other structures already erected, and;
- The preparation of specifications when required so to do, and;
- Acting as arbitrator in cases of dispute in connection with building, or engineering work, when required so to do, and;
- To advise from time to time on cost management, or value management.
- To carry out such other duties as may properly be those of a Quantity Surveyor."

#### Recognition Requirements

Obviously the correct membership requirements are essential to be recognised overseas. One of the councils that are recognised world-wide is RICS (Royal Institution of Chartered Surveyors). This can be obtained by obtaining your professional quantity surveying status and then just a matter of filling in the form to apply. Whereas in other countries persons would have to undergo required tests to be able to join the council.

# 5.6 Testing of Hypothesis

### 5.6.1 Synthesis:

What are the dynamics that can be encountered when faced with the salary one can earn as a quantity surveyor and what types of lifestyle can one experience from that?

#### 5.6.2 Hypothesis:

Due to financial benefits being the driving force behind employment, it is crucial for one to determine what you would want to eventually achieve one day. With the required information one could also determine the type of lifestyle that they could afford. A person can never be too young to have structure and have a plan in life. The monthly salary can be affected by certain factors, including where you studied, geographical factors and years of experience.

# 5.6.3 Acceptance/Dismissal of the hypothesis

The hypothesis has been solved, as a quantity surveyor one has not only the advantage of studying anywhere in South Africa, obviously some Universities better than others, but one also has the advantage of working more or less anywhere in the world. Thus including the major wealthy counties in the world. With the right education background and sufficient years of experience there is no holding back to the lifestyle desired.

# Chapter 6: SUMMARY, CONCLUSION and RECOMMENDATION

# 6.1 Background

As high school students adventure into the world of unknowns one is always in search of the ideal opportunity which would fulfil their life ambitions. As there are many factors that have to be taken into consideration, this including availability of jobs, financial reward, location of this job... etc.

One can decide whether quantity surveying would be that which fulfils theirs goals or the use of such would be a mere tool to get one into a position of fulfilling life goals. A quantity surveyor being a cost consultant within the construction industry has changed dramatically through the years. This being paper based to technological era which obviously opened up the probabilities to new levels as a quantity surveyor.

As the world's population growth is constantly growing at a rapid rate one always needs building, housing and infrastructure to sustain the functionality of humans on earth. Therefore one would always require new buildings to be built and old ones to be renovated, this giving the quantity surveyor ample amount of work and the diversity within which one can work.

This study has investigated the wide scope within which QS can fall into. Thus providing one with the "survival guide" on what is it, where you can obtain it, what you can do with it and would it be a line worth adventuring into.

# 6.2 Statement of the main problem

What, how when and why about a quantity surveyor as needed by a scholar when making the decisive decision of choosing a career line as a quantity surveyor.

## **Hypothesis**

The Internet can only show a certain degree of information about a subject and with the assistance of this thesis one will be able to capture all required information about one topic in one book. By the end of your reading one will be able to decide on all the pro's and con's that one will encounter when approaching the line of quantity surveying as a student. As well as a student making a lifetime decision on what line of quantity surveying career one will want to follow.

#### 6. 3 The Research

This study challenged the main problem with multiple different sections within which the quantity surveyor career can be broken down into. This information was obtained through telephonic and email questionnaires and the use of reliable internet and book resources. Anything that a scholar could possibly think about, which would make them curious about such job could be found in such content.

#### What is a Quantity Surveyor and what work does he/she perform?

Reliable information was obtained from the different associations and councils websites, as well as the suitable course content receive at the University of Pretoria. A broader outline was brought forward other than just saying that they are the guys that count the bricks.

# What is required from a high school scholar in order for them to study at the different universities in South Africa and which institutions would be of greater recommendation?

Suitable contact was made through email and telephonic conversation, and when the information was already available on the internet web pages of the universities such information was used.

But certain information could not be found or supplied by the required resource. Therefore the decision was based on the information that was at hand in order to provide a fair evaluation.

# What are the different career sectors within which a quantity surveyor can perform?

With the aid of Human(2003) sufficient information was obtained as to what the better lines of work a quantity surveyor could pursue should the ordinary boring building measuring become too repetitive. Such work was subdivided into headings. Under each profession the headings below were used to describe the jobs of the quantity surveyor in a more understandable structure.

- General A basic understanding on what the career is all about.
- Skills required A general list of skills that were required in order to be able to perform your best in that line.
- Overlapping with the quantity surveyor The similarities between that specific line and quantity surveying.
- Experience and qualifications What is required from you in order to pursue that line of work.
- Registration Requirement If any, to what would one need to register to in order to practise in that line.
- Income ratio In relation to the value ten allocated to a quantity surveyor the rest of the professions were ratioed to such.
- Feasible rating A score out of ten was allocated depending on the recommendation of what the suitable worthiness of the career line would be.

# What are the dynamics that can be encountered when faced with the salary one can earn as a quantity surveyor and what types of lifestyle can one experience from that?

Based on a survey compiled by the ASAQS (Association of South African Quantity Surveyors) a survey on the different income could be demonstrated within the lines of study institutions, years of experience and geographical areas.

With all the above mentioned criteria one would surely be able to build a life model in what to achieve. Thus varying from what you want to achieve in life, in the sense of a salary, location, what type of job characteristics one would want to have... etc.

# 6.4 Conclusion and Summary

The main problem has been solved through the explanation in the previous chapters. Below one would find a summary of all the essential parts that need to be taken into consideration when it comes down to the basic understanding of what, how when and why about a quantity surveyor.

- A quantity surveyor is a financial consultant for the built environment.
- Recommendation of studying institutions:
  - Nelson Mandela Metropolitan University
  - Tshwane University of Technology
  - University of Cape Town
  - University of Free State
  - University of KwaZulu Natal
- If you had to change the line of work of a traditional quantity surveyor the best options that one could venture into includes the three below mentioned professions: (As per feasible rating)
  - Property Consulting
  - Property Development
  - Process engineering estimating
- Based on Gauteng in the graph below, an indication of the increase of salary with experience.

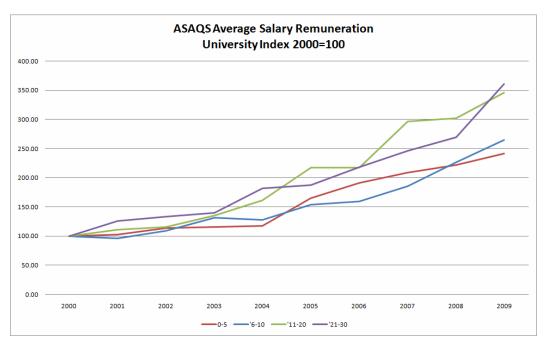


Figure 4: University Experience/Salary graph (ASAQS Salary Survey, 2009)

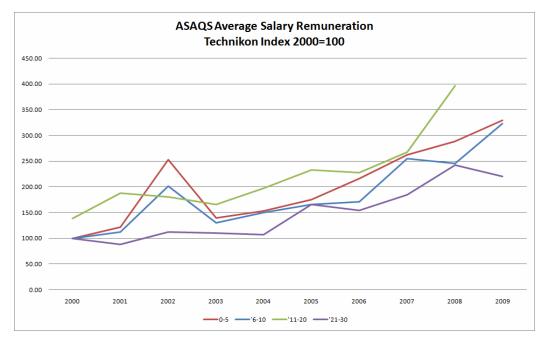


Figure 5: Technikon Experience/Salary graph (ASAQS Salary Survey, 2009)

 Universities are of the better remunerated study institutions even though they are pricey with regard to the tuition fees.

- Gauteng is the location of the highest paid salary within South Africa.
- The quantity surveying course recommended by SACQSP (South African Council for the Quantity Surveying Profession) provides a prerequisite to not only prepare one for the South African market, but also for the larger countries like Australia, United Kingdom, New Zealand, Canada and USA. One would easily be able to adjust to the countries systems to perform what is required from them.

#### 6.5 Recommendations

- As technologies are advancing faster than ever before and taking over jobs that were once done by students, like for example measuring the bills of quantities, one would be able with a click of a button be able to determine what a building consists of. What is the future for quantity surveyors and should there be a concern that there is an over supply by the universities institutions?
- As mentioned before, but beyond the borders of South Africa.
- Would one be able to compress the 4-5year honours course into a 3 year course in order to get persons more exposed to the industry as soon as possible?
- Can quantity surveyors convert to construction managers as an alternative career line and would it be worth it?
- How many quantity surveyors that qualify at the study institutions continue the career lines in the traditional quantity surveying and if they do so what is the incentive?

## **BIBLIOGRAPHY**

#### **EMAIL CORRESPONDANCE**

Association of South African Quantity Surveyors (Industry Insight),
 December 2009. Association of Quantity Surveyors Salary Survey.

#### INTERNET RESEARH

Association of South African Quantity Surveyors, 2010.

Internet: http://www.asaqs.co.za

Access: 17 March 2010

 ROBINSON, B.A, 2007. End of the World Predictions, Ontario Consultants on Religious Tolerance.

Internet: http://www.religioustolerance.org/end wrld.htm

Access: 1 June 2010

 Quantity Surveying Profession act Republiek van Suid-Afrika wet op die bourekenaarsprofessie no, 2000 act, 2010.

Internet: http://www.sacqsp.org.za/ftp/ACT%2049.pdf

Access: 6 April 2010

• Livermore, R. (2008.) Quantity Surveying.

Available:http://www.prospects.ac.uk/p/types of job/quantity survey

or job description.jsp
Access: 6 April 2010

• Quantity surveying jobs, 2010.

Available:http://www.gumtree.com/london/27/55563827.html

Access: 6 April 2010

• Study programmes and admission requirements, 2010

Available:http://info.cput.ac.za/prospectus 3/CPUT%20Admission%2

0Requirements%202010.pdf

Access: 2 July 2010

 Engineering - Cape Peninsula University of Technology: Western Cape, 2010.

Available: <a href="http://info.cput.ac.za/prospectus">http://info.cput.ac.za/prospectus</a> 3/cluster.php?f=6

Access: 2 July 2010

School of Civil Engineering and Built Environment, 2010.

Available: <a href="http://www.cut.ac.za/web/academics/faculties/eng/scebe/homepage">http://www.cut.ac.za/web/academics/faculties/eng/scebe/homepage</a>

Access: 2 July 2010

• Admission Requirements, 2010.

Available: http://www.cut.ac.za/www/news/enroll2009

Access: 2 July 2010

• Faculty of Engineering and the Built Environment, 2010.

Available: <a href="http://www.dut.ac.za/pages/22383">http://www.dut.ac.za/pages/22383</a>

Access: 4 July 2010

Entrance requirements, 2010.

Available: <a href="http://www.dut.ac.za/site/files/6636/entrance%20requireme">http://www.dut.ac.za/site/files/6636/entrance%20requireme</a>
<a href="http://www.dut.ac.za/site/files/6636/entrance%20requireme">http://www.dut.ac.za/site/files/6636/entrance%20requireme</a>

Access: 4 July 2010

 DEPARTMENT of CONSTRUCTION MANAGEMENT and QUANTITY SURVEYING Handbook for 2010, 2010.

Available: <a href="http://dutweb.dut.ac.za/handbooks/EEBE%20Con%20Mgt">http://dutweb.dut.ac.za/handbooks/EEBE%20Con%20Mgt</a> %20&%20QS.pdf

Access: 4 July 2010

• Admission requirements for undergraduate programmes, 2010.

Available: <a href="http://www.nmmu.ac.za/documents/publications/SPS%20bo">http://www.nmmu.ac.za/documents/publications/SPS%20bo</a>
oklet.pdf

Access: 4 July 2010

Building and Quantity Surveying, 2010.

Available:http://www.nmmu.ac.za/default.asp?id=5911&bhcp=1

Access: 4 July 2010

 Faculty of Engineering, the Built Environment and Information Technology, 2010. Available: <a href="http://www.nmmu.ac.za/documents/publications/UG%20Engineering.pdf">http://www.nmmu.ac.za/documents/publications/UG%20Engineering.pdf</a>

Access: 4 July 2010

• Baccalaureus Scientiae In Construction Economics, 2010.

Available: <a href="http://www.nmmu.ac.za/default.asp?id=4883&aq=4J&qc=47">http://www.nmmu.ac.za/default.asp?id=4883&aq=4J&qc=47</a>

002&fc=1700&cf=5911&bhcp=1

Access: 14 July 2010

National Diploma: Building, 2010.

Available:http://www.nmmu.ac.za/default.asp?id=4883&ag=7C&gc=3

262&fc=1700&cf=5911&bhcp=1

Access: 14 July 2010

Fees per a Module, 2010.

Available: <a href="http://www.nmmu.ac.za/default.asp?id=5258">http://www.nmmu.ac.za/default.asp?id=5258</a>

Access: 14 July 2010

Quantity surveying brochure, 2010.

Available: http://www.fe.tut.ac.za/UploadedFiles/Brochures%202010/B

uilding%202010.pdf

Access: 14 July 2010

• Construction Economics Management, 2010.

Available: www.cons.uct.ac.za

Access: 5 July 2010

 Faculty of Engineering & the Built Environment 2009 Entry Requirements for applicants who wrote matric before 2008, 2010.

Available: <a href="http://www.ebe.uct.ac.za/usr/ebe/apply/matric%20entry%20">http://www.ebe.uct.ac.za/usr/ebe/apply/matric%20entry%20</a>

before%202008.pdf

Access: 5 July 2010

Entrance requirements, 2010.

Available: http://www.ebe.uct.ac.za/apply/requirements/

Access: 5 July 2010

Fees 2010, 2010.

Available: http://www.uct.ac.za/usr/finance/fees/fees2010.pdf

Access: 13 July 2010

• Quantity Surveying and Construction management, 2010.

Available: <a href="http://www.uovs.ac.za/faculties/index.php?FCode=04&DCo">http://www.uovs.ac.za/faculties/index.php?FCode=04&DCo</a> <a href="mailto:de=115">de=115</a>

Access: 5 July 2010

 ADMISSION REQUIREMENTS FOR STUDY AT THE UNIVERSITY OF

THE FREE STATE (GENERAL REGULATIONS A2, A3 AND A4), 2010.

Available: <a href="http://www.ufs.ac.za/faculties/documents/H1/HD1/regulatio">http://www.ufs.ac.za/faculties/documents/H1/HD1/regulatio</a>
<a href="ns/2009">ns/2009</a> Toelatingsvereistes 2008 2009 Eng.pdf

Access: 5 July 2010

• Property Development, 2010.

Available:http://propertydev.ukzn.ac.za/CareerPaths400.aspx#q1

Access: 6 July 2010

• Entrance Requirements, 2010.

Available: <a href="http://engineering.ukzn.ac.za/StudentInformation/EntranceR">http://engineering.ukzn.ac.za/StudentInformation/EntranceR</a>
<a href="equirements.aspx">equirements.aspx</a>

Access: 6 July 2010

 CONSTRUCTION ECONOMICS UNDERGRADUATE DEGREES, 2010.

Available: <a href="http://web.up.ac.za/default.asp?ipkCategoryID=3295&sub="http://web.up.ac.za/default.asp?ipkCategoryID=3295&sub=1&parentid=3289&subid=3294&ipklookid=7">http://web.up.ac.za/default.asp?ipkCategoryID=3295&sub=1&parentid=3289&subid=3294&ipklookid=7</a>

Access: 6 July 2010

Wits Admission Requirements, 2010.

Available: <a href="http://web.wits.ac.za/NR/rdonlyres/AEE5E018-2DD6-41F0-8AA1-73AB066A40F1/0/WhyStudyAtWits.pdf">http://web.wits.ac.za/NR/rdonlyres/AEE5E018-2DD6-41F0-8AA1-73AB066A40F1/0/WhyStudyAtWits.pdf</a>

Access: 6 July 2010

School of Construction economics and Management, 2010.

Available: <a href="http://web.wits.ac.za/Academic/EBE/CEM/Courses/Undergraduate/BScQuant.htm">http://web.wits.ac.za/Academic/EBE/CEM/Courses/Undergraduate/BScQuant.htm</a>

Access: 6 July 2010

• Faculty of Science, Engineering and Technology, 2010.

Available: http://www.wsu.ac.za/academic/images/resources/FSET%2 Ogeneral/schools/WSU%20School%20of%20Enggineering INSIDE.p df

Access: 7 July 2010

Project Management, A multidisciplinary approach: Payscale, 2010.

Available: <a href="http://www.payscale.com">http://www.payscale.com</a>.

Access: 30 June 2010

 Project Management = MASTERS PROGRAMME IN ENGINEERING MANAGEMENT & MASTERS PROGRAMME IN PROJECT MANAGEMENT PROGRAMME GUIDE FOR 2010, 2010.

Available: <a href="http://web.up.ac.za/sitefiles/file/44/2846/MEM%20&%20MP">http://web.up.ac.za/sitefiles/file/44/2846/MEM%20&%20MP</a> M%20Programme%20Guide%202010.pdf

Access: 30June 2010

Arbitration = Correspondence Courses in Arbitration 2010, 2010.

Available: http://www.arbitrators.co.za/arbsnew/education.htm

Access: 30 June 2010

Maintenance Management = Third City Solution Ltd Pty, 2010.

Available: http://www.thirdcitysolutions.com.au/

Access: 1 July 2010

Simply Hired, 2010.

Available: <a href="http://www.simplyhired.com.au/job-id/h5awovsflj/quantity-surveyor-jobs/">http://www.simplyhired.com.au/job-id/h5awovsflj/quantity-surveyor-jobs/</a>

Access: 18 August 2010

• Gumtree, 2010.

Available:http://www.gumtree.com/london/77/64149177.html

Access: 18 August 2010

Energy Central Jobs.com, 2010.

Available: <a href="http://www.energycentraljobs.com/seeker/job\_detail\_preview.cfm?cpane=11106&job\_id=261DBF65-1422-7836-7AE34A479586670F&requesttimeout=5000&CFID=2464358&CFTOKEN=99704981&utm\_source=SimplyHired&utm\_medium=organic&utm\_campaign=SimplyHired</a>

Access: 18 August 2010

• Working.com, 2010.

Available: <a href="http://workingtorontojobs.canada.com/careers/jobsearch/det">http://workingtorontojobs.canada.com/careers/jobsearch/det</a> ail?jobId=29197418&viewType=main&networkView=main

Access: 18 August 2010

New Zealand Institute of Quantity Surveyors, 2010.
 Available: <a href="http://www.nziqs.co.nz/about/whatis.html">http://www.nziqs.co.nz/about/whatis.html</a>

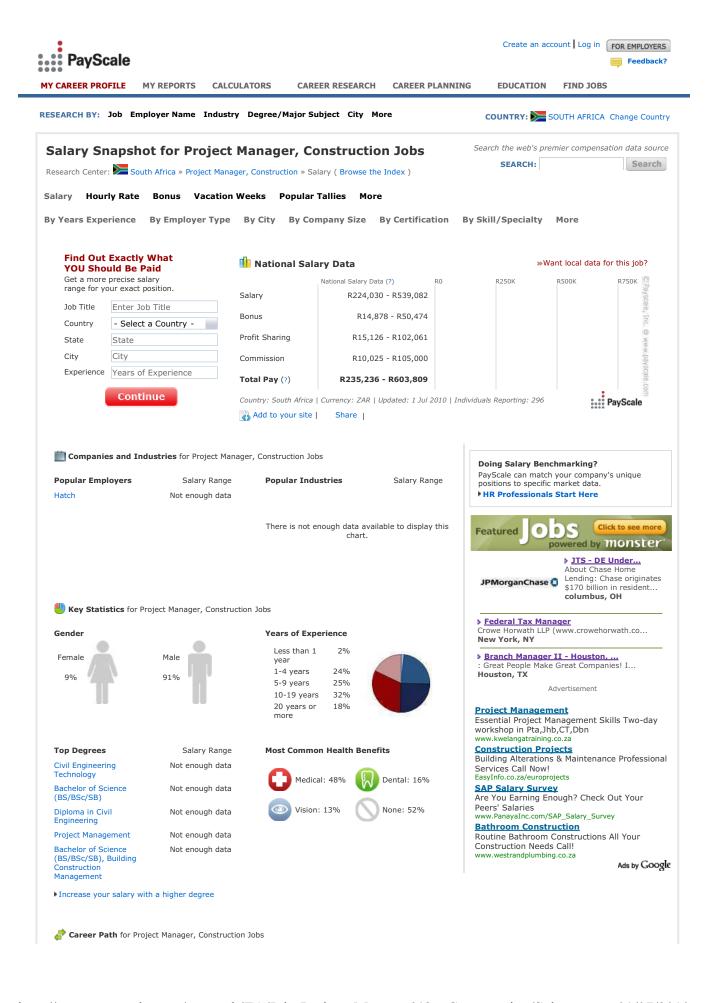
Access: 18 August 2010

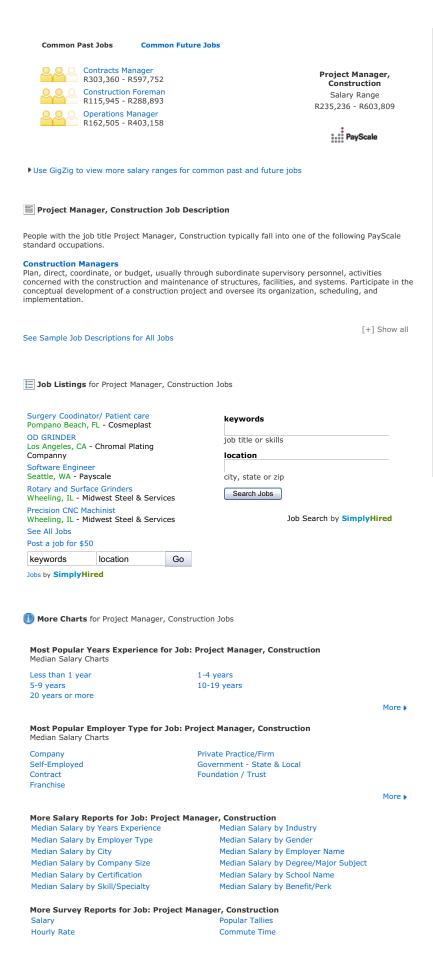
## **CLASS NOTES**

- Potgieter F.J. 2009. Quantity Surveying Practice, Tutorial handout distributed in the unit, BRK 700 Quantity Surveying Practise, University of Pretoria, on 16 July 2009.
- Potgieter F.J. 2009. Quantity Surveying Practice, Tutorial handout distributed in the unit, BRK 700 Quantity Surveying Practise, University of Pretoria, on 27 August 2009.

# **ANNEXURE A**

# **Construction Project Manager**







#### **Online Tenders**

Latest Tenders and business leads in South Africa and surrounds

#### **Job Employment**

Register at Job Crystal and let us find the employment you deserve.

JobCrystal.co.za/JobEmployment

#### Construction projects

Contact the right people with Databuild comprehesive tender info. www.databuild.co.za

#### **Armco Construction**

We supply the Construction Industry with solutions

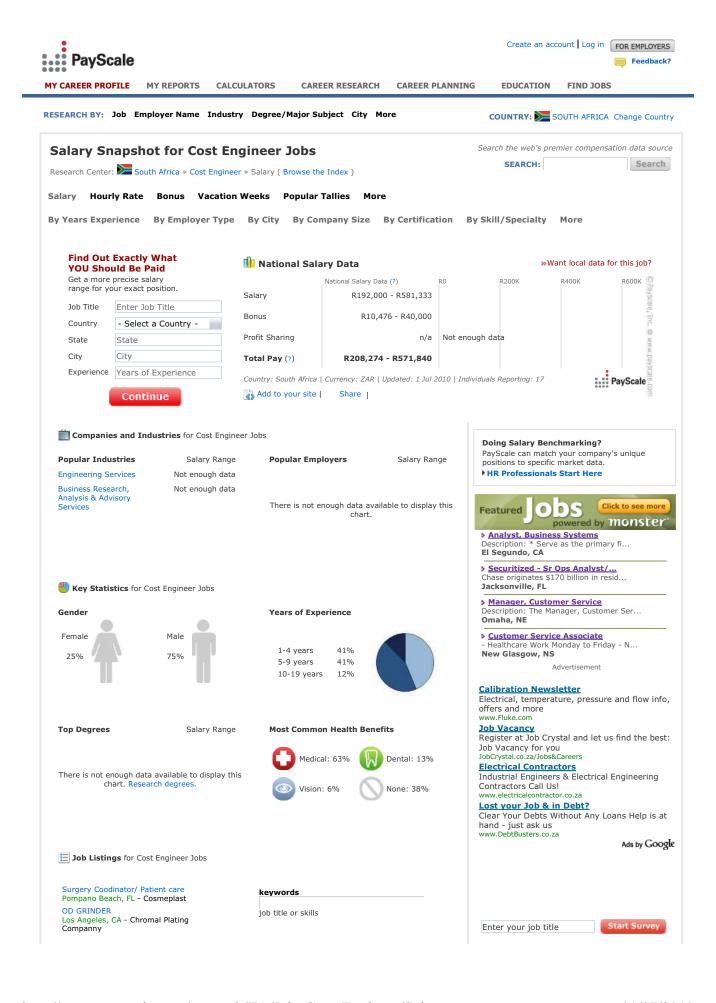
www.armcorsp.co.za

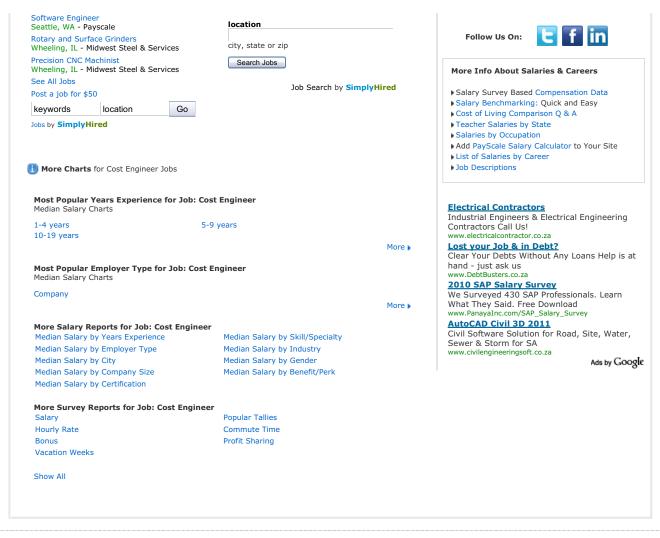
Ads by Google

Bonus Commission
Vacation Weeks Profit Sharing
Show All

Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

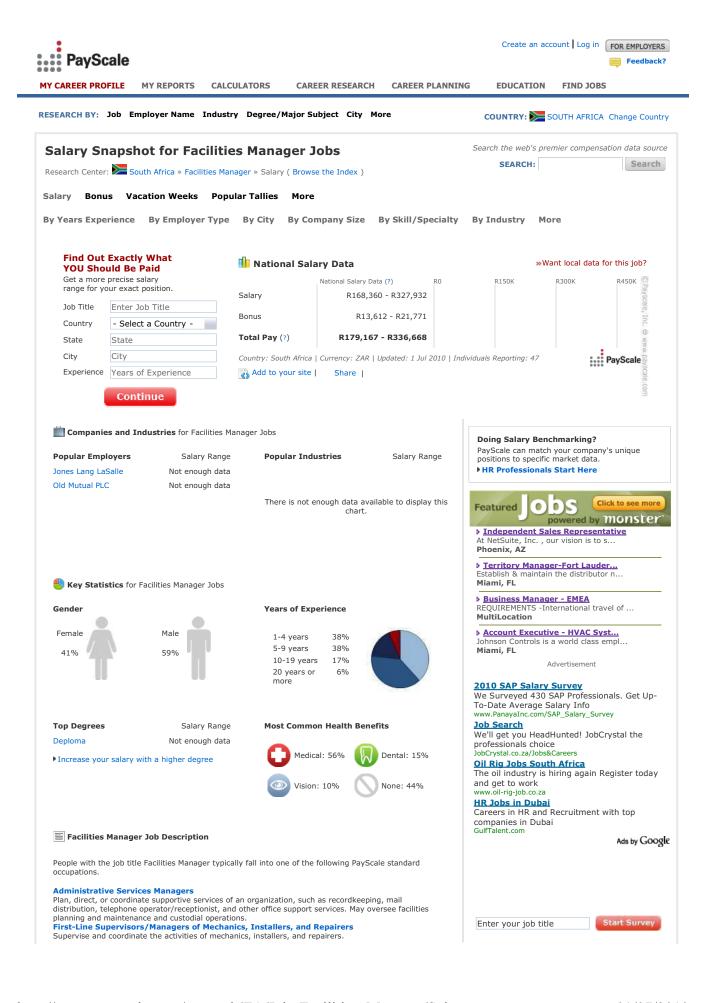
## **Cost Engineer**

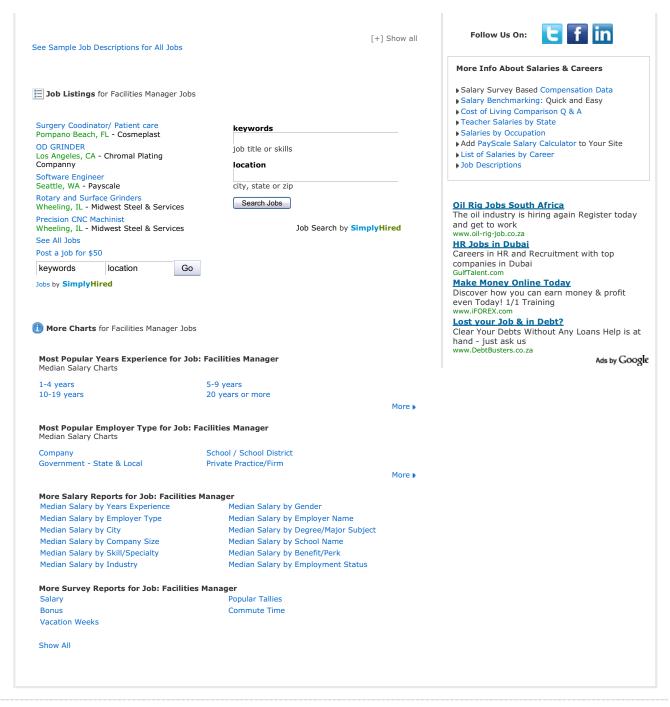




in Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

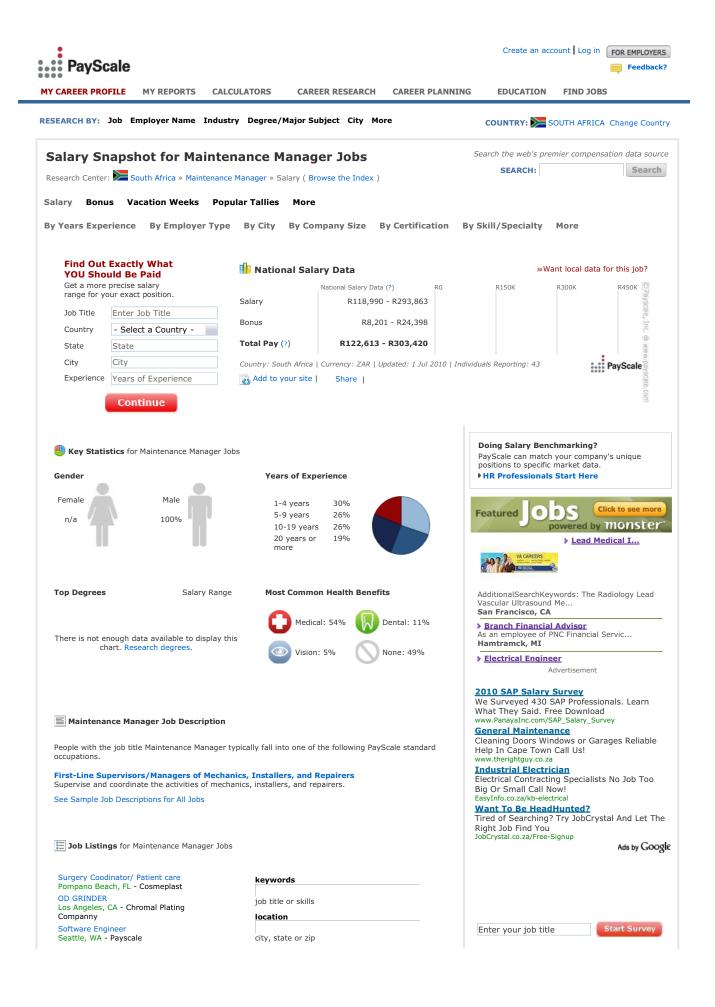
## **Facilities Manager**

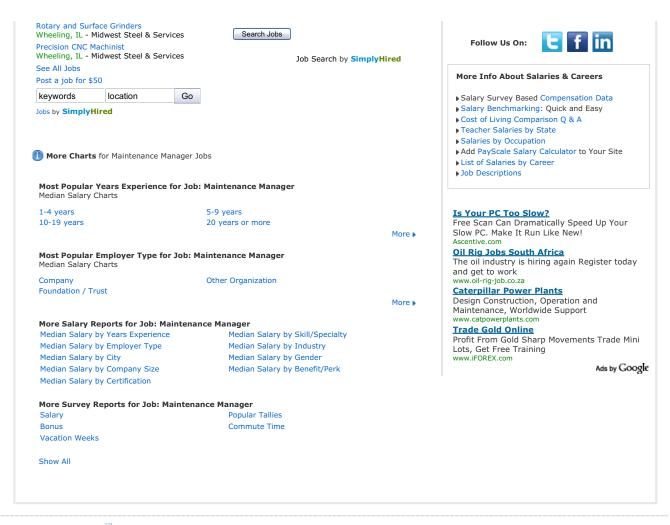




ighthalphaper Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

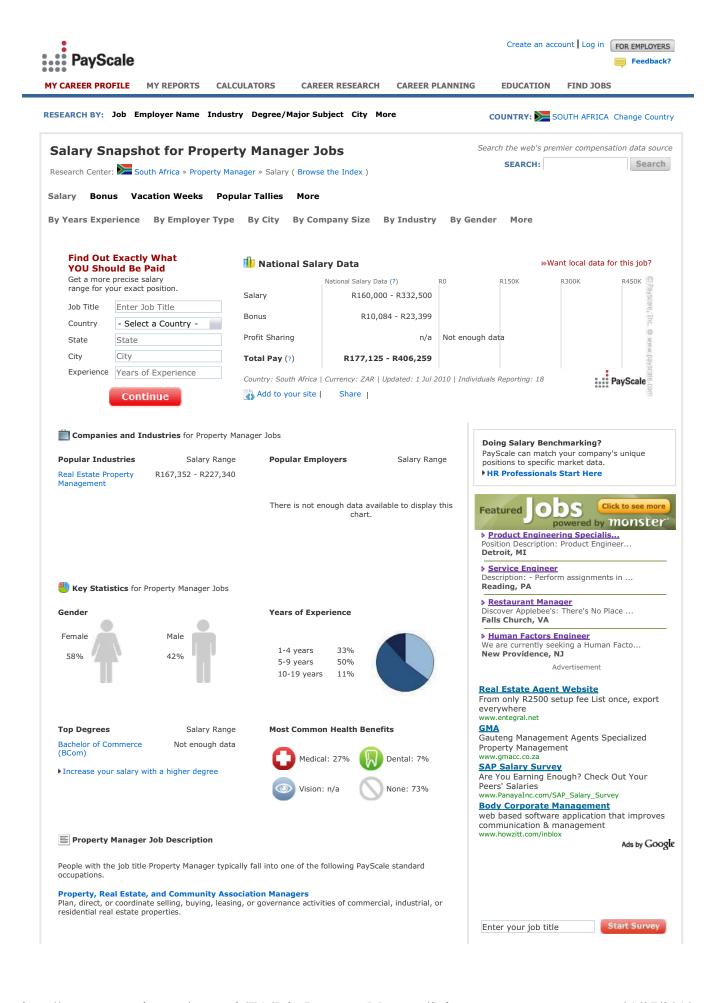
# **Maintenance Manager**

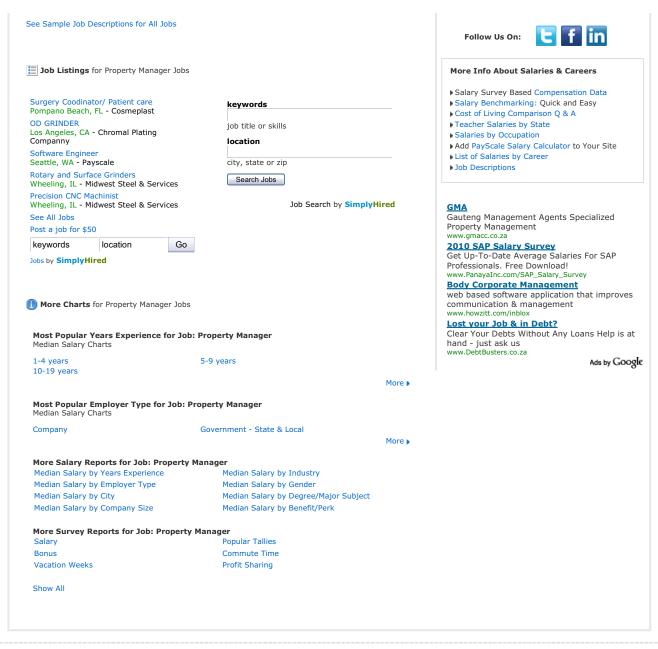




📴 Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

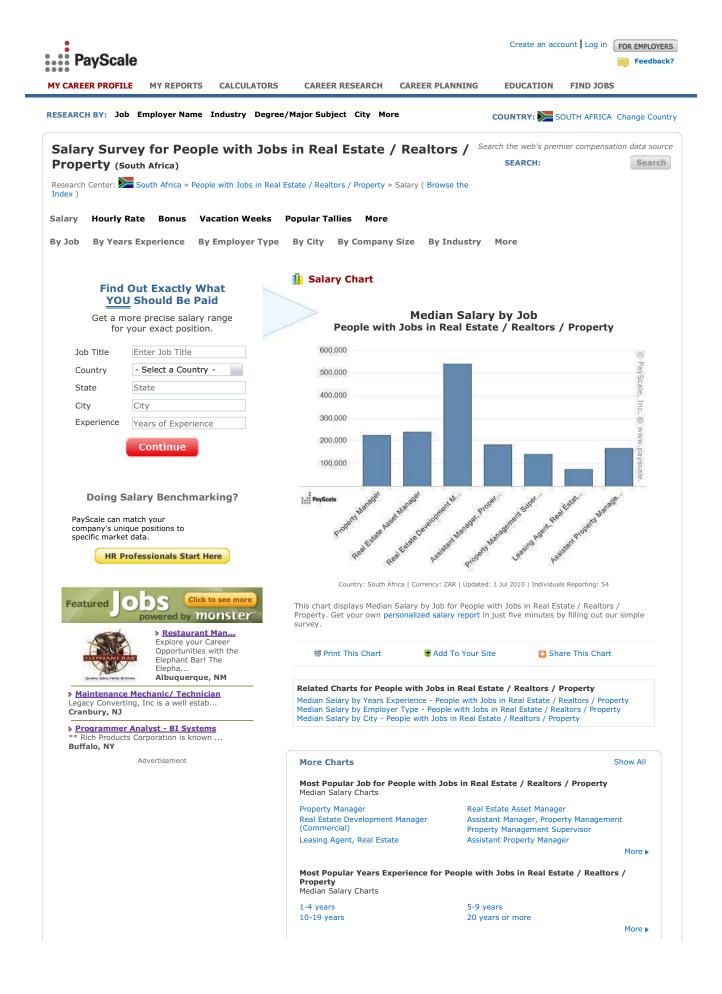
# **Property & Retail Management**





Frivacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

### **Real Estate**



### 2010 SAP Salary Survey

Get Up-To-Date Average Salaries For SAP Professionals. Free Download! www.PanayaInc.com/SAP\_Salary\_Survey

#### HR Jobs in Dubai

Careers in HR and Recruitment with top companies in Dubai GulfTalent com

#### DMA2010 San Fran Oct 9-14

The Global Event For Interactive Marketing. Register Today! www.DMA2010.org

#### Want To Be HeadHunted?

Tired of Searching? Try JobCrystal And Let The Right Job Find You JobCrystal.co.za/Free-Signup

Ads by Google





#### More from PayScale

- Salaries by Occupation
- List of Salaries by CareerSalary Madness PayScale's March Madness Predictions
- Salary Survey Based Compensation Data
- Salary Benchmarking: Quick and Easy
- · Cost of Living Comparison Q & A
- Teacher Salaries by State
  Add PayScale Salary Calculator to Your Site
- Job Descriptions

#### DMA2010 San Fran Oct 9-14

The Global Event For Interactive Marketing. Register Today! www.DMA2010.org

#### Want To Be HeadHunted?

Tired of Searching? Try JobCrystal And Let The Right Job Find You JobCrystal.co.za/Free-Signup

#### **Online Payroll System**

Simple, cheap, no hassles. Manage all your payroll details. Setup now taxshop.payus.co.za

#### **Debt Problems?**

Clear Your Debts Without Any Loans. Let Us Solve Your Debt Problems!

Ads by Google

Most Popular Employer Type for People with Jobs in Real Estate / Realtors / Property

Median Salary Charts

Company Other Organization Foundation / Trust Government - State & Local

More .

More Salary Reports for People with Jobs in Real Estate / Realtors / **Property** 

Median Salary by Job Median Salary by Gender Median Salary by Years Experience Median Salary by Employer Name

Median Salary by Employer Type Median Salary by Degree/Major Subject Median Salary by School Name Median Salary by City Median Salary by Company Size Median Salary by Benefit/Perk

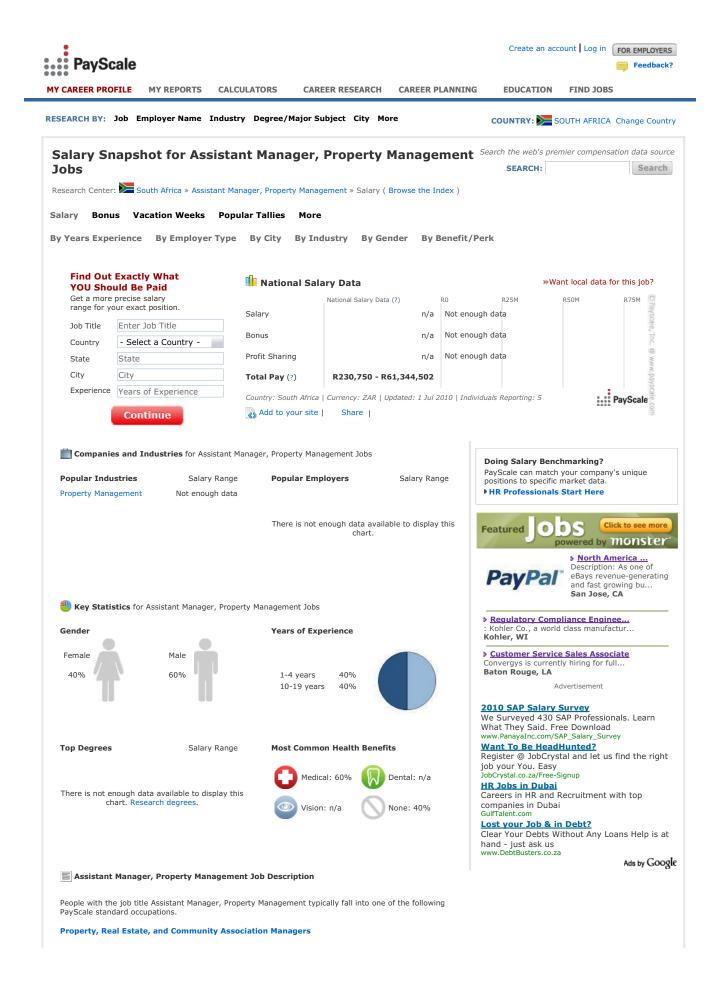
Median Salary by Industry

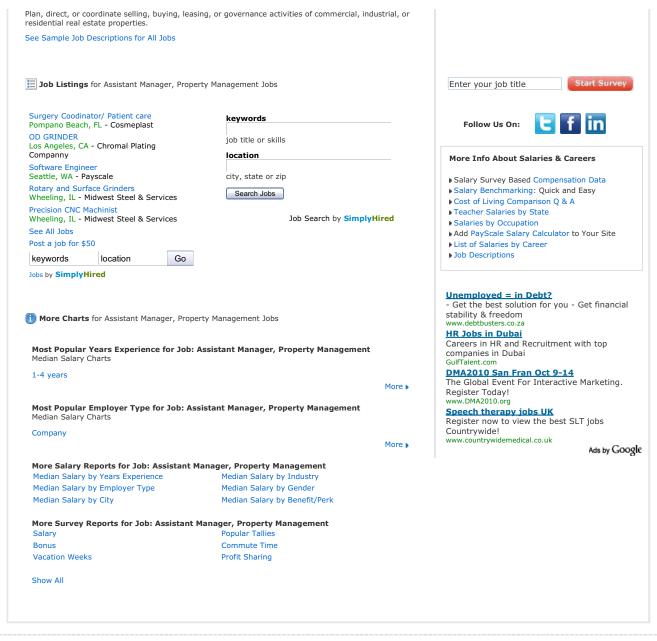
More Survey Reports for People with Jobs in Real Estate / Realtors / **Property** 

Salary Popular Tallies **Hourly Rate** Commute Time Bonus Commission Vacation Weeks **Profit Sharing** 

id Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

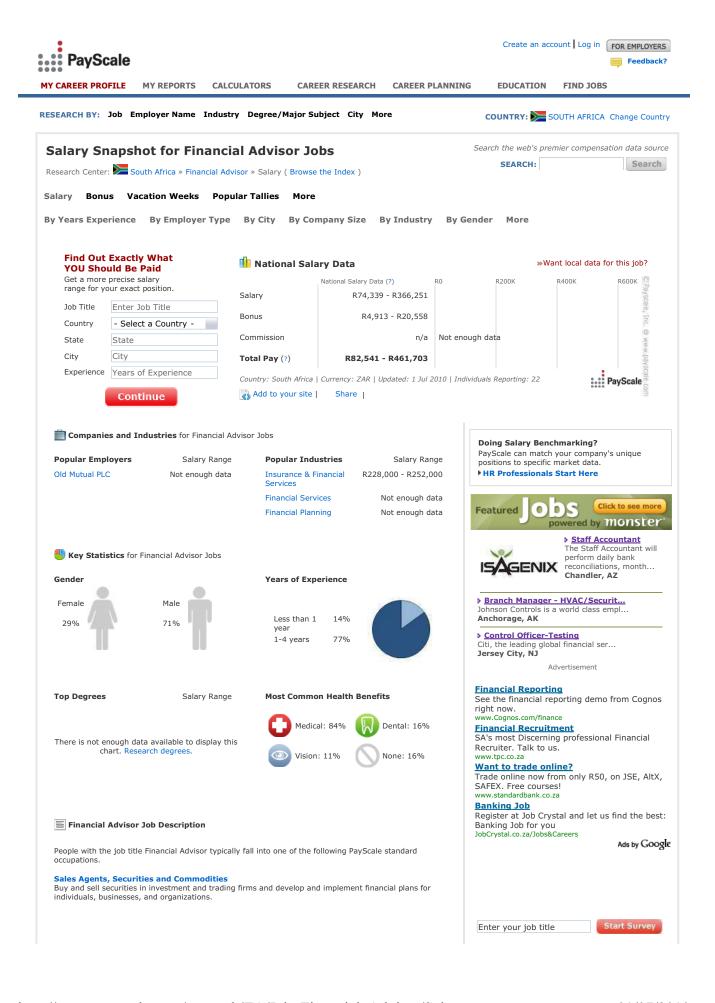
## **Asset Management**

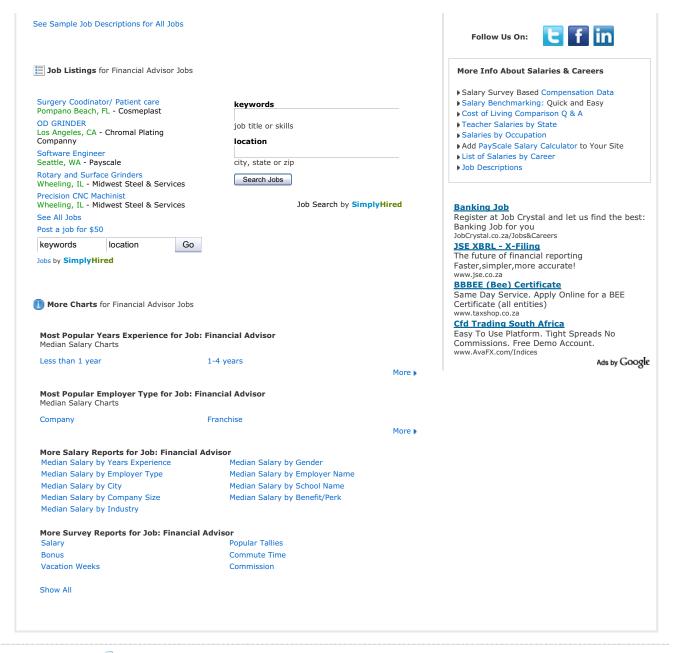




Frivacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

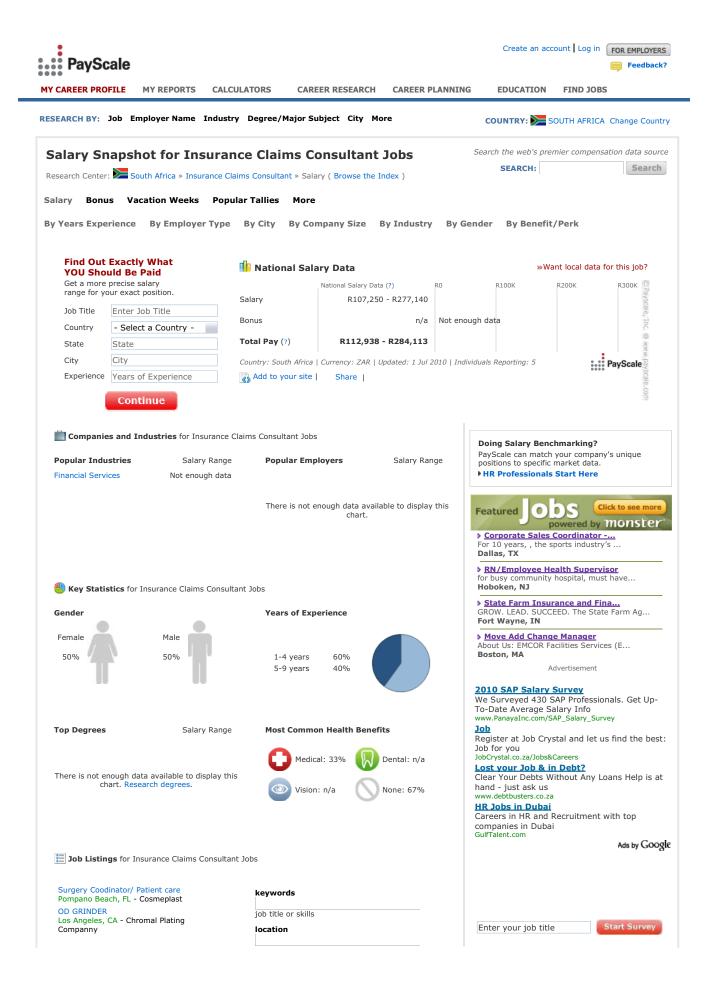
### **Financial Adviser**

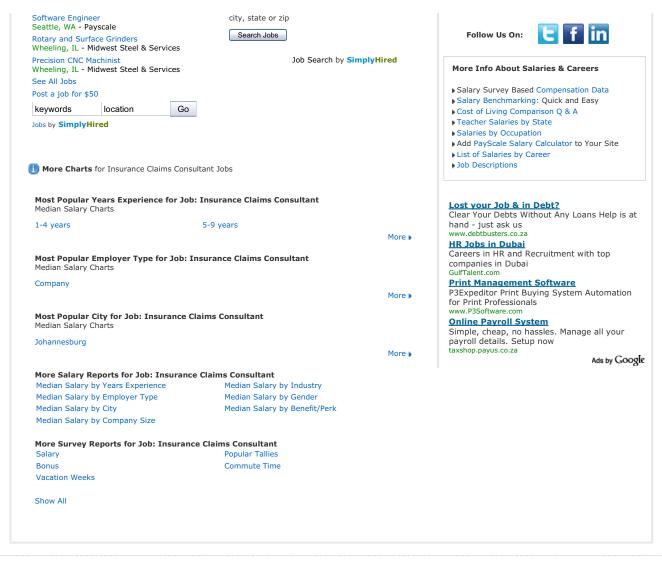




Frivacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

### **Loss Consultant/Adjuster**

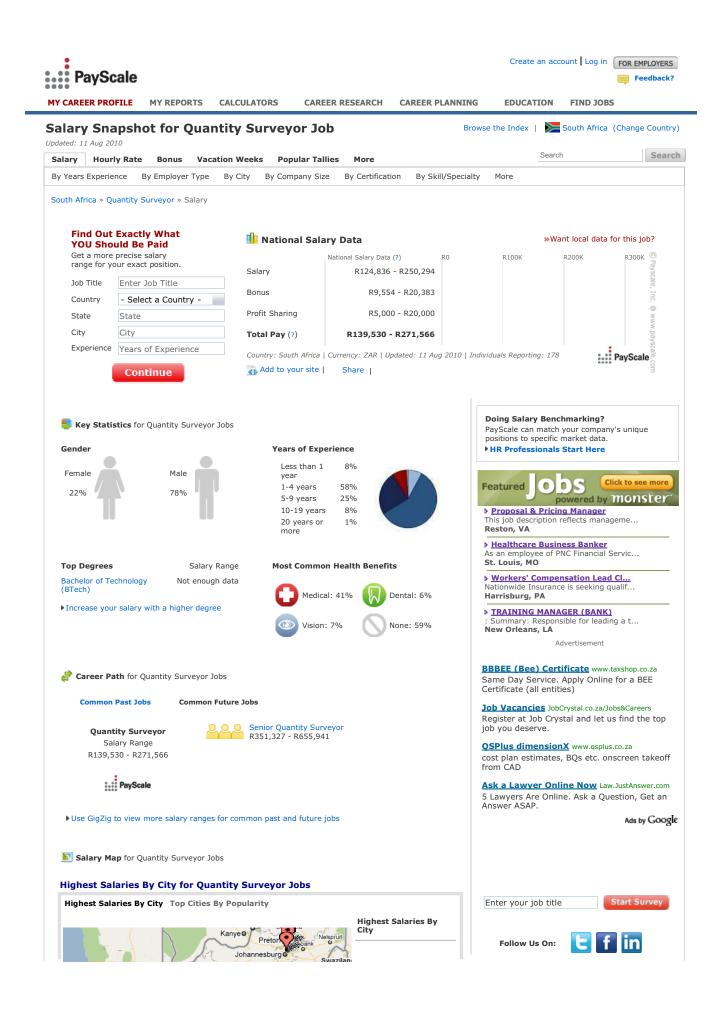


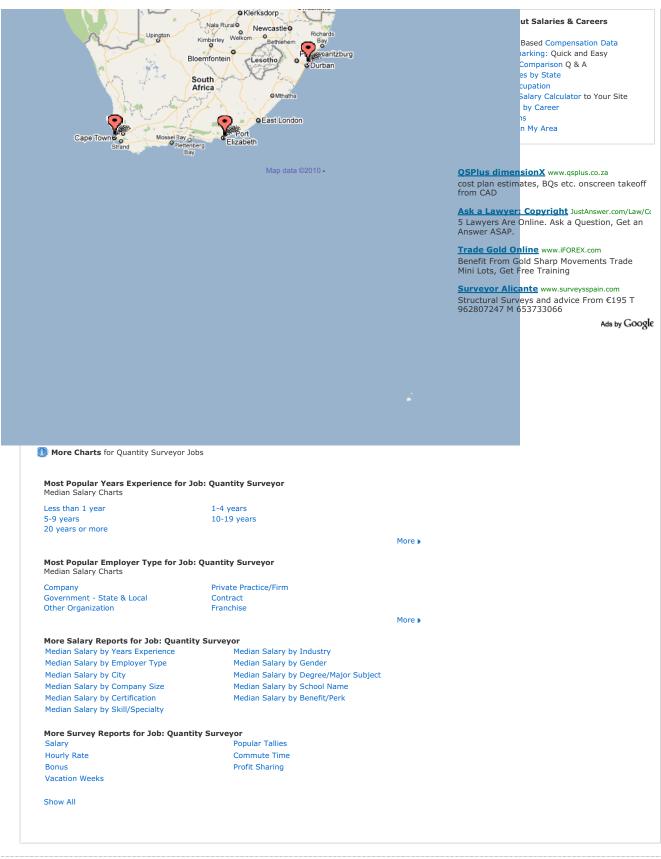


Frivacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

### **ANNEXURE B**

## **Quantity Surveyor in South Africa**



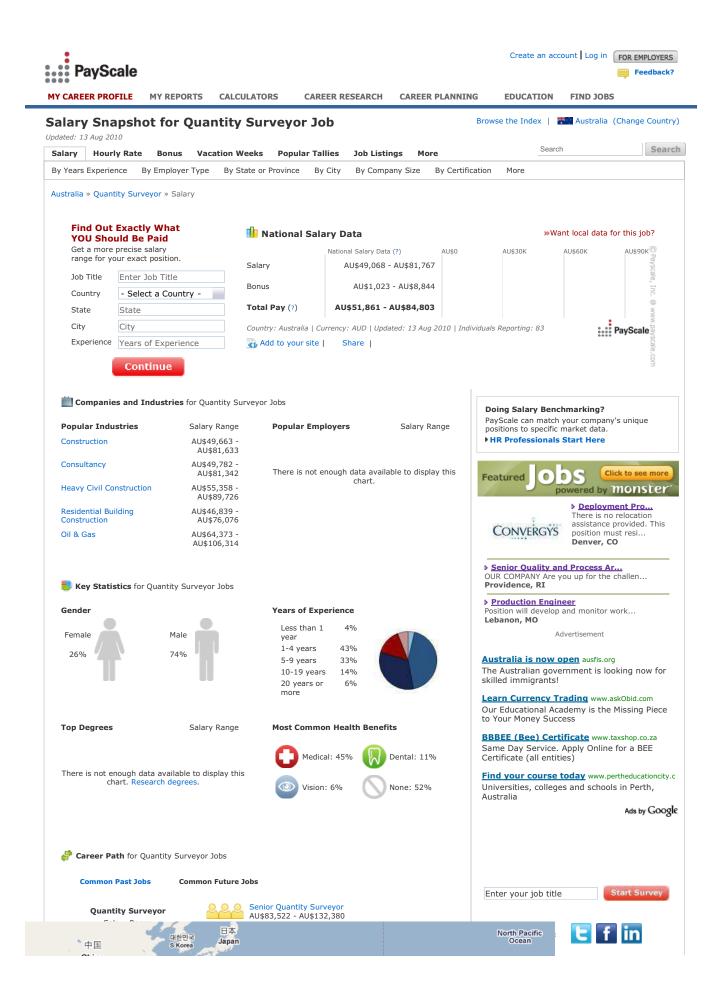


Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

Syndicate PayScale Data | Privacy Policy | Terms of Use | About PayScale | PayScale Blogs

PayScale, The PayScale Report and People Like You are Trademarks of PayScale, Inc. © 2000 - 2010 PayScale, Inc. All rights reserved. Patents Pending.

## **Quantity Surveyor in Australia**





▶ Use GigZig to view more salary ranges for common past and future jobs



#### **Surveyor Jobs**



#### **More Info About Salaries & Careers**

- ▶ Salary Survey Based Compensation Data
- ▶ Salary Benchmarking: Quick and Easy
- ▶ Cost of Living Comparison Q & A
- ▶ Teacher Salaries by State
- ▶ Salaries by Occupation
- Add PayScale Salary Calculator to Your Site
- List of Salaries by Career
- ▶ Job Descriptions
- Job Openings in My Area

BBBEE (Bee) Certificate www.taxshop.co.za Same Day Service. Apply Online for a BEE Certificate (all entities)

Find your course today www.pertheducationcity.c Universities, colleges and schools in Perth,

Moving to Dubai? Offshore.HSBC.com/Experts-in-E: HSBC Offshore has a Range of Wealth Management Solutions to Suit You!

**QSPlus dimensionX** www.qsplus.co.za cost plan estimates, BQs etc. onscreen takeoff from CAD

Ads by Google

#### Ouantity Surveyor Job Description

People with the job title Quantity Surveyor typically fall into one of the following PayScale standard occupations.

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

See Sample Job Descriptions for All Jobs



Posted Job Title Company Job Location Randstad Professionals Canberra. Aug 18 quantity surveyor -Australian Capital intermediate Territory (ACT) currently require an experienced intermediate Quantity Surveyor to become an integral part of their Canberra based ... of professionals your: \* Proven ability and success in quantity surveying \* Focus and ability to effectively manage...

Aug 16 Quantity Surveyor **Hays Property**  Darwin, Northern

Start!Professional Quantity Surveying firmContract assignment with permanent position availableIMMEDIATE ... hourly RATE!Contract assignment to assist a professional Quantity Surveying practice close-out a multi-million...

Simply Hired

Aug 15 Estimator Quantity

Surveyor

Talon Group

Sydney, New South

Quantity Surveyor Due to exceptional growth period our client, one of Australia's top Design and  $\dots$ your experience as a qualified Estimator?Quantity Surveyor across a range of new civil engineering projects...

Simply Hired

View More Quantity Surveyor Jobs





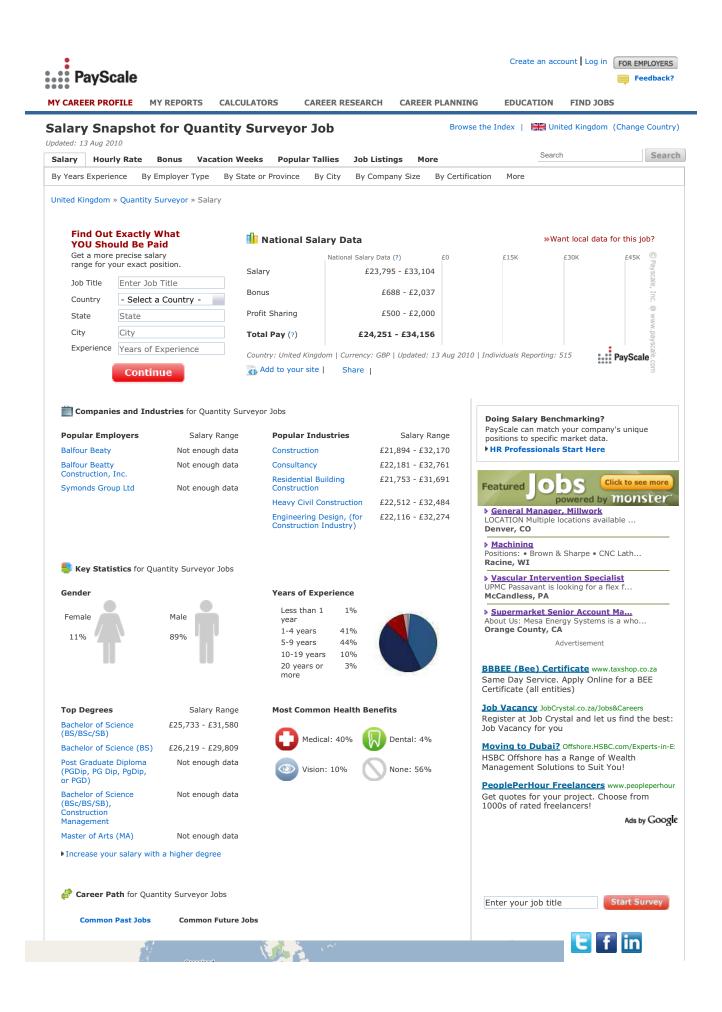
Win the job! Create a great resume in minutes. Try LiveCareer's Resume Builder for FREE!

Advertisement

More Charts for Quantity Surveyor Jobs Most Popular Years Experience for Job: Quantity Surveyor Less than 1 year 1-4 years 5-9 years 10-19 years 20 years or more More • Most Popular Employer Type for Job: Quantity Surveyor Median Salary Charts Company Private Practice/Firm More • More Salary Reports for Job: Quantity Surveyor Median Salary by Skill/Specialty Median Salary by Years Experience Median Salary by Employer Type Median Salary by Industry Median Salary by State or Province Median Salary by Gender Median Salary by School Name Median Salary by City Median Salary by Company Size Median Salary by Benefit/Perk Median Salary by Certification More Survey Reports for Job: Quantity Surveyor Salary Vacation Weeks Hourly Rate Popular Tallies Commute Time Bonus

in Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

## **Quantity Surveying in United Kingdom**



Salary Range £24,251 - £34,156





▶ Use GigZig to view more salary ranges for common past and future jobs

Salaries Büy Salaries Büy Surveyor Jobs Ouantity

#### **Surveyor Jobs**



### Quantity Surveyor Job Description

People with the job title Quantity Surveyor typically fall into one of the following PayScale standard occupations

#### **Cost Estimators**

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

See Sample Job Descriptions for All Jobs

### **Job Listings** for Quantity Surveyor Jobs

Posted	Job Title	Company	Job Location
Aug 18	Managing Quantity Surveyor	Reed Property & Construction	Milton Keynes, England: Buckinghamshire

housing. Due to a recent departure they require a managing surveyor to be based from Brentwood, looking after a ... in the Milton Keynes Area. Job Description As Managing surveyor you will be responsible for overseeing a 210 unit...

Simply Hired

Aug 17 Quantity Surveyor Linsco Nottingham,
Cladding England:
Nottinghamshire

Quantity Surveyor (Cladding) An excellent opportunity has arisen for a Quantity Surveyor to join ... experiencing an increase in enquires. The Role As a Quantity Surveyor you will be focused on the Commercial...

Simply Hired

Aug 17 Quantity Surveyor ASA Recruitment Glasgow, Scotland: Glasgow

client a local authority is currently seeking to recruit a Quantity Surveyor on a temporary contract to work on Commercial & Domestic Projects. All potential candidates must have Measured term Contract Experience.

Contracts Experience in Building repairs,...

View More Quantity Surveyor Jobs





Win the job! Create a great resume in minutes.

Try LiveCareer's Resume Builder for FREE!

Advertisement

More Charts for Quantity Surveyor Jobs

#### **More Info About Salaries & Careers**

- ▶ Salary Survey Based Compensation Data
- ▶ Salary Benchmarking: Quick and Easy
- ▶ Cost of Living Comparison Q & A
- ▶ Teacher Salaries by State
- ▶ Salaries by Occupation
- ▶ Add PayScale Salary Calculator to Your Site
- List of Salaries by Career
- ▶ Job Descriptions
- ▶ Job Openings in My Area

Moving to Dubai? Offshore.HSBC.com/Experts-in-E: HSBC Offshore has a Range of Wealth Management Solutions to Suit You!

**QSPlus dimensionX** www.qsplus.co.za cost plan estimates, BQs etc. onscreen takeoff from CAD

Find Your Senior Match www.DatingForSeniors.cc Meet Local Active Seniors Near You. View Profiles 100% Free. Join Now!

<u>Salary Surveys</u> www.myiyo.com/Survey
Participate in a Online Survey and Earn a Little
Extra Money!

Ads by Google

Most Popular Years Experience for Job: Quantity Surveyor

Median Salary Charts

Less than 1 year 1-4 years 5-9 years 10-19 years

20 years or more

More >

Most Popular Employer Type for Job: Quantity Surveyor

Median Salary Charts

Company Private Practice/Firm
Government - State & Local Contract
Other Organization College / University
Non-Profit Organization Self-Employed

More »

More Salary Reports for Job: Quantity Surveyor

Median Salary by Years ExperienceMedian Salary by Skill/SpecialtyMedian Salary by Employer TypeMedian Salary by IndustryMedian Salary by State or ProvinceMedian Salary by GenderMedian Salary by CityMedian Salary by Employer NameMedian Salary by Company SizeMedian Salary by Degree/Major Subject

More Survey Reports for Job: Quantity Surveyor

Median Salary by Certification

Salary Popular Tallies
Hourly Rate Commute Time
Bonus Commission
Vacation Weeks Profit Sharing

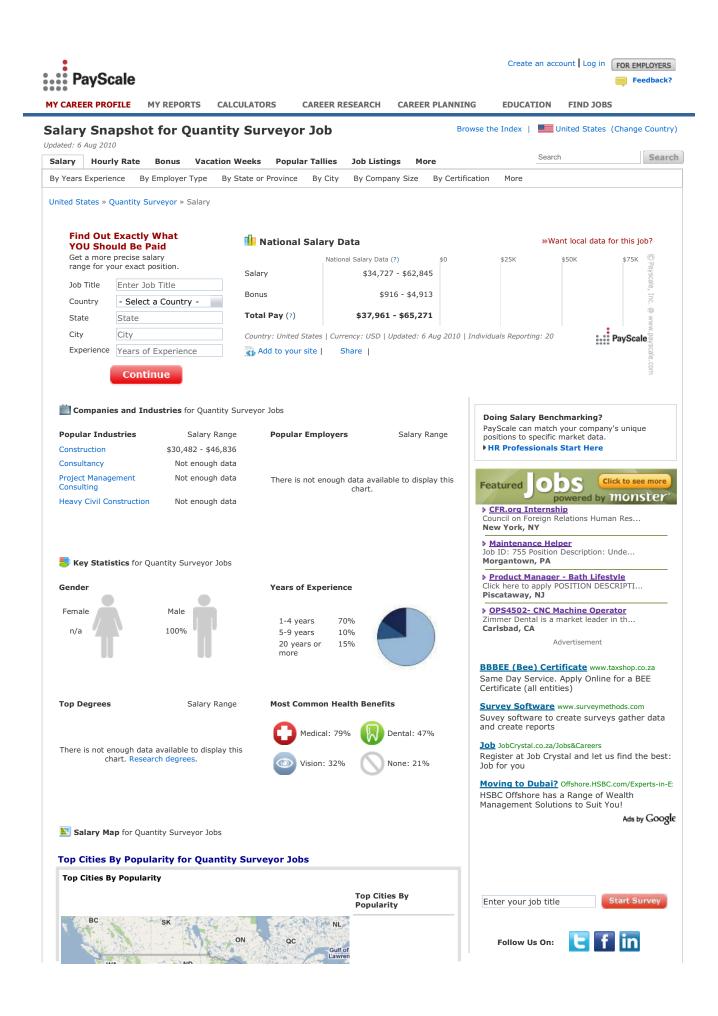
Show All

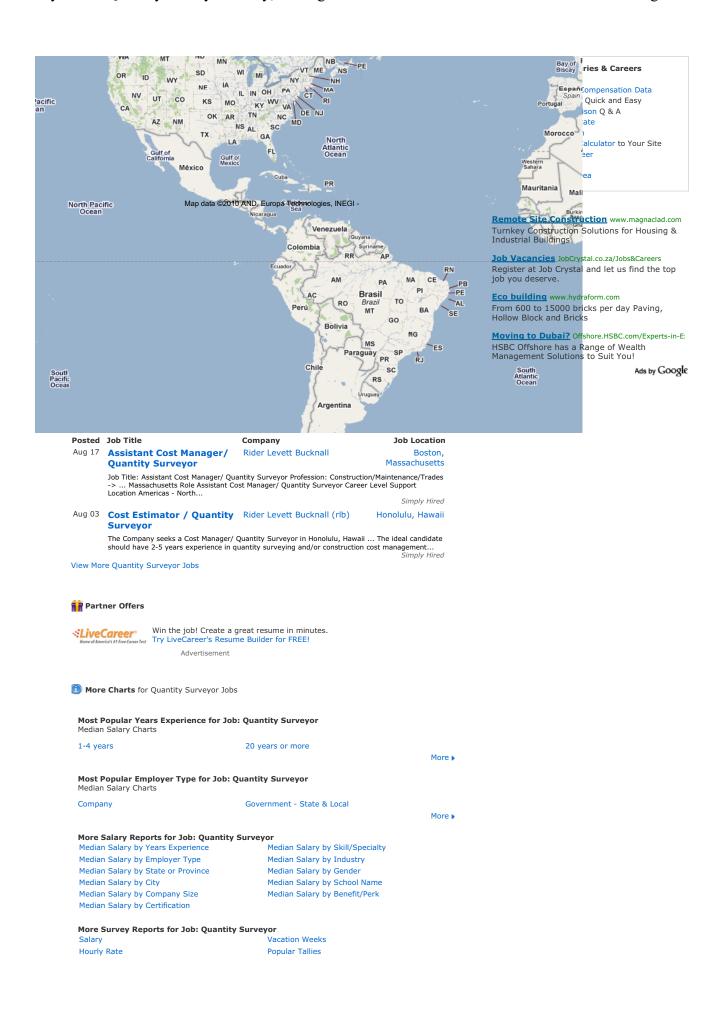
Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

Median Salary by School Name

Syndicate PayScale Data | Privacy Policy | Terms of Use | About PayScale | PayScale Blogs PayScale, The PayScale Report and People Like You are Trademarks of PayScale, Inc. © 2000 - 2010 PayScale, Inc. All rights reserved. Patents Pending.

# **Quantity Surveyor in USA**



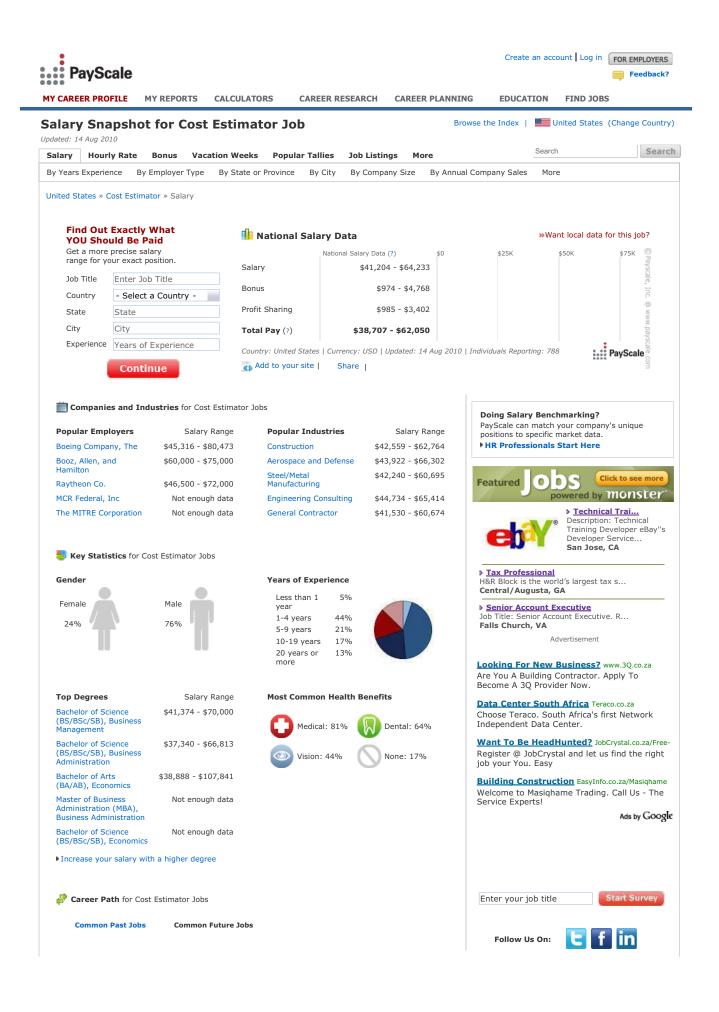


Bonus	Commute Time	
Show A		

Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

Syndicate PayScale Data | Privacy Policy | Terms of Use | About PayScale | PayScale Blogs PayScale, The PayScale Report and People Like You are Trademarks of PayScale, Inc. © 2000 - 2010 PayScale, Inc. All rights reserved. Patents Pending.

## **Cost Estimator in USA**



Cost Estimator Salary Range \$38,707 - \$62,050



Estimator, Construction \$40,653 - \$68,295 Senior Estimator \$63,613 - \$100,307 Cost Estimating Manager \$54,487 - \$110,415

▶ Use GigZig to view more salary ranges for common past and future jobs

Filghestep
Salaries\*By
Estimator Jobs
Cost

#### **Estimator Jobs**



#### More Info About Salaries & Careers

- ▶ Salary Survey Based Compensation Data
- ▶ Salary Benchmarking: Quick and Easy
- ▶ Cost of Living Comparison Q & A
- ▶ Teacher Salaries by State
- ▶ Salaries by Occupation
- Add PayScale Salary Calculator to Your Site
- List of Salaries by Career
- ▶ Job Descriptions
- Job Openings in My Area

<u>Construction Accounting</u> Accounting. Technology@free Accounting Software Systems
Evaluations, Comparisons & Reports!

**Sport Court Construction** www.saquotes.co.za/as Request a Quote for Tar & Asphalt Court Construction or Resurfacing.

Moving to Dubai? Offshore.HSBC.com/Experts-in-E: HSBC Offshore has a Range of Wealth Management Solutions to Suit You!

Want To Be HeadHunted? JobCrystal.co.za/Free-Register @ JobCrystal and let us find the right job your You. Easy

Ads by Google

#### Cost Estimator Job Description

People with the job title Cost Estimator typically fall into one of the following PayScale standard

#### Cost Estimators

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

See Sample Job Descriptions for All Jobs

Job Listings for Cost Estimator Jobs

 Posted
 Job Title
 Company
 Job Location

 Aug 05
 Senior Cost Estimator
 Mcr Federal
 El Segundo, California

please visit www.mcri.com . Duties Knowledge of Cost Estimating for Space Systems Acquisitions. At a ... for special studies, understand range of applicable cost methods, perform "What-IP" exercises, be able to...

Simply Hired

Jul 31 Cost Estimator SCE - Southern California Edison Rosemead, NB61093911EA California

successful candidate will work in Cost Estimating in TDBU. The primary function is performing cost analysis, and ... projects. Typical responsibilities include: performing cost estimates, applying SCE cost estimating standards to...

Simply Hired

Jul 07 DOD Cost Serco Dumfries, Virginia Estimator/Analyst

Job Title: DOD Cost Estimator/Analyst Profession: Analysis/Consulting/Project Management -> Business Analysis Serco ... Cost Analysts. The Cost Analyst Analyzes and/or estimates cost data collected using approved techniques from various...

Aug 02 Sr. Cost Estimator Benteler Automotive Kalamazoo,

Michiga

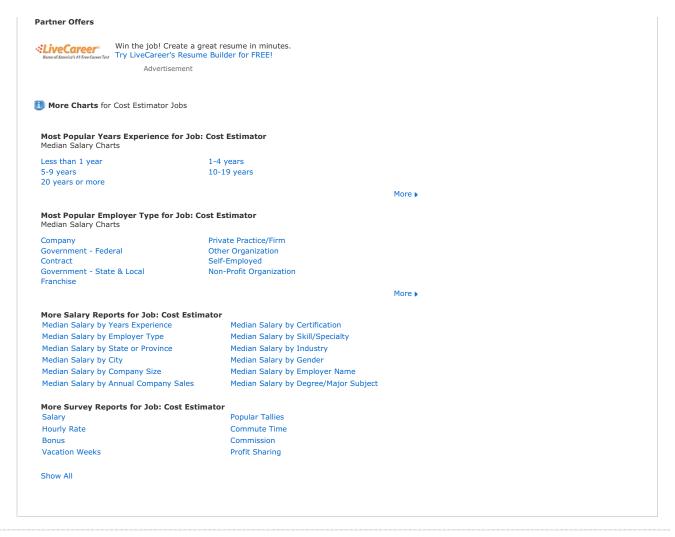
Cost Estimator Profession: Analysis/Consulting/Project Management -> Project/Engagement

Management Job Title Sr ... Cost Estimator Business Function Others Country/Location USA/
Kalamazoo, MI Position Status Regular Full Time...

Simply Hired

View More Cost Estimator Jobs

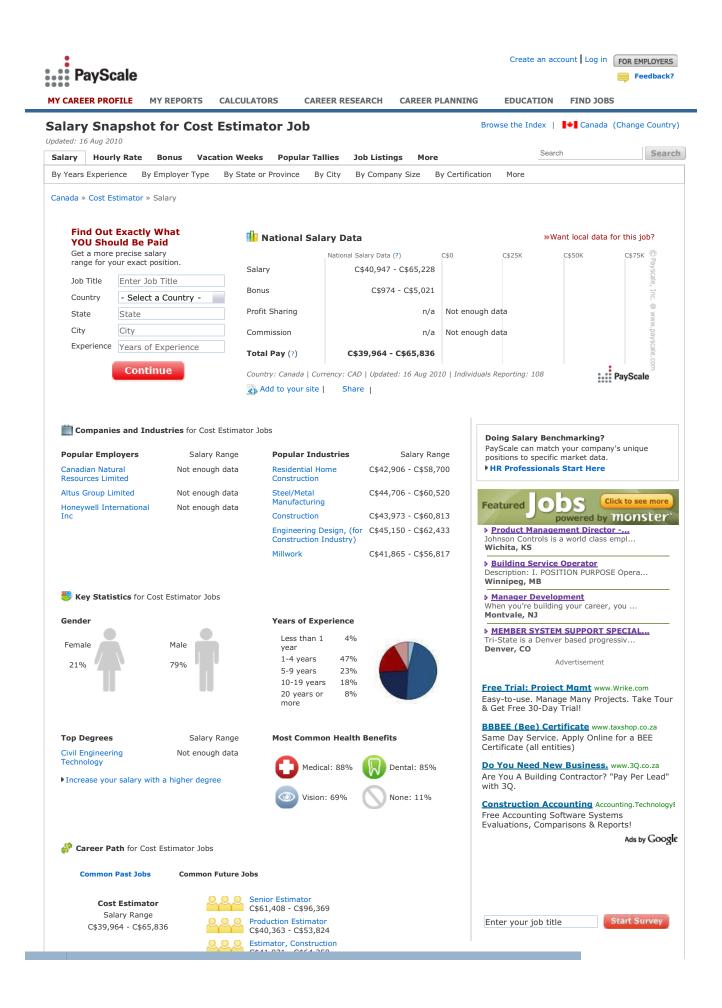




ill Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

Syndicate PayScale Data | Privacy Policy | Terms of Use | About PayScale | PayScale Blogs
PayScale, The PayScale Report and People Like You are Trademarks of PayScale, Inc.
© 2000 - 2010 PayScale, Inc. All rights reserved. Patents Pending.

## **Cost Estimator in Canada**





▶ Use GigZig to view more salary ranges for common past and future jobs



#### **Estimator Jobs**



Cost Estimator Job Description

People with the job title Cost Estimator typically fall into one of the following PayScale standard occupations.

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

See Sample Job Descriptions for All Jobs

**Job Listings** for Cost Estimator Jobs

Posted Job Title Company Job Location Aug 15 COST ESTIMATOR Calgary, Alberta

client is seeking a Cost Estimator to provide cost estimates for a project as a member of a multidisciplinary  $\dots$  in the petrochemical industry \* Familiar with cost estimating principles and multidisciplinary ... in t processes for capital...

Simply Hired

Aug 06 Cost Estimator Suncor Energy Calgary, Alberta

employment experience as a multidiscipline project cost estimator, several years in industrial construction ... environments . Two years of experience with In-Plant Cost Estimator (Icarus) or similar software . Mechanical...

Aug 04 Cost Estimator (10-160) Canadian Natural Resources Calgary, Alberta

evaluations and project cost forecasting • Prepare material take-offs from engineering drawings for all ... verify total installed cost estimates submitted by contractors of all disciplines including civil, structural,...

Simply Hired

Jul 29 **Project Cost Engineering** Career Path Personnel Pembroke, Ontario

**Estimator** 

They are seeking to hire a Project Cost Engineering Estimator for their Pembroke/Petawawa locations. The successful ... following: \* Sound knowledge and experience in Project Cost

Estimating \* Familiarity with environmental, waste...

View More Cost Estimator Jobs





Win the job! Create a great resume in minutes. Try LiveCareer's Resume Builder for FREE!

Advertisement

1

Follow Us On:



#### **More Info About Salaries & Careers**

- ▶ Salary Survey Based Compensation Data
- ▶ Salary Benchmarking: Quick and Easy
- ▶ Cost of Living Comparison Q & A
- ▶ Teacher Salaries by State
- ▶ Salaries by Occupation
- Add PayScale Salary Calculator to Your Site
- ▶ List of Salaries by Career
- ▶ Job Descriptions
- ▶ Job Openings in My Area

Construction Accounting Accounting. Technology f Free Accounting Software Systems Evaluations, Comparisons & Reports!

Want to be HeadHunted? www.jobcrystal.co.za/j Register at JobCrystal and let us find the right

Research Surveys www.mvivo.com/Survey Participate in a Online Survey and Earn a Little Extra Money!

Labour Trend Reports www.cii.co.za CJ Index reports in-depth insights in online labour trends in S.Africa

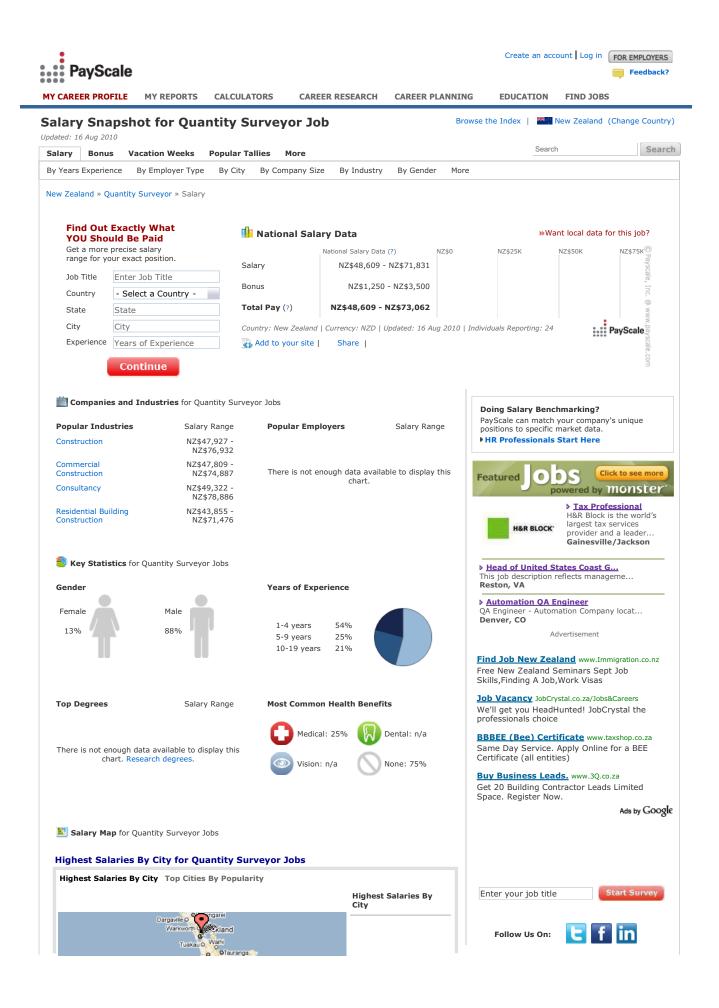
Ads by Google

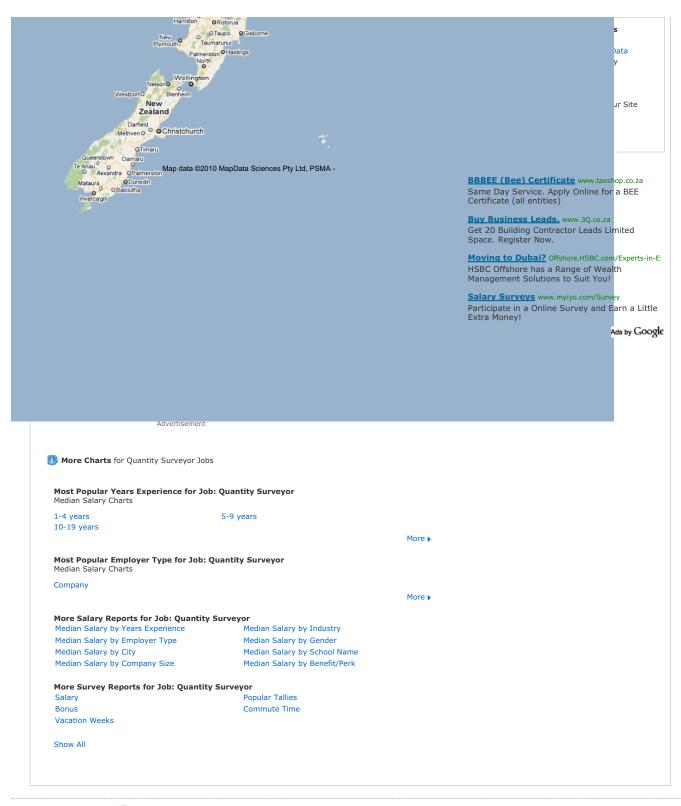
More Charts for Cost Estimator Jobs Most Popular Years Experience for Job: Cost Estimator Median Salary Charts Less than 1 year 1-4 years 5-9 years 10-19 years 20 years or more More . Most Popular Employer Type for Job: Cost Estimator Median Salary Charts Company Private Practice/Firm Self-Employed Government - State & Local More • More Salary Reports for Job: Cost Estimator Median Salary by Skill/Specialty Median Salary by Years Experience Median Salary by Industry Median Salary by Employer Type Median Salary by State or Province Median Salary by Gender Median Salary by City Median Salary by Employer Name Median Salary by Company Size Median Salary by Degree/Major Subject Median Salary by Certification Median Salary by School Name More Survey Reports for Job: Cost Estimator Popular Tallies Salary Hourly Rate Commute Time Bonus Commission Profit Sharing Vacation Weeks Show All

in Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

Syndicate PayScale Data | Privacy Policy | Terms of Use | About PayScale | PayScale Blogs PayScale, The PayScale Report and People Like You are Trademarks of PayScale, Inc. © 2000 - 2010 PayScale, Inc. All rights reserved. Patents Pending.

# **Quantity Surveyor in New Zealand**





Privacy Notice: PayScale takes your privacy seriously and is sensitive to the nature of information collected on this site.

Syndicate PayScale Data | Privacy Policy | Terms of Use | About PayScale | PayScale Blogs
PayScale, The PayScale Report and People Like You are Trademarks of PayScale, Inc.
© 2000 - 2010 PayScale, Inc. All rights reserved. Patents Pending.