BACHELOR OF QUANTITY SURVEYING HONOURS

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Version 1.0

CONTENTS

NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY

PART A: PROGRAMME DOCUMENTATION

BACHELOR OF QUANTITY SURVEYING HONOURS

(NEW PROGRAMME)

1. Awarding Institution:

Namibia University of Science and Technology (NUST)

2. Faculty and Department:

Faculty of Natural Resources and Spatial Sciences,

Department of Architecture and Spatial Planning

3. Programme / Qualification Title:

Bachelor of Quantity Surveying Honours

4. NQF Level of Qualification:

Level 8

5. NQF Credits of Qualification:

Total credits available: 120

Minimum credits required: 120

	Compulsory
Level 8 credits:	120
Minimum Total Credits Required:	**120**

6. Field and Subfield of Learning:

Field: Physical Planning and Construction
Sub-field: Quantity Surveying

7. Programme Aims / Purpose:

The Bachelor of Quantity Surveying Honours degree is designed to provide students with comprehensive and systematic knowledge and skills in the field of quantity surveying using the principles, theories and methodologies of the profession. The programme is intended to expose students to competencies that enable them to provide economic, cost, contractual, and technical advice on all aspects of the construction process and managerial skills. Thus, the programme gives students a thorough understanding of the roles of a Quantity Surveyor at every stage of infrastructure development process, from the project brief issued to the lead consultant through all the design and planning stages to the construction, completion, occupation and maintenance of the facilities to meet the objective of value for money.

The Bachelor of Quantity Surveying Honours therefore, aims at producing quantity surveying graduates who are capable of discharging their roles competently, professionally and ethically in a competitive global environment. Additionally, this Honours degree programme serves as a fulfilling requisite requirement for professional registration for students pursuing their career in quantity surveying.

Through this programme, students will be able to acquire advanced intellectual, critical and analytical skills pertaining to the quantity surveying profession. The programme also intends to provide students with construction and financial management competencies. Additionally, the skills acquired enable students to solve complex quantity surveying problems and to be competitive in the job market.

The principal purposes of this qualification are to:

- Provide students with advanced professional or technical competencies related to quantity surveying professional practice in the construction industry and property development projects;
- Enhance critical and analytical skills that give competitive advantage to the students when seeking employment and during the in-training period;
- Produce students who possess construction and financial management skills to enhance value for money to clients;
- Provide a bridge for students who intend to pursue further studies in quantity surveying or other related programmes at level 9;
- Produce students who demonstrate understanding of:
  - Professional ethics;
  - Advanced research;
  - The importance of coexistence of infrastructure and the natural environment;
  - Societal expectations, morals and values; and
- Produce students who would contribute to the national economic development through optimising construction costs on infrastructure development.

On successful completion of the Bachelor of Quantity Surveying Honours, graduates will be eligible for registration as Quantity Surveyor In-Training with the Namibia Council for Architects and Quantity Surveyors (NCAQS) in terms of Acts 13 of 1979, and Act 11 of 1992.

This programme has been endorsed by members of the Programme Advisory Committee while other institutions of higher learning have been consulted for purposes of benchmarking (attached, please find evidence of consultation, benchmarking and support).

8. Programme Rationale:

Namibia is one of the countries that have experienced sporadic urban growth as evidenced by proliferation of shanty, informal urban communities since attaining independence in 1990. The latter challenge needs urgent attention to mitigate housing problem and other amenities such as sewer and water reticulation, tarred roads, schools, recreational facilities etcetera. In order for the country to address the noted challenges, the built environment professionals such as quantity surveyors, architects, project managers, contractors/subcontractors and construction economists need to be engaged. However, the country continues to experience scarcity of such professionals and currently hire the services of these professionals from all over the world, resulting in high overheads and consequent escalation of development project costs on the Government and private developers.

Accordingly, the built environment disciplines of architecture and quantity surveying in particular, have since been recognised as one of those fields to be urgently established in local institutions of education for human resource development, and subsequently to enhance the sustainability of human settlement development intentions enshrined in the NDP 5. At this stage of its socio-cultural transformation, Namibia needs home-grown built environment professionals to take charge of the human settlement development future of the country. It is therefore understandable that the outcomes of the recently conducted needs assessment survey amongst the generality of the country's stakeholders demonstrate overwhelming support for the mounting of a Bachelor of Quantity Surveying Honours (BQS Hons) programme at NUST.

Indeed, the Quantity Surveying Programme at NUST was established to fill this demand/gap of

professional skills urgently needed for the various sectors of the national economy. The proposed Quantity Surveying Honours programme is therefore aligned with such national development programmes such as the NDP 5 and Vision 2030.

At the individual level, members of the quantity surveying and architectural professions enjoy due recognition and financial reward in terms of their specialised skills and competence, and are eligible for employment in numerous spheres of the economy which, as stated earlier, include the private sector consultancies and professional firms, public sector employment (State, Provincial and Local Authorities), tertiary education and training, financial institutions, property development enterprises, construction companies and research organisations. The skills and knowledge acquired by holders of this qualification also afford opportunities for entry into many other fields, such as urban, interior or industrial design, conservation/restoration/maintenance of buildings, construction materials production and retailing.

The proposed programme is fully compliant with requirements of the Namibia Qualifications Framework (NQF), the NUST curriculum framework as well as with the NCAQS Standards.

9. Exit Programme Outcomes (Qualification Outcomes):

Upon completing the Bachelor of Quantity Surveying Honours, graduates will be able to:

- Analyse and recommend funding opportunities for proposed infrastructure development and existing facilities;
- Demonstrate a comprehensive understanding of principles of measurement of civil engineering quantities required in preparing a bill of quantities with strict adherence to civil engineering standard method of measurement (CESMM);
- Comply with professional ethics and procedures relevant to quantity surveying profession during the discharge of professional services to both public and private clients;
- Apply advanced estimating skills in costing construction works during pre-contract stage right through post-contract stage;
- Plan, schedule and manage construction works; and
- Conduct supervised research of an applied nature in quantity surveying or related construction discipline.

10. Criteria for Admission:

Applicants holding a Bachelor of Quantity Surveying Degree, obtained from the Namibia University of Science and Technology, are eligible for admission into the Bachelor of Quantity Surveying Honours programme. Additionally, a candidate must obtain a minimum average mark of 60% for third-year courses, excluding institutional courses. Candidates who do not meet these requirements are advised to gain a minimum of one-year work experience in a quantity surveying consultant firm or an equivalent construction related firm in order to develop a portfolio of works, with which they are encouraged to re-apply in the next available academic year.

In this case, admission will be by means of a selection interview with the Departmental Postgraduate Selection Committee, during which candidates will be required to present a satisfactory portfolio of work, which may include work from previous studies or industry work experience.

Applicants holding a Bachelor of Quantity Surveying Degree obtained from any other recognised Tertiary Education Institution, at NQF Level 7 worth a minimum of 360 credits, or equivalent pre-NQF 3-year qualifications are eligible for admission. Qualifications from other institutions will be evaluated by the Departmental Postgraduate Selection Committee to determine equivalence in terms of core competencies, acceptable to the Department.

Candidates who do not meet these requirements are advised to gain a minimum of one-year work experience in a quantity surveying consultant firm or an equivalent construction related firm in order

to develop a portfolio of works, with which they are encouraged to re-apply in the next available academic year.

In this case, admission will be by means of a selection interview with the Departmental Postgraduate Selection Committee, during which candidates will be required to present a satisfactory portfolio of work, which may include works from previous studies or industry work experience.

The decision of the Departmental Postgraduate Selection Committee is final and no discussion of the results with the candidates will be entertained.

11. Articulation Arrangements:

Transfer of credits will be dealt with according to the NUST regulations on Recognition of Prior Learning. These provide for course-by-course credits as well as credit transfer by volume under certain academic conditions. Maximum credit that can be granted is 50% of the credits for a qualification.

Students who complete the Bachelor of Quantity Surveying Honours successfully will ordinarily be able to undertake Master of Quantity Surveying, Msc. in Construction Project Management or related disciplines at NQF Level 9.

12. Mode of Delivery:

This programme is offered on the full-time mode in accordance with NUST rules and regulations.

13. Requirements for Qualification Award:

The Bachelor of Quantity Surveying Honours will be awarded to candidates credited with a minimum of 120 NQF credits, and who have met the detailed requirements set out below. In addition, students should meet the administrative and financial requirements in accordance with Yearbook Part 1 of the NUST Yearbook, General Information and Regulations.

The curriculum outline is as follows:

Semester 1		**Semester 2**	
Course Title	**Compulsory or Elective (C or E)**	**Course Title**	**Compulsory or Elective (C or E)**
Research Methodology	C	Construction Costing and Feasibility Study	C
Construction Finance	C	Contract Management	C
Measurement	C	Mini-Thesis	C
Professional Practice and Procedures	C		

The detailed Curriculum requirements for the programme are as follows: (Course codes for new courses will be created by the Faculty Officer following Senate approval of the programme)

YEAR 1: SEMESTER 1 COURSES

Course Code	Course Title	Comprehensive Learning Outcome	Pre-requisites	Compulsory or Elective	NQF Level	Notional Hours	NQF Credits
RMR810S	Research Methodology	Produce and present a comprehensive research proposal.	None	Compulsory	8	150	15
TBA	Construction Finance	Identify and recommend financing opportunities for the proposed infrastructure development.	None	Compulsory	8	150	15
TBA	Measurement	Prepare bills of quantities from technical drawings and specifications for civil engineering works.	None	Compulsory	8	150	15
TBA	Professional Practice and Procedures	Comply with professional ethics and procedures relevant to the profession during the discharge of professional services to both public and private sector clients, who are based locally or internationally.	None	Compulsory	8	150	15
							Total Credits: 60

YEAR 1: SEMESTER 2 COURSES

Course Code	Course Title	Comprehensive Learning Outcome	Pre-requisites	Compulsory or Elective	NQF Level	Notional Hours	NQF Credits
TBA	Construction Costing and Feasibility Study	Apply advanced estimating skills in costing construction works during pre-contract stage right through post-contract stage as well as preparation of feasibility or viability reports.	None	Compulsory	8	150	15
TBA	Contract Management	Manage construction work on site.	None	Compulsory	8	150	15
TBA	Mini-Thesis	Conduct supervised research of an applied nature in quantity surveying or related construction discipline (Mini-thesis).	None	Compulsory	8	300	30
							Total Credits: 60

14. Special Arrangements:

14.1. Teaching and Learning Strategies:

The requirements of the NQF underline the acquisition of cognitive skills and competencies exceeding the knowledge and understanding of subject specific knowledge items and professional / technical competencies. Thus, the qualification focuses on the engagement of students in an interactive learning process in order to provide for the development of generic cognitive and intellectual skills, key transferable skills, and, as the case may be, subject specific and / or professional / technical practical skills. This learning process will be facilitated both in and outside the classroom, requiring specific tasks to be carried out by students. The programme espouses a socio-constructivist approach to learning in which learning is viewed as an active, constructive process rather than a passive, reproductive process. This learning process will be facilitated both in and outside the classroom, requiring specific tasks to be carried out by the student. The learning facilitation will make use of student-centred, engaging and active learning methods which include lectures, seminars, practical assignments, workshops, study visits, discussions and debates, as well as problem based learning and structured (unsupervised) self-study and/or group work, case studies, lecturer feedback, projects, guest lectures, etc. The progress of learning will be monitored, recorded and assessed.

This facilitation will make use of a variety of appropriate methods, including lectures, practical classes, workshops and seminars and site visits. The progress of learning embedded in such tasks will be monitored, recorded and assessed.

14.2. Assessment Strategies:

Learning and assessment are integrated throughout the programme. Diversified continuous assessment is applied to ensure that students receive feedback on their progress towards the achievement of specific learning outcomes. This will normally apply to practical assignments to be carried out individually or in groups, tests, class seminars, as well as technical and project site reports. The brief for the assignment must clearly explain the aim of the assignment as well as the expected learning competencies relative to the course. In accordance with NUST's policy on diversified continuous assessment, each course will have a minimum of four assessment events.

Assignments, designed to meet the requirements of integrated assessment, accomplish / deliver:

- Integration of qualification outcomes in a way that demonstrates that the purpose of the qualification as a whole has been achieved, either totally or within the components of the study programme;
- Demonstration of student competence through evaluation;
- Criterion-referenced assessment, which has been clearly explained to and is understood by students.

In the assessment of whether the desired outcomes have been achieved (or not), recognition is given to criteria and evaluation methods that adequately and appropriately achieve such assessment.

14.3. Quality Assurance of Assessment Requirements:

Each course will have one or more examiner and one moderator. Moderators will be identified both internally and externally. The required minimum qualification of the moderator should be a Master's Degree in a related field of studies or the person must be a well-respected expert in the field. Lecturing staff will set and mark tests and / or examinations which will, together with relevant study material of

that particular course and other material containing course learning outcomes in the context of the qualification learning outcomes, be forwarded to the moderator for moderation purpose, therefore, ensuring quality of the assessment and the qualification as a whole. All courses at exit level will be externally moderated as per NUST regulations.

Assessment of competence of students by external organisations, in particular the Namibia Council for Architects and Quantity Surveyors, established in terms of the Architects' Act, 1979 (Act 13 of 1979 and Act 11 of 1992), will normally be done through scheduled, mutually arranged periodic validation visitations of frequency not more than 5 years.

15. Transition Arrangements:

This is a new programme, which does not replace any existing programme(s). Transition arrangements are, therefore, not applicable.

16. Career Opportunities:

Career possibilities for graduates completing and leaving the programme at the exit level are bright and diverse as follows:

- Graduates can take up careers in a wide range of areas in the built environment industry at senior level. These opportunities may arise in professional quantity surveying practice firms, contracting firms, commercial trading, construction material hardware shops, Regional Councils, municipal authorities, state enterprises and government ministries.

- In addition, graduates of the programme may join academia as Junior Lecturers impart knowledge and skill and or be involved in research for development.

17. Programme Director / Coordinator

Prof. S. Umenne
Director and Head of Department: Architecture and Spatial Planning
Namibia University of Science and Technology
Private Bag 13388
Windhoek
Namibia
Tel: +264 207 2924
Email: sumenne@nust.na

18. Intended Date of First intake

TBC

19. Date of Approval of this Version

June 2019

20. Intended date of Review

5 years from the date of the date of registration of the resultant qualification on the NQF.

PART B: COURSE SPECIFICATION

Course Title	**RESEARCH METHODOLOGY**
Course Code	RMR810S
NQF Level	8
Notional Hours	150 Contact: 55 hours; directed self-learning and self-directed learning: 55 hours; assessment: 40 hours
NQF Credits	15 Credits
Prerequisites	None
Options (compulsory or elective)	Compulsory
Semester Offered	Semester 1
Course Aims	The aim of the course is to prepare students in the field of Quantity Surveying to conduct applied research and be able to statistically analyse data in order to make appropriate decisions based on research findings. The students will also be introduced to research tools and methods, and techniques of scientific communication to disseminate information through reports, seminars and workshops.
Specific Learning Outcomes	On completion of the course, students will, through assessment activities, show evidence of their ability to: • Formulate and/or design relevant research questions applying scientific methods; • Formulate clear aims and objectives, and state appropriate null and alternative hypotheses; • Collect data, both from the field and from stakeholders and analyse the data using appropriate statistical tests and other tools; • Synthesise, interpret and integrate the results into the existing knowledge of the topic, generate relevant conclusions and present them in scientific format; • Write and review scholarly papers on a specific topic; • Undertake an extensive literature review and write project proposals; • Apply the basics of publishing and adhere to recommended referencing styles, e.g. APA guidelines; and • Present scientific data simply to various target groups.
Comprehensive Learning Outcome	Produce and present a comprehensive research proposal.
Course Content	• Revision and further application of basic statistics; • Research designs and sampling strategies; • Quantitative and qualitative research methods in quantity surveying and the construction industry: definitions, principles and basic concepts, relative strengths, methods of data collection, qualitative data analysis, introduction to computer-assisted qualitative data analysis software;

	• Scientific writing and publishing: critical reading of scientific articles; • Advanced statistics e.g. use of hypothesis testing hypotheses using different statistical parameters and e.g. regression analysis, logistics regression etc.; • Statistics software usage, e.g. IBM Statistical Package for Social Sciences; • Effective communication and feedback to all parties concerned; • Communication skills, including awareness raising and making scientific results accessible to the general public; and • Checking for plagiarism using a software e.g. Turnitin.
Methods of Facilitating Learning	This course will be facilitated through a blended learning approach incorporating both, the use of MyNUST eLearning platform and face-to-face sessions. Various methods including use of lectures, assignments, seminars, case study-based data analysis and presentations and critiquing of published research papers will form an integral part of facilitating learning.
Assessment Strategies	• 100% Diversified Continuous Assessment; • Assessment will be based on project reports, presentations, assignments, tests and the research proposal; • A minimum Final Mark of 50% is required to pass the course; and • Assessment strategies will be aligned with the course learning outcomes.
Quality Assurance Arrangements	Moderation of assessment will be done in accordance with the NUST's general rules and guidelines on moderation.
Student Support and Learning Resources	NUST level: • The library and student services. Department level: • Individual tutoring; • Internet facilities available; and • Public lectures. Course level: • Students will be provided with a detailed course outline which will clearly define the purpose, aims and objectives of the course; • Students will be provided with a study guide that will also clearly define what the final performance requirements will be; • Internet facilities available; and • Learning materials through MyNUST eLearning platform. **Prescribed text book:** • Chanetsa, B., & Grobler, J. (2010). *APA citation guide* (2nd ed.). NUST library citation guide series 1. Windhoek: NUST. **Recommended reading:** • Creswell, J. W. (2008). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications, Inc; 3rd edition. • Fink, A. (2009). *Conducting Research Literature Reviews: From the Internet to Paper.* SAGE Publications, Inc; Third Edition. • Hughes, A. H. and Havhoe, G. F. (2007). *A Research Primer for Technical Communication: Methods, Exemplars, and Analyses*. Routledge; 2nd edition. • Kumar, R. (2010). *Research Methodology: A Step-by-Step Guide for Beginners.* SAGE Publications Ltd; Third Edition.

Course Title	**CONSTRUCTION FINANCE**
Course Code	TBA
NQF Level	8
Notional Hours	150 hours; Contact: 56 hours; Directed self-learning and Self-Directed Learning: 74 hours; Assessment: 20 hours
NQF Credits	15 Credits
Prerequisites	None
Options (compulsory or elective)	Compulsory
Semester Offered	1
Course Aims	The aim of the course is to equip students with knowledge relevant to financial management and financial analysis pertaining to construction work and projects. It will further equip them with knowledge on alternative funding opportunities to enable them to select the best financial opportunity for the proposed development.
Specific Learning Outcomes	On completion of the course students will, through assessment activities, show evidence of their ability to: • Discuss the various alternative funding opportunities pertaining to construction projects; • Identify and evaluate risks associated with each project financing opportunity; and • Recommend the best funding opportunity for the projected development, considering the prevailing social, economic, political and environmental conditions.
Comprehensive Learning Outcome	Identify and recommend financing opportunities for the proposed infrastructure development.
Course Content	• Sources of finance; • Introduction to Land tenure systems and tenure security in Namibia; • International Finance (Foreign Direct Investment, African Development Bank, World Bank, Asian Development Bank, European Development Bank); • Public Private Partnerships (PPPs) (BOOT, BOT, BOO), Joint Ventures, Consortium; • Function of Special Purpose Vehicle (SPV); • Financial Evaluation; • Principles of managerial finance focusing on financial markets, financial statement analysis, capital budgeting and working capital management; • Managing Risk in Project Finance Transactions; and • Discussion on how to find the best financial package for the projected development.
Methods of Facilitating Learning	The course content will be delivered via methods that will ensure maximum intrinsic knowledge and understanding acquisition. Instructional strategies will aim at student participation on individual as well as group-based interaction. Group-based learning is regarded as a major strategy to develop

	within individuals' professional research competencies. The course will be facilitated through the following instructional strategies and methods: • Lectures: to be employed to properly ground the theoretical concepts that underlie a learning domain; • Individual assignments based on demonstrated studies of strategic plans and implementation procedures; and • Individual projects will be used as assessment tasks.
Assessment Strategies	Diversified continuous assessment mode: Recommended weight: Assignments 60% Tests 40% Notes: • Students need to acquire a minimum final mark of 50% to pass the course; • A portfolio of works will be required at the end of the semester for internal and external moderation; • For second opportunities refer to Departmental Regulations; and • Final assessment weights are at discretion of the lecturer.
Quality Assurance Arrangements	Moderation will be done in accordance with NUST rules and guidelines on moderation.
Student Support and Learning Resources	NUST level: • The library, student services and internet facilities. Faculty Level: • Faculty-based induction. Department level: • Internet facilities available; and • Public lectures. Course level: • Students will be provided with a detailed course outline which will clearly define the purpose, aims and objectives of the course; • Students will be provided with a study guide that will also clearly define what the final performance requirements will be; and • Learning materials through MyNUST eLearning platform. **Prescribed text book:** • Pretorius, F., Chung-Hsu, B.F., Mclnnes, A., Lejot, P., and Arner, D. (2008). *Project Finance for Construction and Infrastructure: Principles and Case Studies.*Hong Kong: Blackwell Publishers. • Higham, A., Bridge, C and Farrell, P. (2017). *Project Finance for Construction.* New York: Routledge. **Recommended reading:** • Tang, S.L. (2015). *Construction Financial Management,*(3rd edition). Denmark: Bookboom. • Yescombe, E.R. (2014). Principles of Project Finance (2nd edition). Waltham, USA: Elsevier Inc.

Course Title	**MEASUREMENT**
Course Code	TBA
NQF Level	8
Notional Hours	150 Contact: 56 hours; Directed self-learning and Self-Directed Learning: 74 hours; Assessment: 20 hours
NQF Credits	15 Credits
Prerequisites	None
Options (compulsory or elective)	Compulsory
Semester Offered	Semester 1
Course Aims	The course is designed to enable students to translate civil engineering drawings into quantifiable work items that will be incorporated in the Bill of Quantities as per Civil Engineering Standard Method of Measurement (CESMM).
Specific Learning Outcomes	On completing the course students will, through assessment activities, show evidence of their ability to: • Interpret civil engineering designs, drawings and applicable specifications; • Demonstrate an understanding of the differences and similarities of the Civil Engineering Standard Method of Measurement (CESMM) and Standard System of Measuring Building Work (SSM); • Measure Civil Engineering quantities in accordance with the applicable Civil Engineering Standard Method of Measurement (CESMM); and • Prepare an acceptable Bill of Quantities with appropriate descriptions and specifications in accordance with the fundamental rules of civil engineering quantities.
Comprehensive Learning Outcome	Prepare bills of quantities from technical drawings and specifications for civil engineering works.
Course Content	• Measurement Theory and Practice; • Fundamental Principles of Civil Engineering Standard Method of Measurement; • Bill Production for Civil Engineering Works; • Contract Preparatory and Site Matters; • Excavation, Filling and landscaping; • Concrete Works; • Pipework; and • Roads.
Methods of Facilitating Learning	The course content will be delivered via methods that will ensure maximum intrinsic knowledge and understanding acquisition. Instructional strategies will aim at student participation on individual as well as group base interaction. Group-based learning is regarded as a major strategy to develop within individuals' professional research competencies. The course will be facilitated through the following instructional strategies and methods: • Lectures: to be employed to properly ground the theoretical concepts that underlie a learning domain;

	• Individual assignments based on demonstrated studies of strategic plans and implementation procedures; • Individual projects will be used as assessment tasks; and • Project excursion will improve the students' perspective of the topics in the course.
Assessment Strategies	Diversified continuous assessment mode: Recommended weight: Assignments 60% Class Tests 40% Notes: • Students need to acquire a minimum final mark of 50% to pass the course; • A portfolio of works will be required at the end of the semester for internal and external moderation; • For second opportunities refer to Departmental Regulations; and • Final assessment weights are at discretion of the lecturer.
Quality Assurance Arrangements	Moderation of assessment will be done in accordance with the NUST's general rules and guidelines on moderation.
Student Support and Learning Resources	NUST level: • The library, student services and internet facilities. Faculty level: • Faculty-based induction Department level: • Internet facilities available; and • Public lectures. Course level: • Students will be provided with a detailed course outline which will clearly define the purpose, aims and objectives of the course; • Students will be provided with a study guide that will also clearly define what the final performance requirements will be; and • Learning materials through MyNUST eLearning platform. **Prescribed text book:** • Institute of Civil Engineers. (2016), *Civil Engineering Standard Method of Measurement (CESMM)* 4th Edition, United Kindom: ICE Publishing & RICS • Seeley, I.H. & Murray, G.P. (2001), *Civil Engineering Quantities* (Sixth Edition). Britain: Antony Rowe Ltd **Recommended reading:** • Barnes, M. (1992) CESMM3 Handbook, United Kingdom: Thomas Telford Publishers

Course Title	**PROFESSIONAL PRACTICE AND PROCEDURES**
Course Code	TBA
NQF Level	8
Notional Hours	150 hours; Contact: 60 hours, Directed self-learning and self-directed learning: 70 hours, Assessment:20 hours
NQF Credits	15
Prerequisites	None
Options (compulsory or elective)	Compulsory
Semester Offered	1
Course Aims	The course aims at equipping students with the knowledge about ethics of the quantity surveying profession that include values, ethical theory and practice, moral reasoning, morality in law and codes.
Specific Learning Outcomes	On completion of the course students will, through assessment activities, show evidence of their ability to: • Demonstrate comprehensive and systematic knowledge of quantity surveying professional ethics; • Distinguish between acceptable professional ethical conduct and non-ethical conduct in the discharge of professional duties basing on given case studies; • Analyse the professional code of conduct issued by the Institute of Namibian Quantity Surveyors; • Comprehend and adhere to professional code of conduct, Architects'and Quantity Surveyors Act and other relevant international laws governing the profession during the discharge of professional duties; • Exercise duty of care expected during the discharge of professional duties; and • Calculate professional fees using the gazetted tariff of fees chargeable by quantity surveyors for any service(s) rendered to public sector or private sector clients.
Comprehensive Learning Outcome	Comply with professional ethics and procedures relevant to the profession during the discharge of professional services to both public and private sector clients, who are based locally or internationally.
Course Content	• Professional ethics and ethical theory and practice; • Moral values, reasoning, morality in law; • Professional Liability and Professional Indemnity Insurance; • Mandate of professional bodies (Institute of Namibian Quantity Surveyors (INQS), Namibia Council of Architects and Quantity Surveyors (NCAQS), Royal Institute of Chartered Surveyors (RICS) etcetera); • Professional code of conduct issued by the Institute of Namibian Quantity Surveyors; • Clauses in the Architects' and Quantity Surveyors' Act and related Regulations; • Tariff of Fees Chargeable by Architects and Quantity Surveyors and related disbursement charges;

	• Professional fees for services rendered to public or private sector clients; • Public Procurement Act of Namibia and related Regulations; • Client/consult service level agreements and dispute resolution process; • Procedure for registration as a professional quantity surveyor. • Company registration process; and • International consultant service provision (modus operandi, fee chargeable, currencies applicable, law governing operations etcetera).
Methods of Facilitating Learning	The course will be facilitated through the following learning activities: Lectures in which students are expected to take notes, assigned readings, discussions (all students are expected to participate), case studies, seminars, assignments.
Assessment Strategies	Diversified continuous assessment mode: Recommended weight: Assignments 60% Tests 40% Notes: • Students need to acquire a minimum final mark of 50% to pass the course; • A portfolio of works will be required at the end of the semester for internal and external moderation; • For second opportunities refer to Departmental Regulations; and • Final assessment weights are at discretion of the lecturer.
Quality Assurance Arrangements	Moderation will be done in accordance with NUST rules and guidelines on moderation.
Student Support and Learning Resources	NUST level: • The library, student services and internet facilities. Department level: • Internet facilities available; and • Public lectures. Course level: • Students will be provided with a detailed course outline which will clearly define the purpose, aims and objectives of the course; • Students will be provided with a study guide that will also clearly define what the final performance requirements will be; • Texts as prescribed by Lecturer from time to time; and • Learning materials through MyNUST eLearning platform. **Prescribed Textbook:** • Architects' and Quantity Surveyors' Act, 1997 (Act. 13 of 1979) • Quantity Surveying Practice Manual (issued by Institute of Namibian Quantity Surveyors) **Recommended reading:** • Public Procurement Act, 2015 (Act No. 15 of 2015) • Public Procurement Regulations: Public Procurement Act, 2015 (Act No.15 of 2015) • Quantity Surveying Profession Act, 2000 (Act 49 of 2000). South Africa: SACQSP • RICS Regulation: Rules of Conduct for Members (2007). London: RICS

Course Title	**CONSTRUCTION COSTING AND FEASIBILITY STUDY**
Course Code	TBA
NQF Level	8
Notional Hours	150 Contact: 60 hours; Directed self-learning and Self-Directed Learning: 70 hours; Assessment: 20 hours
NQF Credits	15
Prerequisites	None
Options (compulsory or elective)	Compulsory
Semester Offered	Semester 2
Course Aims	The course aims at equipping students with advanced skills of costing construction works i.e elemental cost estimation, pricing of various trades and preliminaries, building escalation and feasibility or viability studies.
Specific Learning Outcomes	On completion of the course students will, through assessment activities, show evidence of their ability to: • Prepare reliable elemental cost estimate; • Price various trades and preliminaries in the bill of quantities for building works; • Calculate pre-contract and contract escalations; • Prepare feasibility studies or viability studies; and • Project cashflows for social building projects.
Comprehensive Learning Outcome	Apply advanced estimating skills in costing construction works during pre-contract stage right through post-contract stage as well as preparation of feasibility or viability reports.
Course Content	• Elemental cost estimating • Evaluation of Model Preliminaries; • Costing Preliminaries in bill of quantities (fixed costs, time related costs and value related cost); • Costing trades in bill of quantities; • Fluctuations or escalations for building works; and • Feasibility or Viability Studies
Methods of Facilitating Learning	The course content will be delivered via methods that will ensure maximum intrinsic knowledge and understanding acquisition. Instructional strategies will aim at student participation on individual as well as group base interaction. Group-based learning is regarded as a major strategy to develop within individuals' professional research competencies. The course will be facilitated through the following instructional strategies and methods: • Lectures: to be employed to properly ground the theoretical concepts that underlie a learning domain; • External resource persons will be invited on a regular basis to present workshops or seminars on some of the topics; • Individual assignments based on demonstrated studies of strategic plans and implementation procedures; and • Individual projects will be used as assessment tasks.

Assessment Strategies	Diversified continuous assessment mode: Recommended weight: Assignments 60% Tests 40% Notes: • Students need to acquire a minimum final mark of 50% to pass the course; • A portfolio of works will be required at the end of the semester for internal and external moderation; • For second opportunities refer to Departmental Regulations; and • Final assessment weights are at discretion of the lecturer.
Quality Assurance Arrangements	Moderation of assessment will be done in accordance with the NUST's general rules and guidelines on moderation.
Student Support and Learning Resources	NUST level: • The library, student services and internet facilities. Department level: • Internet facilities available; and • Public lectures. Course level: • Students will be provided with a detailed course outline which will clearly define the purpose, aims and objectives of the course; • Students will be provided with a study guide that will also clearly define what the final performance requirements will be; • Texts as prescribed by Lecturer from time to time; and • Learning materials through MyNUST eLearning platform. **Prescribed Textbook:** • Guide to Elemental Cost Estimating & Analysis for Building Works, 2013. Africa Association of Quantity Surveyors. **Recommended reading:** • Greenhalgh, B. (2013). *Introduction to Estimating for Construction.* Oxon, UK: Routledge. • Dagostino, FR., & Peterson, ST. (2011). *Estimating in Building Construction.* 7th Edtn, Prentice Hall. • Dagostino, FR., & Peterson, ST. (2017). *Estimating in Building Construction.* 9th Edtn, Prentice Hall. • Pratt, JD. (2012*). Estimating for Residential Construction.* 2nd Edtn. Australia, Delmar Cengage Learning. • Jacob, D. & Muller, C. (2016). *Estimating in Heavy Construction Roads, Bridges, Tunnels, Foundations*. Willey Ernest & Sohn. • Brickstone (2018). *The Guide for Developing Feasibility Studies for Real Estate Projects.* Brickstone Publications. • PCH Publications (2007) (Editor). *Feasibility Study Preparation & Analysis Hardcover.* PCH Publishers. • www. Project Management Docs.com

Course Title	**CONTRACT MANAGEMENT**
Course Code	TBA
NQF Level	8
Notional Hours	150 Contact: 60 hours; Directed Self-learning and Self-directed Learning: 70 hours; Assessment: 20 hours.
NQF Credits	15
Prerequisites	None
Options (compulsory or elective)	Compulsory
Semester Offered	Semester 2
Course Aims	This course aims to develop the fundamental skills required to successfully manage a construction project from the planning phases through execution until the project attains completion.
Specific Learning Outcomes	On completing the course students will, through assessment activities, show evidence of their ability to: • Demonstrate understanding of the distinct characteristics of the Construction Industry; • Outline the critical legal instruments that regulate and ensure compliance on construction contracts; • Demonstrate understanding of International Contracts i.e Federation Internationale des Ingenieurs-Conseils (FIDIC). • Identify and assess the major risks of a construction project and recommend appropriate management strategies; • Demonstrate comprehensive understanding of tendering methodologies in construction; • Prepare appropriate schedule of activities using different planning techniques; • Develop a comprehensive project cashflow for effective budgeting; • Demonstrate understanding of the different ways to assure quality on a construction project.
Comprehensive Learning Outcome	Manage construction work on site.
Course Content	• Introduction to commercial construction and construction management; • Principles of Sustainable Construction • Project Delivery Methods; • Project Stages; • Bidding and Procurement; • Advanced Estimation; • Project Planning, Scheduling and Review; • International Contracts i.e FIDIC; • Contract Administration; • Project Cashflows and Cost Reports; • Construction Operations and jobsite Management; • Managing Quality and Safety; • Monitoring Project Performance; and • Managing Project Risks.

Methods of Facilitating Learning	The course is to be facilitated through the following learning activities: • Lecturing will be the main method of teaching and will be conducted in such a way as to promote maximum interaction between the lecturer and the students through frequent questioning and commenting; • External resource persons will be invited on a regular basis to teach specific topics in the course; • Group work and group assignments at various levels of delivery, modules will form part of the teaching methods so that students can interact and share ideas; and • Site visits will be arranged to places of construction interests, where students can observe, experiment or carry out any relevant exercises.
Assessment Strategies	Diversified continuous assessment mode: Recommended weight: Assignments 60% Tests 40% Notes: • Students need to acquire a minimum final mark of 50% to pass the course; • A portfolio of works will be required at the end of the semester for internal and external moderation; • For second opportunities refer to Departmental Regulations; and • Final assessment weights are at discretion of the lecturer.
Quality Assurance Arrangements	Moderation of assessment will be done in accordance with the NUST's general rules and guidelines on moderation.
Student Support and Learning Resources	NUST level: • The library, student services Department level: • Internet facilities available; and • Public lectures. Course level: • Students will be provided with a detailed course outline which will clearly define the purpose, aims and objectives of the course; and • Learning materials through MyNUST eLearning platform. **Prescribed Reading:** • Halpin, D.W. & Senior B.A (2012) *Construction Management, 4th Edition*, United Kingdom: John Wiley & Sons (Asia) Ltd • Baldwin, A. & Bordoli, D. (2014) *A Handbook for Construction Planning and Scheduling*, United Kingdom: Wiley Blackwell **Recommended Reading:** • Smith, N.J.; Merna, T. & Jobling, P. (2014) *Managing Risk in Construction Projects, 3rd Edition*, United Kingdom: John Wiley & Sons, Ltd • Jackson, B.J. (2010) *Construction Management Jump Start*, 2nd Edition, Indianapolis, Indiana: Wiley Publishing, Inc.

Course Title	**MINI-THESIS**
Course Code	TBA
NQF Level	8
Notional Hours	300 hours
NQF Credits	30
Prerequisites	Research Methodology
Options (compulsory or elective)	Compulsory
Semester Offered	Semester 2
Course Aims	The course is designed to support students in the field of Quantity Surveying to apply their knowledge and skills to conduct relevant applied research
Specific Learning Outcomes	On completing the course students will through assessment activities, show evidence of their ability to: • Undertake the research project for which a proposal was produced in the Research Methodology course; • Collect, analyse, organise and critically evaluate information; • Apply different research methods and techniques in their areas of specialisation; • Produce a scientific report (mini-thesis) that is of such a standard that it can be published; and • Defend the mini-thesis orally.
Comprehensive Learning Outcome	Conduct supervised research of an applied nature in quantity surveying or related construction discipline (Mini-thesis).
Course Content	• Execution of the supervised research project; • Research report writing; and • Oral presentation and defense.
Methods of Facilitating Learning	There will be regular tutoring sessions between the student and supervisor throughout the semester. The tutor will carry out field visits with the student to ensure that methodology is applied correctly. Rough drafts of chapters will be submitted to the supervisor for correction and comments, before the final version is assessed.
Assessment Strategies	Diversified continuous assessment mode: Recommended weight: Oral Presentation 30% Final Report 70% Notes: • Students need to acquire a minimum final mark of 50% to pass the course; • A portfolio of works will be required at the end of the semester for internal and external moderation; • For second opportunities refer to Departmental Regulations; and • Final assessment weights are at discretion of the lecturer.
Quality Assurance Arrangements	Moderation of assessment will be done in accordance with the NUST's general rules and guidelines on moderation.
Student Support and Learning Resources	Institutional level: The library and Student Services.

	Departmental level: Individual tutoring. Learning Resources: • Learning resources will depend on each student's research topic. It is expected from students to do their own literature review, relevant to their research topics. This must include literature from peer-reviewed journals, as well as other sources, including personal communication with experts. • Any supplementary material recommended by the Supervisor.