



NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Office of the Registrar

Yearbook - Part 6 Faculty of Health and Applied Sciences



2020



NAMIBIA
UNIVERSITY
OF SCIENCE
AND TECHNOLOGY

YEARBOOK 2019

PART

6

FACULTY OF
HEALTH AND
APPLIED SCIENCES

(**Note:** The final interpretation of all regulations in this Yearbook for the *Faculty of Health and Applied Sciences* shall be vested in Council).

NOTE

The ***Yearbook for the Faculty of Health and Applied Sciences*** is valid for 2020 only. Curricula and syllabi may be amended for 2021.

It is obtainable free of charge from:

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Due to the rapidly changing external environment that many programmes operate in, and the University's desire to remain constantly relevant in its offerings, some programmes may be significantly amended after publication of this Yearbook. Please consult our website for the latest versions of our curricula, syllabi and academic regulations.

The fact that particulars of a specific programme, field of study, subject, or course have been included in this Yearbook does not necessarily mean that such a programme, field of study, subject, or course will be offered in the academic year 2019.

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UNDERGRADUATE PROGRAMMES

DEPARTMENT OF HEALTH SCIENCES

Code 57

QUALIFICATIONS OFFERED

| | |
|--|--------|
| Bachelor of Medical Laboratory Sciences (Revised Programme) (Phased in 2017) | 08BMLS |
| Bachelor of Biomedical Sciences (Phased out 2017) | 50BBMS |
| Bachelor of Emergency Medical Care (Phased in 2018) | 07BOMC |
| Bachelor of Environmental Health Sciences (Revised Programme) (Phased in 2019) | 08BOHS |
| Bachelor of Science in Health Information Systems Management (Phased in 2019) | 07BHIS |
| Bachelor of Human Nutrition (New programme) (Phased in 2019) | 08BOHN |

**BACHELOR OF MEDICAL LABORATORY SCIENCES
(Revised Programme) (Phased in 2017)**

08BMLS

NQF Level: 8

NQF Credits: 511

NQF Qualification ID: Q0991

Description

The Bachelor of Medical Laboratory Sciences is a professional degree, designed for registration at level 8 of the National Qualifications Framework (NQF). The programme demands a high level of theoretical and practical engagement, as well as intellectual independence and aims to foster deepened, comprehensive and systematic expertise in the major cognate area of learning, i.e. Medical Laboratory Science. The programme further equips students with cognitive and intellectual skills, key transferable skills and professional, technical and practical skills that would enable them to apply principles and techniques in the routine and specialised analysis of biological specimens and other substances. Students will also be capacitated to organise laboratory operations in clinical diagnostic laboratories in accordance with Good Laboratory Practice (GLP). Students will be able to integrate laboratory tests and results with pathophysiological conditions and conduct supervised research based on sound scientific principles. Overall, the programme aims to produce highly flexible and well-trained graduates who are able to adapt to a changing environment and comply with statutory requirements in relation to quality, ethics and safety.

Successful completion of the Bachelor of Medical Laboratory Sciences and the industry examination will enable graduates to register with the Health Professions Council of Namibia (HPCNA).

Admission Criteria

In addition to meeting the University's minimum admission requirements as outlined in the general rules, candidates must have a total of 18 points on the evaluation scale for Physical Science, Mathematics and Biology, in a combination of symbols on NSSC Higher or Ordinary Level or both. No symbol for any one or more of the subjects may be lower than a C on Ordinary Level or a 4 on Higher Level. Candidates must further have obtained at least a D on Ordinary Level for English.

The Head of Department or his/her nominee may admit candidates who do not have the required minimum symbol for one of the above subjects, provided that such candidates have very strong symbols for the other two subjects and that the total point score for the three subjects is not lower than 18.

Students who meet the above admission requirements will be subjected to a selection process using ranking of results for Biology, Physical Science and Mathematics.

Articulation Arrangements

The transfer of credits will be dealt with according to NUST rules and 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 credits that can be granted are 50% of the credits for a qualification.

Graduates of this programme will under normal circumstances be able to pursue further studies in Medical Laboratory Science, or a related cognate area of learning, at NQF Level 9.

Mode of Delivery

This programme will be offered on the full-time mode of study in accordance with NUST rules and regulations.

Requirements for Qualification Award

The Bachelor of Medical Laboratory Sciences designed for registration at NQF level 8, will be awarded to a student credited with a minimum of 511 NQF credits, this total includes the courses making up the 465 cognitive credits and then the core institutional courses which is 46 credits. In addition, students must meet the administrative and financial requirements as spelt out in Part 1 of NUST Yearbook.

Assessment Strategies

Students will be assessed through continuous and summative assessment. These assessments will focus on the achievement of qualification outcomes and take the form of problem solving exercises, individual/group assignments and presentations, case studies, report writing, practical application of skills and competencies, tutorials, practical projects and questioning (tests and/or examinations). The use of validating end of term assessments may be minimised in order to free students' intellectual capacity for broader cognitive development. Assessment by means of tests and/or examinations will, therefore, be restricted to situations where it is necessary to establish that a previous specific performance can be repeated or a specific skill can be transferred. In accordance with NUST policy on diversified continuous assessment, each course will have a minimum of six assessment events. Courses that are assessed using a combination of continuous assessment and a final end-of-term examination must have at least three assessments.

In this programme, all courses will be assessed using a combination of continuous assessment and an end-of-semester examination in the ratio 60% (continuous assessment) and 40% (examination).

Assessment of the Work Integrated Learning components will be dealt with by means of close cooperation between WIL clinical instructors and NUST academics by means of a work manual in which students have to report on their activities in the simulation laboratory and/or work place and signed-off by the instructors. The mini-thesis will be assessed in accordance with NUST rules for studies at honours level.

Transition Arrangements

The Bachelor of Biomedical Sciences (old curriculum) will be phased out systematically until 2022 with minimum disruption to existing students' learning progression. The last intake of 1st year students for the out-phasing programme (old curriculum) was in January 2016.

Students who were registered in 2016 for the 1st year of the old curriculum, and who do not meet the rules for progression to the 2nd year at the end of 2016, will be required to change their registration to the revised programme (revised curriculum), and will be granted credits on a course-by-course basis in accordance with information in Table 1, below. Similarly, students who are registered in 2016 for the 1st year of the old curriculum, and who meet the minimum requirements for progression to the 2nd year at the end of 2016, will also be required to transition to the revised programme (revised curriculum), but will be required to do Cell and Molecular Biology. Such students, will be exempted from the newly introduced English communication courses, and Information Competence, but will have to meet all other requirements of the revised programme (revised curriculum). Such arrangements will be done in consultation with office of the Registrar to ensure that students do not lose credits.

Students who were registered in 2016 for the 2nd, 3rd or 4th year of the old curriculum will be required to complete their studies, based on the requirements of the old curriculum.

The revised Bachelor of Medical Laboratory Sciences (revised curriculum) has taken effect from January 2017 with the implementation of the 1st and 2nd years. The revised programme will be fully implemented by 2019. Courses will only be offered based on the new/ revised syllabi in 2017 (1st and 2nd year), 2018 (3rd year), and 2019 (4th year). Students who fail any of the courses on the old curriculum will be required to repeat such courses based on the syllabi of new/revised corresponding courses (please refer to Table 2, below, for information on the new/revised corresponding courses to be done, if courses on the old curriculum are failed).

The deadline for complete phasing out of the Bachelor of Biomedical Sciences (old curriculum) is 2022 after which students must automatically change registration to the revised programme (new curriculum) and fulfil all requirements of the new curriculum.

Table 1: Courses to be credited

| Course Code | Bachelor of Biomedical Sciences (Old Courses) | Course Code | Bachelor of Medical Laboratory Science (New/ Revised Corresponding Courses to be Done, if Failed) |
|--------------------|--|--------------------|--|
| CEM110S | Medical Chemistry | HSC511S | Health Science Chemistry |
| MPH110S | Medical Physics | HSP511S | Health Science Physics |
| BCL110S | Biostatistics and Calculations | HSS511S | Health Science Statistics |
| CUS411S | Computer User Skills | CUS411S | Computer User Skills |
| EAP511S | English for Academic Purposes | EAP511S | English for Academic Purposes |
| LAP110S | Laboratory Principles | IML511S | Introduction to Medical Laboratory Science |
| ALP120S | Applied Laboratory Principles | | |
| BMB120S | Molecular Biology | CMB521S | Cell and Molecular Biology |
| CEB210S | Cell Biology | | |
| HPY110S | Human Anatomy and Physiology A | HPY511S | Human Anatomy and Physiology 1A |
| IMY120S | Immunology | IMY521S | Immunology |
| HPY120S | Human Anatomy and Physiology B | HPY521S | Human Anatomy and Physiology 1B |
| BCH120S | Biochemistry | BIO521S | Biochemistry |
| MMB210S | Medical Microbiology 1 | MMB611S | Medical Microbiology 2A |
| HAM210S | Haematology 1 | HAM611S | Haematology 2A |
| CLC210S | Clinical Chemistry 1 | CLC611S | Clinical Chemistry 2A |
| MMB220S | Medical Microbiology 2 | MMB621S | Medical Microbiology 2B |
| HAM220S | Haematology 2 | HAM621S | Haematology 2B |
| CLC220S | Clinical Chemistry 2 | CLC621S | Clinical Chemistry 2B |
| MOD310S | Molecular Diagnostics | MOD621S | Molecular Diagnostics |
| MMB310S | Medical Microbiology 3 | MMB711S | Medical Microbiology 3 |
| HAM310S | Haematology 3 | HAM711S | Haematology 3 |
| CLC310S | Clinical Chemistry 3 | CLC711S | Clinical Chemistry 3 |
| RES310S | Research Methodology | RMA821S | Research Methodology |
| BMT320S | Experiential learning A | WLB721S | WIL 3 |
| BMT410S | Experiential learning B | WLB811S | WIL 4A |
| LAM320S | Medical Laboratory Management A | MLM711S | Medical Laboratory Management |
| LAM420S | Medical Laboratory Management B | | |
| ICP420S | Integrated Clinical Pathology | ICP811S | Integrated Clinical Pathology |

Table 2: Corresponding Courses (if Failed). This is not a credit table.

| Course Code | Bachelor of Biomedical Sciences (Old Courses) | Course Code | Bachelor of Medical Laboratory Science (New/Revised Corresponding Courses to be Done, if Failed) |
|-------------|---|-------------|--|
| CEM110S | Medical Chemistry | HSC511S | Health Science Chemistry |
| MPH110S | Medical Physics | HSP511S | Health Science Physics |
| BCL110S | Biostatistics and Calculations | HSS511S | Health Science Statistics |
| CUS411S | Computer User Skills | CUS411S | Computer User Skills |
| LAP110S | Laboratory Principles | IML511S | Introduction to Medical Laboratory Science |
| ALP120S | Applied Laboratory Principles | | |
| BMB120S | Molecular Biology | CMB521S | Cell and Molecular Biology |
| CEB210S | Cell Biology | | |
| HPY110S | Human Anatomy and Physiology A | HPY511S | Human Anatomy and Physiology 1A |
| IMY120S | Immunology | IMY521S | Immunology |
| HPY120S | Human Anatomy and Physiology B | HPY521S | Human Anatomy and Physiology 1B |
| BCH120S | Biochemistry | BIO521S | Biochemistry |
| MMB210S | Medical Microbiology 1 | MMB611S | Medical Microbiology 2A |
| HAM210S | Haematology 1 | HAM611S | Haematology 2A |
| CLC210S | Clinical Chemistry 1 | CLC611S | Clinical Chemistry 2A |
| MMB220S | Medical Microbiology 2 | MMB621S | Medical Microbiology 2B |
| HAM220S | Haematology 2 | HAM621S | Haematology 2B |
| CLC220S | Clinical Chemistry 2 | CLC621S | Clinical Chemistry 2B |
| MOD310S | Molecular Diagnostics | MOD621S | Molecular Diagnostics |
| MMB310S | Medical Microbiology 3 | MMB711S | Medical Microbiology 3 |
| HAM310S | Haematology 3 | HAM711S | Haematology 3 |
| CLC310S | Clinical Chemistry 3 | CLC711S | Clinical Chemistry 3 |
| RES310S | Research Methodology | RMA821S | Research Methodology |
| BMT320S | Experiential learning A | WLB721S | WIL 3 |
| BMT410S | Experiential learning B | WLB811S | WIL 4A |
| LAM320S | Medical Laboratory Management A | MLM711S | Medical Laboratory Management |
| LAM420S | Medical Laboratory Management B | | |
| ICP420S | Integrated Clinical Pathology | ICP811S | Integrated Clinical Pathology |

Please Note:

In cases where more than one course in the old curriculum is replaced by one course in the new programme, students who have failed any one of the old courses must do the whole new course. Exemption cannot be granted for less than a whole course.

Table 2 only highlights new/revised core courses in Bachelor of Medical Laboratory Sciences that should be done if courses on the old curriculum are failed. Service courses from other Departments are excluded, but the rules of relevant Departments apply to this programme as well.

Such course will have to be offered until the programme completely phases out in 2022:

- Biology of Diseases

CURRICULUM**Year 1****Semester 1**

| Course Title | Course Code | Prerequisite | NQF Level | NQF Credit |
|--|-------------|--------------|-----------|------------|
| Human Anatomy and Physiology 1A | HPY511S | None | 5 | 12 |
| Introduction to Medical Laboratory Science | IML511S | None | 5 | 12 |
| Health Science Chemistry | HSC511S | None | 5 | 10 |
| Health Science Physics | HSP511S | None | 5 | 10 |
| Health Science Statistics | HSS511S | None | 5 | 10 |
| Computer User Skills | CUS411S | None | 4 | 10 |
| Principles of English Language Use | PLU411S | None | 4 | NCB |

Semester 2

| | | | | |
|---------------------------------|---------|------------------------------------|---|-----|
| English in Practice | EPR511S | Principles of English Language Use | 5 | NCB |
| Information Competence | ICT521S | None | 5 | 10 |
| Human Anatomy and Physiology 1B | HPY521S | Human Anatomy and Physiology 1A | 5 | 12 |
| Immunology | IMY521S | Human Anatomy and Physiology 1A | 5 | 12 |
| Biochemistry | BIO521S | Health Science Chemistry | 5 | 10 |
| Cell and Molecular Biology | CMB521S | Human Anatomy and Physiology 1A | 5 | 12 |

Year 2

Semester 3

| | | | | |
|-------------------------------|---------|---|---|----|
| English for Academic Purposes | EAP511S | English in Practice | 5 | 14 |
| Medical Microbiology 2A | MMB611S | Human Anatomy and Physiology 1B Introduction to Medical Laboratory Science | 6 | 13 |
| Haematology 2A | HAM611S | Human Anatomy and Physiology 1B Immunology | 6 | 10 |
| Clinical Chemistry 2A | CLC611S | Biochemistry Introduction to Medical Laboratory Science | 6 | 12 |
| Anatomical Pathology 2A | ANP611S | Human Anatomy and Physiology 1A Human Anatomy and Physiology 1B Cell andMolecular Biology | 6 | 14 |

Semester 4

| | | | | |
|-------------------------|---------|--|---|----|
| Medical Microbiology 2B | MMB621S | Medical Microbiology 2A | 6 | 12 |
| Haematology 2B | HAM621S | Haematology 2A | 6 | 12 |
| Clinical Chemistry 2B | CLC621S | Clinical Chemistry 2A | 6 | 12 |
| Anatomical Pathology 2B | ANP621S | Anatomical Pathology 2A | 6 | 12 |
| Immunohaematology | IMH621S | Human Anatomy and Physiology 1A Human Anatomy and Physiology 1B | 6 | 10 |
| Molecular Diagnostics | MOD621S | Biochemistry Cell and Molecular Biology | 6 | 10 |

Year 3

Semester 5

| | | | | |
|--------------------------------|---------|---|---|----|
| Sustainability and Development | SYD611S | None | 7 | 12 |
| Medical Microbiology 3 | MMB711S | Medical Microbiology 2B | 7 | 12 |
| Haematology 3 | HAM711S | Haematology 2B | 7 | 12 |
| Clinical Chemistry 3 | CLC711S | Clinical Chemistry 2B | 7 | 12 |
| Medical Laboratory Management | MLM711S | Introduction to Medical Laboratory Science | 7 | 14 |

Semester 6

| | | | | |
|------------------------------------|---------|---|---|----|
| Research Methodology | RMA821S | Health Science Statistics | 8 | 12 |
| Work Integrated Learning 3 (WIL 3) | WLB721S | Medical Microbiology 3 Clinical Chemistry 3 Haematology 3 Molecular Diagnostics Anatomical Pathology 2B | 7 | 50 |

Year 4

Semester 7

| | | | | |
|--------------------------------------|---------|------------------------------------|---|----|
| Integrated Clinical Pathology | ICP811S | Work Integrated Learning 3 (WIL 3) | 8 | 14 |
| Work Integrated Learning 4A (WIL 4A) | WLB811S | Work Integrated Learning 3 (WIL 3) | 8 | 50 |

Semester 8

| | | | | |
|--------------------------------------|---------|--------------------------------------|---|----|
| Mini-Thesis | MTB811S | Research Methodology | 8 | 30 |
| Work Integrated Learning 4B (WIL 4B) | WLB821S | Work Integrated Learning 4A (WIL 4A) | 8 | 40 |

**BACHELOR OF BIOMEDICAL SCIENCES
(Phased out from 2017)****50BBMS****NQF Level: 8****NQF Credits: 515****NQF Qualification ID: Q0165****Description**

The Bachelor of Biomedical Sciences is a professional degree at NQF Level 8. The degree incorporates a research component and 1 year of practical work-based learning. The programme is offered on full time mode only.

Admission Requirements

Grade 12 with minimum of 25 points as per the NUST general admission requirements. In addition, applicants must meet the following specific admission requirements:

| | |
|-----------------------|--|
| Mathematics | – B on NSSC (O) or 4 on NSSC (H) or equivalent |
| English | – E on NSSC (O) or 4 on NSSC (H) or equivalent |
| Biology or Physiology | – B on NSSC (O) or 4 on NSSC (H) or equivalent |
| Physical Science | – B on NSSC (O) or 4 on NSSC (H) or equivalent |

Students meeting these requirements will be subjected to a selection process. Limited space is available in the programme. Meeting admission requirements does not guarantee placement in the programme. No mature age entries will be considered.

CURRICULUM**Year 1****Semester 1**

| Course Title | Course Code | Prerequisite(s) | NQF Level | NQF Credits |
|--------------------------------|--------------------|--|------------------|--------------------|
| Human Anatomy & Physiology 1A | HPY110S | None | 5 | 12 |
| Medical Chemistry | CEM110S | None | 5 | 10 |
| Biostatistics and Calculations | BCL110S | None | 5 | 8 |
| Medical Physics | MPH110S | None | 5 | 7 |
| Laboratory Principles 1A | LAP110S | None | 5 | 12 |
| Computer User Skills | CUS411S | None | 4 | 10 |
| English for Academic Purposes | EAP511S | English in Practice, or Language in Practice B, or Module 3 or Exemption | 5 | 14 |

Semester 2

| | | | | |
|----------------------------------|---------|---------------------------------|---|----|
| Human Anatomy and Physiology 1B | HPY120S | Human Anatomy and Physiology 1A | 6 | 12 |
| Molecular Biology | BMB120S | Medical Chemistry 1 | 6 | 10 |
| Immunology | IMY120S | Human Anatomy and Physiology 1A | 6 | 12 |
| Biochemistry | BCH120S | Medical Chemistry 1 | 6 | 12 |
| Applied Laboratory Principles 1B | ALP120S | Laboratory Principles 1A | 6 | 15 |

Year 2**Semester 3**

| | | | | |
|------------------------|---------|--------------------------------------|---|----|
| Medical Microbiology 1 | MMB210S | Human Anatomy and Physiology 1A & 1B | 6 | 15 |
| Haematology 1 | HAM210S | Immunology | 6 | 12 |
| Clinical Chemistry 1 | CLC210S | Biochemistry | 6 | 12 |
| Cell Biology | CEB210S | Human Anatomy and Physiology 1A & 1B | 6 | 10 |

Semester 4

| | | | | |
|------------------------|---------|------------------------|---|----|
| Medical Microbiology 2 | MMB220S | Medical Microbiology 1 | 7 | 20 |
| Haematology 2 | HAM220S | Haematology 1 | 7 | 15 |
| Biology of Diseases | BOD220S | Cell Biology | 7 | 10 |
| Clinical Chemistry 2 | CLC220S | Clinical Chemistry 1 | 7 | 15 |

Year 3**Semester 5**

| | | | | |
|------------------------|---------|--------------------------------|---|----|
| Medical Microbiology 3 | MMB310S | Medical Microbiology 2 | 7 | 15 |
| Haematology 3 | HAM310S | Haematology 2 | 7 | 15 |
| Clinical Chemistry 3 | CLC310S | Clinical Chemistry 2 | 7 | 15 |
| Research Methodology A | RES310S | Biostatistics and Calculations | 7 | 15 |

| | | | | |
|---------------------------------|---------|----------------------------------|---|----|
| Medical Laboratory Management A | LAM320S | Applied Laboratory Principles 1B | 7 | 10 |
| Molecular Diagnostics | MOD310S | Clinical Chemistry 2 | 7 | 15 |
| Semester 6 | | | | |
| Experiential Learning A | BMT320S | All semester five courses | 8 | 60 |
| Year 4 | | | | |
| Semester 7 | | | | |
| Experiential Learning B | BMT410S | Experiential Learning A | 8 | 60 |
| Semester 8 | | | | |
| Integrated Clinical Pathology | ICP420S | Experiential Learning A & B | 8 | 27 |
| Research Project | RSP420S | Research Methodology A | 8 | 30 |
| Medical Laboratory Management B | LAM420S | Medical Laboratory Management A | 8 | 10 |

Progression Rule: Students must complete and have passed all clinical courses before they will be allowed to register for experiential learning.

NQF Level: 7**NQF Credits: 388****NQF Qualification ID: Q1109****Description**

The Bachelor of Emergency Medical Care is a three-year full-time programme that is registered at a NQF level 7. Designed to provide students with a systematic and coherent introduction to the broad knowledge, principles, concepts and problem-solving techniques of emergency medical care. The programme will enable students to acquire cognitive/intellectual skills, practical/clinical skills, and key transferable skills for a career in the profession of emergency medical care. Graduates of this programme will be able to competently integrate and apply theoretical principles and practical clinical procedures and techniques to independently provide emergency medical care to injured and/or ill patients in urban, peri-urban and rural areas within the scope of practice stipulated by the Health Professions Council of Namibia (HPCNA).

The programme allows for an early exit with a Diploma in Emergency Medical Care after successful completion of the second year of study. Students who exit with a Diploma will be able to find employment in industry as mid-level emergency care practitioners and will be eligible to register with the HPCNA as Emergency Care Technicians (ECT's). Successful completion of the Bachelor of Emergency Medical Care degree will enable registration with the HPCNA as an Advanced Life Support (ALS) Practitioner, while graduates will be able to find employment in more senior positions, typically as ALS practitioners (Paramedics).

Admission Requirements

Candidates may be considered for admission to this programme, if they meet the General Admission Requirements of the Namibia University of Science and Technology (GI2.1 in Part 1 of the NUST Yearbook), and comply with the additional requirements below:

- A minimum E symbol in English as a Second Language at NSSC Ordinary Level or a 4 on Higher Level;
- A minimum D symbol in Mathematics and Biology, or Physical Science, at NSSC Ordinary Level or 4 on Higher Level.

Mature age candidates will be considered provided they meet the requirements and pass the mature age entrance examinations of the Namibia University of Science and Technology (GI2.2 in Part 1 of the NUST Yearbook). Students are required to obtain a minimum final score of at least **60%** in the language proficiency test and **50%** in the mathematics proficiency test.

The final selection of candidates to this programme shall follow a three-step process as indicated below:

Step 1: Applicants, who meet or surpass the minimum admission requirements, as stated above, will be shortlisted based on academic merit. Such candidates shall receive an invitation and information package for the selection assessments of the second stage (Step Two).

Step 2: Candidates are to be assessed in terms of their physical, medical fitness/abilities and phobias, and will be required to do a short-written placement test as well. Based on the outcome of these assessments, a shortlist shall be compiled and successful candidates will be invited to participate in a selection interview (Step Three).

Step 3: Candidates shall undergo an interview by the programme staff after which the final selection for admission shall be made. The results of the Selection Committee are final and no discussion or correspondence will be entered into.

If the final Grade 12 results of candidates, who were selected provisionally, do not meet the minimum requirements, then admission to the programme will be withheld.

Holders of the National Higher Certificate in Emergency Medical Care may be considered for admission to this programme provided they are registered with the Health Professions Council of Namibia as Emergency Care Technicians. These candidates, if admitted, will be granted credits for the following courses:

- Language in Practice (Principles of English Language Use)
- Computer User Skills
- Basic Science
- Pre-hospital Emergency Medical Care I
- Human Anatomy and Physiology
- Clinical Practice I
- Basic Medical Rescue
- Clinical Practice II
- Primary Health Care and HIV/AIDS

Holders of the National Higher Certificate in Emergency Medical Care will not be awarded with the new Diploma in Emergency Care. Emergency Care Technicians (National Higher Certificate) and Critical Care Assistants (CCA's) are eligible to apply for Recognition of Prior Learning (RPL) as established by the programme.

Mode of Delivery

This programme will be delivered on the full-time mode of study in accordance with NUST rules.

Requirements for Qualification Award

The Bachelor of Emergency Medical Care will be awarded to candidates credited with a minimum of 388 NQF credits while the Diploma in Emergency Medical Care (Level 6) will be awarded to candidates credited with a minimum of 259 NQF credits. In addition, students should meet the administrative and financial requirements as set out in Part 1 of the Namibia University of Science and Technology Yearbook.

Progression Rules

Students will only have three opportunities to pass the following courses; Emergency Medical Care I, Clinical Practice I, Emergency Medical Care II, Clinical Practice II, Emergency Medical Care III, and Clinical Practice III; due to the limited number of available sites for clinical placement (Work Integrated Learning), and due to advice in placement of students by the HPCNA, particularly pertaining to the ratio of student to lecturer in all practical classes. This will ensure that students are awarded a fair opportunity to complete the programme successfully whilst adhering to the HPCNA requirements in terms of students to lecturer ratios in theoretical and practical classes.

CURRICULUM

Year 1

Semester 1

| Course Title | Course Code | Prerequisite |
|---------------------------------------|-------------|--------------|
| Principles of English Language in Use | PLU411S | None |
| Computer User Skills | CUS411S | None |
| Basic Science | BSC410S | None |

Semester 2

| | | |
|------------------------|---------|------------------------------------|
| English in Practice | EPR511S | Principles of English Language Use |
| Information Competence | ICT521S | None |
| Basic Mathematics | BMS411S | None |

Year Courses

| | | |
|----------------------------------|---------|------|
| Emergency Medical Care I | EMC501Y | None |
| Human Anatomy and Physiology | HAP501Y | None |
| Primary Health Care and HIV/AIDS | PHC501Y | None |
| Clinical Practice I | CPR501Y | None |

Year 2

Semester 1

| | | |
|-------------------------------|---------|------------------------------|
| English for Academic Purposes | EAP511S | English in Practice |
| Medical Rescue 1A | MRS511S | None |
| Pathophysiology | PPH611S | Human Anatomy and Physiology |

Semester 2

| | | |
|------------------------|---------|-------------------|
| Medical Law and Ethics | MLE512S | None |
| Medical Rescue 1B | MRS521S | Medical Rescue 1A |

Year Courses

| | | |
|---------------------------|---------|---|
| Emergency Medical Care II | EMC601Y | Emergency Medical Care I, Human Anatomy and Physiology, Clinical Practice I |
| Pharmacology | PHA601Y | Emergency Medical Care I, Human Anatomy and Physiology |
| Clinical Practice II | CPR601Y | Emergency Medical Care I, Clinical Practice I |

Year 3

Semester 1

| | | |
|--------------------------------|---------|------|
| Sustainability and Development | SYD611S | None |
|--------------------------------|---------|------|

Semester 2

| | | |
|--|---------|---------------------------|
| Emergency Medical Service Administration | EMS612S | Emergency Medical Care II |
|--|---------|---------------------------|

Year Courses

| | | |
|---------------------------------|---------|--|
| Emergency Medical Care III | EMC701Y | Emergency Medical Care II and Clinical Practice II, Pharmacology |
| Clinical Practice III | CPR701Y | Emergency Medical Care II, Clinical Practice II, Pharmacology |
| ICU and Critical Care Transport | ICU701Y | Emergency Medical Care II, Clinical Practice II, Pharmacology |

**BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES
(Revised Programme) (Phased in 2017)****08BOHS****NQF Level: 8****NQF Credits: 517****NQF Qualification ID: Q0310****Description**

The Bachelor of Environmental Health Sciences is a professional degree, designed for registration at level 8 on the National Qualifications Framework (NQF). The programme demands a high level of theoretical engagement and intellectual independence and aims to foster deepened, comprehensive and systematic expertise in the major cognate area of learning, i.e. Environmental Health.

The current Bachelor of Environmental Health Sciences programme was reviewed in order to ensure full compliance with the NUST Curriculum Framework and requirements of the NQF. The curriculum review is needed to ensure that students attain all the core competencies to practice in different industries, and are equipped to deal with public health needs in a dynamic health system.

Admission Criteria

Candidates may be admitted to this programme if they meet the General Admission Requirements of the University. In addition, candidates must have a minimum of 15 points in Physical Science, Mathematics and Biology at NSSC (H or O), provided that no symbol must be below C on Ordinary Level.

Articulation Arrangements

The transfer of credits will be dealt with according to the University's rules and 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 credits that can be granted are 50% of the credits for a qualification.

Graduates of this programme will under normal circumstances be able to pursue further studies in Environmental Health Sciences, or a related cognate area of learning, at NQF Level 9.

Mode of Delivery

The Bachelor of Environmental Health Sciences will be offered on the full-time mode in accordance with NUST rules and procedures.

Requirements for Qualification Award

The Bachelor of Environmental Health Sciences, designed for registration at NQF level 8, will be awarded to students credited with a minimum of 517 NQF credits. All the courses are compulsory and in addition, students must meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

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 programme 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 the student. This facilitation will make use of, inter alia, practical projects, tutorials, case studies, field trips, software demonstration, problem based learning and individual and/or group work. The progress of learning embedded in such tasks will be monitored, recorded and assessed.

Learning activities outside the classroom will include two semesters of Work Integrated Learning at various institutions such as the Ministry of Health and External Services, Municipalities, Abattoirs, Nampont, Namwater, food processing industries, food storage industries, mining companies, etc., to enable students to apply learnt competencies and conduct research of an applied nature (to be published in a Mini-thesis). The department will identify industry supervisors who will work hand in hand with the department in training and supervising the students learning activities during Work Integrated Learning.

The Work Integrated Learning experiences should be documented throughout the placement period, reports on the students' performance will be provided outlining activities covered during WIL. At the end of the attachment, students need to provide a detailed written report that will be presented to a panel of evaluators who will determine the mark to be awarded to the student. This mark contributes towards the final semester mark for the course. External moderators will moderate the portfolios for both semesters. Work Integrated Learning (Part 1) includes Meat Hygiene practicals and Environmental Health Services. Work Integrated Learning (Part 2) includes Environmental Health Services while students are required at the same time to carry out their research activities.

Assessment

Students will be assessed through continuous and summative assessments. These assessments will focus on the achievement of qualification outcomes and take the form of problem solving exercises, individual/group assignments and presentations, case studies, report writing, practical application of skills and competencies, tutorials, practical projects and questioning (tests and/or examinations). The use of validating end of term assessments may be minimised in order to free students' intellectual capacity for broader cognitive development.

Assessment by means of tests and/or examinations will, therefore, be restricted to situations where it is necessary to establish that a previous specific performance can be repeated or a specific skill can be transferred. In accordance with the NUST policy on diversified continuous assessment, each course will have a minimum of six assessment events. Courses that are assessed using a combination of continuous assessment and a final end-of-term examination must have at least three assessments. All courses will be assessed using a combination of continuous assessment and an end-of-semester examination in the ratio 60% (continuous assessment) and 40% (examination).

Assessment of the Work Integrated Learning components will be dealt with by means of close cooperation between industry assessors and NUST academics by means of a work manual in which students have to report on their activities in the work place and signed off by the assessors. The mini-thesis will be assessed in accordance with the University's rules for studies at postgraduate level.

CURRICULUM

Year 1

Semester 1

| Course Title | Course Code | Prerequisite | NQF Levels | NQF Credits |
|------------------------------------|-------------|--------------|------------|-------------|
| Principles of English Language Use | PLU411S | None | | |
| Computer User Skills | CUS411S | None | 4 | 10 |
| Health Science Physics | HSP511S | None | 5 | 10 |
| Health Science Chemistry | HSC511S | None | 5 | 10 |
| Health Science Statistics | HSS511S | None | 5 | 10 |
| Anatomy and Physiology | AAP511S | None | | |

Semester 2

| | | | | |
|-------------------------------|---------|------------------------------------|---|----|
| Information Competence | ICT521S | None | | |
| English in Practice | EPR511S | Principles of English Language Use | | |
| Water and Sanitation | WAS512S | None | 5 | 12 |
| Microbiology and Parasitology | MAP512S | None | 5 | 12 |
| Community Health Promotion | CHP521S | None | 5 | 12 |
| Housing and Health | HAH521S | None | 5 | 12 |

Year 2

Semester 3

| | | | | |
|-----------------------------------|---------|--|---|----|
| English for Academic Purposes | EAP511S | English in Practice | | |
| Waste Management | WSM611S | Water and Sanitation | 6 | 12 |
| Occupational Health and Safety 2A | OHS611S | Health Science Physics | 6 | 12 |
| Food and Meat Hygiene 2A | FMH611S | Microbiology and Parasitology Health Science Chemistry | 6 | 12 |
| Epidemiology 2A | EPD611S | Health Science Statistics Anatomy and Physiology | 6 | 12 |
| Public Health Legislation 2A | PHL611S | Community Health Promotion | 6 | 12 |

Semester 4

| | | | | |
|-----------------------------------|---------|-----------------------------------|---|----|
| Occupational Health and Safety 2B | OHS612S | Occupational Health and Safety 2A | 6 | 12 |
| Food and Meat Hygiene 2B | FMH612S | Food and Meat Hygiene 2A | 6 | 12 |
| Epidemiology 2B | EPD612S | Epidemiology 2A | 6 | 12 |
| Public Health Legislation 2B | PHL612S | Public Health Legislation 2A | 6 | 12 |
| Air Pollution and Noise | APN612S | Waste Management | 6 | 12 |

Year 3**Semester 5**

| | | | | |
|------------------------------------|---------|-----------------------------------|---|----|
| Sustainability and Development | SYD611S | None | 7 | 13 |
| Occupational Health and Safety 3 | OHS711S | Occupational Health and Safety 2B | 7 | 13 |
| Food and Meat Hygiene 3 | FMH711S | Food and Meat Hygiene 2B | 7 | 13 |
| Epidemiology 3 | EPD711S | Epidemiology 2B | 7 | 13 |
| Health Management Practice 3 | HMP711S | Public Health Legislation 2B | 7 | 13 |
| Environmental Pollution and Safety | EPS711S | Air Pollution and Noise | 7 | 13 |

Semester 6

| | | | | |
|-----------------------------------|---------|------------------------------|---|----|
| Work Integrated Learning (Part 1) | EWL712S | All courses up to Semester 5 | 7 | 60 |
|-----------------------------------|---------|------------------------------|---|----|

Year 4**Semester 7**

| | | | | |
|----------------------------------|---------|------------------------------------|---|----|
| Occupational Health and Safety 4 | OHS811S | Occupational Health and Safety 3 | 8 | 14 |
| Food and Meat Hygiene 4 | FMH811S | Food and Meat Hygiene 3 | 8 | 14 |
| Research Methodology | RMA811S | Epidemiology 3 | 8 | 14 |
| Health Management Practice 4 | HMP811S | Health Management Practice 3 | 8 | 14 |
| Environmental Quality Management | EQM811S | Environmental Pollution and Safety | 8 | 14 |

Semester 8

| | | | | |
|-----------------------------------|---------|------------------------------|---|----|
| Work Integrated Learning (Part 2) | EWL812S | All courses up to Semester 7 | 8 | 36 |
| Mini-Thesis | EMT812S | Research Methodology | 8 | 30 |

NQF Level: 7

NQF Credits: 374

NQF Qualification ID: Q0891

Description

The Bachelor of Science in Health Information Systems Management is designed for registration at Level 7 on the NQF.

Admission Requirements

Candidates may be admitted to this programme if they meet the General Admission Requirements of the University (GI2.1 in Part 1 of the NUST Yearbook). In addition, candidates must have a minimum of 15 points in Physical Science, Mathematics and Biology at NSSC (H or O), provided that no symbol must be below D on Ordinary Level.

Articulation Arrangements

The transfer of credits will be dealt with according to the University's rules and 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 credits that can be granted are 50% of the credits for a qualification.

Graduates of this programme will, under normal circumstances, be able to pursue further studies in health information management, health informatics, public health or a related cognate area of learning, at NQF Level 8.

Mode of Delivery

The Bachelor of Sciences in Health Information Systems Management will be offered on a full-time mode of study. Permission will be sought in the future subject to the approval of the Executive Committee, to deliver the programme on flexible modes such as Block release, distance learning, and E-learning in accordance with University's rules and procedures.

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 programme 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 the student. This facilitation will make use of, inter alia, practical projects, tutorials, case studies, field trips, software demonstration, problem based learning and individual and/or group work. The progress of learning embedded in such tasks will be monitored, recorded and assessed.

Learning activities outside the classroom will include two semesters of Work Integrated Learning at various institutions such as the Ministry of Health, Hospitals, Clinics, Health insurance companies, Health care settings in private sector, Telecom Namibia, HIS consulting companies, etc. to enable students to apply learnt competencies. Students will be required to sign an agreement form provided by the department in collaboration with the organisation offering the placement. The department will identify and appoint an industry supervisor who will work hand in hand with the department.

The agreement will cover all the departments that the student should cover. The Work Integrated Learning experiences should be documented throughout the placement period, reports on the students' performance will be provided outlining activities covered during WIL. At the end of the attachment, students need to provide a detailed written report that will be presented to a panel of evaluators who will determine the mark to be awarded to the student. This mark contributes towards the final semester mark for the course. External moderators are moderating the portfolios for both semesters. Work Integrated Learning (Part 1) includes Health Information Management in health care delivery and Database Management & Analytics for HISM professionals' lab. Work Integrated Learning (Part 2) includes Health Information Management Services while students are required at the same time to carry out their research activities.

Assessment Strategies

Students will be assessed through continuous and summative assessment. These assessments will focus on the achievement of qualification outcomes and take the form of problem solving exercises, individual/group assignments and presentations, case studies, report writing, practical application of skills and competencies, tutorials, practical projects and questioning (tests and/or examinations). The use of validating end of term assessments may be minimised in order to free students' intellectual capacity for broader cognitive development. Assessment by means of tests and/or examinations will, therefore, be restricted to situations where it is necessary to establish that a previous specific performance can be repeated or a specific skill can be transferred. In accordance with the University's policy on diversified continuous assessment, each course will have a minimum of six assessment events. Courses that are assessed using a combination of continuous assessment and a final end-of-term examination must have at least three assessments.

All courses will be assessed using a combination of continuous assessment and an end-of-semester examination in the ratio 60% (continuous assessment) and 40% (examination).

Assessment of the Work Integrated Learning components will be dealt with by means of close cooperation between industry assessors and NUST academics by means of a work manual in which students have to report on their activities in the work place and signed off by the assessors.

CURRICULUM

Year 1

Semester 1

| Course Code | Course Title | Prerequisite | NQF Level | NQF Credits |
|-------------|------------------------------------|--------------|-----------|-------------|
| PLU411S | Principles of English Language Use | None | 4 | NCB |
| CUS411S | Computer User Skills | None | 4 | 10 |
| HSP511S | Health Sciences Physics | None | 5 | 10 |
| HSC511S | Health Sciences Chemistry | None | 5 | 10 |
| HSS511S | Health Sciences Statistics | None | 5 | 10 |
| AAP511S | Anatomy and Physiology | None | 5 | 12 |

Semester 2

| | | | | |
|---------|------------------------------------|--|---|-----|
| ICT521S | Information Competence | None | 5 | 10 |
| EPR511S | English in Practice | Principles of English Language Use or Language in Practice A | 5 | NCB |
| CHP521S | Community Health Promotion | None | 5 | 12 |
| BPP521S | Basic Pathophysiology | None | 5 | 12 |
| BME521S | Biomedical Ethics | None | 5 | 12 |
| IHI521S | Introduction to Health Informatics | None | 5 | 12 |

Year 2

Semester 3

| | | | | |
|---------|--|---|---|----|
| EAP511S | English for Academic Purposes | English in Practice or Language in Practice B | 5 | 14 |
| HIT611S | Health Information Technology | Introduction to Health Informatics | 6 | 12 |
| EPD611S | Epidemiology 2A | Health Statistics; Anatomy and Physiology | 6 | 12 |
| PHS611S | Policy in Health Information Systems | Biomedical Ethics | 6 | 12 |
| MTD611S | Medical Terminologies and Disease Nomenclature | Basic Pathophysiology | 6 | 12 |

Semester 4

| | | | | |
|---------|--|------------------------------------|---|----|
| EHR621S | Electronic Health Records | Introduction to Health Informatics | 6 | 12 |
| ICD621S | International Classification of Disease Nomenclature | Medical Terminologies and Disease | 6 | 12 |
| EPD612S | Epidemiology 2B | Epidemiology 2A | 6 | 12 |
| HIM621S | Health Information Management | Health Information Technology | 6 | 12 |

Year 3

Semester 5

| | | | | |
|---------|---------------------------------|-----------------|---|----|
| EPD711S | Epidemiology 3 | Epidemiology 2B | 7 | 13 |
| PHM711S | Principles of Health Management | None | 7 | 13 |
| SYD611S | Sustainability and Development | None | 6 | 12 |

Semester 6

| | | | | |
|---------|-----------------------------------|------------------------------|---|----|
| PHP721S | Public Health Practice | Epidemiology 3 | 7 | 13 |
| WIH711S | Work Integrated Learning (Part 1) | All courses up to Semester 4 | 7 | |

Plus TWO of the following elective courses:

| | | | | |
|---------|---|------|---|----|
| BSD721S | Biostatistics and Demography | None | 7 | 13 |
| LHM721S | Legislations of Health Information Management | None | 7 | 13 |
| FMS721S | Financial Management in Health Services | None | 7 | 13 |

NQF Level: 8

NQF Credits: 482

NQF Qualification ID: Q1097

Description

The Bachelor of Human Nutrition is designed to provide students with a comprehensive knowledge of human nutrition, the related biosciences and their application to the maintenance of human health in public health domains as well as the prevention and management of disease. The programme enables students to apply their knowledge of nutrition and holistic approaches to contribute to the alleviation of malnutrition and nutrition-related morbidity and mortality in Namibia. Students will be capacitated with relevant knowledge and skills in foundational cognate areas including food chemistry, human anatomy and physiology, microbiology, biochemistry, food security, etc., and be able to apply this knowledge in understanding the role of diet in health maintenance and illness prevention. The programme, further aims to produce graduates who can deliver quality nutritional services within a wide range of settings including public health, health education or health promotion, the food industry, and other areas of nutrition.

On completion, graduates who intend to practice as Nutritionists will be eligible to register with the Health Professions Council (HPCNA) of Namibia. After registration with HPCNA, they may be able to find employment in both public and private sector, municipalities, research institutions, other health related institutions, as well as teaching/training institutions.

Criteria for Admission

Candidates may be admitted to this programme if they meet the General Admission Requirements of NUST (GI2.1 in Part 1 of the NUST Yearbook). In addition, candidates must have a minimum of 15 points in Physical Science, Mathematics and Biology at NSSC (H or O), provided that no symbol must be below C on Ordinary Level.

Mature age candidates will be considered provided they meet the requirements and pass the mature age entrance examinations of NUST (GI2.2 in the Prospectus/Year Book) – with a minimum of 50% in both English and Mathematics.

Articulation Arrangements

The transfer of credits will be dealt with according to NUST’s rules and 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 credits that can be granted are 50% of the credits for a qualification.

Graduates of this programme will under normal circumstances be able to pursue further studies in Human Nutrition, or a related cognate area of learning, at NQF Level 9.

Mode of Delivery

The Bachelor of Human Nutrition will be offered on a full-time mode of study. Flexible modes such as Block release, Distance learning and E-learning may be used to deliver the programme in the future in accordance with NUST rules and procedures.

Requirements for Qualification Award

The Bachelor of Human Nutrition will be awarded to students credited with a minimum of 482 NQF credits. In addition, students must meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

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 programme 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, using a blended mode with e-learning and other technologies, requiring specific tasks to be carried out by the student. This facilitation will make use of, inter alia, practical projects, tutorials, case studies, field trips, software demonstration, problem based learning and individual and/or group work. The progress of learning embedded in such tasks will be monitored, recorded and assessed.

Learning activities outside the classroom will include one semester of WIL at various institutions such as the Ministry of Health and Social Sciences, Hospitals, Clinics, Health care settings in private sectors, Food service industry, Non-Governmental Organisations, Municipalities, etc. to enable students to apply learnt competencies. Students will be required to sign an agreement form provided by the department in collaboration with the organisation offering the placement. The department will identify an industry supervisor who will work hand in hand with the department. The WIL experiences should be documented throughout the placement period, reports on the students’ performance will be provided outlining activities covered during WIL. At the end of the attachment, students need to provide a detailed written report that will be presented to a panel of evaluators who will determine the mark to be awarded to the student. This mark contributes towards the final semester mark for the course. External moderators will moderate the submitted WIL portfolios. WIL includes clinical nutrition, food service management and community nutrition.

Assessment Strategies

Students will be assessed through continuous and summative assessment. These assessments will focus on the achievement of qualification outcomes and take the form of problem solving exercises, individual/group assignments and presentations, case studies, report writing, practical application of skills and competencies, tutorials, practical projects and questioning (tests and/or examinations). Assessment by means of tests and/or examinations will be used in situations where it is necessary to establish that a previous specific performance can be repeated or a specific skill can be transferred. In accordance with NUST's policy on diversified continuous assessment, each course will have a minimum of four assessment events. Courses that are assessed using a combination of continuous assessment and a final end-of-term examination must have at least three assessments.

All courses will be assessed using a combination of continuous assessment and an end-of-semester examination in the ratio 60% (continuous assessment) and 40% (examination).

Assessment of the WIL components will be dealt with by means of close cooperation between industry assessors and NUST academics by means of a work manual in which students have to report on their activities in the work place and signed off by the assessors.

Transition Arrangements

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

CURRICULUM**Year 1****Semester 1**

| Course Code | Course Title | Prerequisite | NQF Level | NQF Credit |
|-------------|------------------------------------|--------------|-----------|------------|
| PLU411S | Principles of English Language Use | None | | |
| CUS411S | Computer User Skills | None | | |
| HSP511S | Health Sciences Physics | None | 5 | 10 |
| HSC511S | Health Sciences Chemistry | None | 5 | 10 |
| HSS511S | Health Sciences Statistics | None | 5 | 10 |
| AAP511S | Anatomy and Physiology | None | 5 | 12 |

Semester 2

| | | | | |
|---------|---|------------------------------------|---|----|
| ICT521S | Information Competence | None | | |
| EPR511S | English in Practice | Principles of English Language Use | | |
| CHP521S | Community Health Promotion | None | 5 | 12 |
| IBC521S | Introduction to Biochemistry | Health Science Chemistry | 5 | 10 |
| IFN521S | Introduction to Foods, Nutrition and Health | None | 5 | 10 |
| GEP521S | Gastro-intestinal and Endocrine Physiology | None | 5 | 10 |

Year 2**Semester 3**

| | | | | |
|---------|----------------------------------|---|---|----|
| EAP511S | English for Academic Purposes | English in Practice or Language in Practice B | 6 | 12 |
| MIB611S | Microbiology | None | 6 | 12 |
| FSN611S | Food Security and Nutrition | None | | |
| EPD611S | Epidemiology 2A | Health Statistics and Anatomy and Physiology | 6 | 12 |
| NTL611S | Nutrition through the Life Cycle | Introduction to Foods, Nutrition and Health | 6 | 12 |

Semester 4

| | | | | |
|---------|--|----------------------------------|---|----|
| FCH621S | Food Chemistry | Introduction to Biochemistry | 6 | 12 |
| EPD612S | Epidemiology 2B | Epidemiology 2A | 6 | 12 |
| MCN621S | Maternal and Early Childhood Nutrition | Nutrition through the Life Cycle | 6 | 12 |
| FCA621S | Food Composition and Analysis | Introduction to Biochemistry | 6 | 12 |
| FSS621S | Food Service Systems | None | 6 | 12 |

Year 3**Semester 5**

| | | | | |
|---------|---|-----------------|---|----|
| SYD611S | Sustainability and Development | None | 7 | 13 |
| EPD711S | Epidemiology 3 | Epidemiology 2B | 7 | 13 |
| PHM711S | Principles of Health Management | None | 7 | 13 |
| HNT711S | Human Nutrition 1 | None | 7 | 13 |
| PHC711S | Principles of Primary Health Care Nutrition | None | 7 | 13 |

Semester 6

| | | | | |
|---------|----------------------------------|-------------------|---|----|
| FPC721S | Food Processing and Preservation | None | 7 | 14 |
| HTN721S | Human Nutrition 2 | Human Nutrition 1 | 7 | 14 |
| NNA721S | Nutrition Anthropology | None | 7 | 14 |
| RMD821S | Research Methodology | Epidemiology 3 | 8 | 14 |

Year 4

Semester 7

| | | | | |
|---------|---|----------------|---|----|
| CAN811S | Computer Applications in Nutrition | None | 8 | 14 |
| NIE811S | Nutrition in Emergencies | None | 8 | 14 |
| CNN811S | Community Nutrition | None | 8 | 14 |
| PCN811S | Primary Care Nutrition for HIV/AIDS and Communicable Diseases | None | 8 | 14 |
| NCA811S | Nutraceuticals and Alternative Nutritional Remedies | Food Chemistry | 8 | 14 |

Semester 8

| | | | | |
|---------|--------------------------|------------------------------|---|----|
| MTN821S | Mini-thesis | Research Methodology | 8 | 30 |
| WLN821S | Work Integrated Learning | All courses up to Semester 7 | 8 | 36 |

QUALIFICATIONS OFFERED

Bachelor of Science in Applied Mathematics and Statistics (Revised – Phasing in from 2015)
 Bachelor of Science in Applied Mathematics and Statistics (Phasing out from 2015)

07BAMS
 35BAMS

**BACHELOR OF SCIENCE IN APPLIED MATHEMATICS AND STATISTICS
 (Revised Programme) (Phasing in from 2015)**
07BAMS**NQF Level: 7****NQF Credits: 414****NQF Qualification ID: Q0724****Description**

The Bachelor of Science in Applied Mathematics and Statistics provides a systematic and coherent introduction to the knowledge, principles, concepts, data, theories and problem-solving techniques of the Applied Mathematics and Applied Statistics discipline. The programme will enable students to acquire cognitive/intellectual skills, practical skills and key transferable skills and to apply these skills in solving Applied Mathematics and Statistics problems facing the public and private sectors, as well as the overall economy.

Admission Requirements

In addition to the general admission requirements of the University, a candidate should have obtained a minimum B symbol in NSSC Mathematics or its equivalent. Candidates that obtained a C symbol in Mathematics will be required to sit for an entrance test in Mathematics.

Candidates who left formal school eight (8) or more years earlier will be considered for admission under Rule GI2.3 in the NUST General Information and Regulations Yearbook.

Modes of Study

The programme will run in the full-time and part-time modes.

CURRICULUM**Year 1****Semester 1**

| Course Title | Course Code | Prerequisite(s) | NQF Level | NQF Credits |
|------------------------------------|-------------|-----------------|-----------|-------------|
| Sets, Algebra and Trigonometry | SAT501S | None | 5 | 12 |
| Mathematical Structures | MAS501S | None | 5 | 12 |
| Introduction to Applied Statistics | IAS501S | None | 5 | 12 |
| Probability Theory 1 | PBT501S | None | 5 | 12 |
| Computer User Skills | CUS411S | None | 4 | 10 |
| Principles of English Language Use | PLU411S | None | 4 | NCB |

Semester 2

| | | | | |
|-------------------------|---------|------------------------------------|---|-----|
| Calculus 1 | CLS502S | Sets, Algebra & Trig | 5 | 12 |
| Linear Algebra 1 | LIA502S | Sets, Algebra & Trig | 5 | 12 |
| Financial Mathematics 1 | FIM502S | None | 5 | 12 |
| Statistical Inference 1 | SIN502S | None | 5 | 12 |
| English in Practice | EPR511S | Principles of English Language Use | 5 | NCB |
| Basic Science | BSC410S | None | 4 | 8 |

Year 2**Semester 3**

| | | | | |
|-------------------------------|---------|-------------------------|---|----|
| Statistical Inference 2 | SIN601S | Statistical Inference 1 | 6 | 12 |
| Calculus 2 | CLS601S | Calculus 1 | 6 | 12 |
| Linear Algebra 2 | LIA601S | Linear Algebra 1 | 6 | 12 |
| Financial Mathematics 2 | FIM601S | Financial Mathematics 1 | 6 | 12 |
| English for Academic Purposes | EAP511S | EPR511S and LIP411S | 5 | 14 |
| Information Competence | ICT521S | None | 5 | 10 |

Semester 4

| | | | | |
|--|---------|-------------------------|---|----|
| Mathematical Programming | MAP602S | Linear Algebra 1 | 6 | 12 |
| Applied Mathematical and Statistical Computing | AMS602S | Computer User Skills | 6 | 12 |
| Regression Analysis & ANOVA | RAA602S | Statistical Inference 1 | 6 | 12 |
| Probability Theory 2 | PBT602S | Probability Theory 1 | 6 | 12 |

| | | | | |
|---------------------------------|---------|------------|---|----|
| Ordinary Differential Equations | ODE602S | Calculus 1 | 6 | 12 |
| Demography | DEM602S | None | 6 | 12 |

Year 3

Semester 5

| | | | | |
|--|---------|---------------------------------|---|----|
| Real Analysis | RAN701S | Calculus 2 | 7 | 12 |
| Numerical Methods 1 | NUM701S | Ordinary Differential Equations | 7 | 12 |
| Time Series Analysis | TSA701S | Introduction to Applied Stats | 7 | 12 |
| Survey Methods and Sampling Techniques | SMS701S | Introduction to Applied Stats | 7 | 12 |
| Mathematical Modelling 1 | MMO701S | Ordinary Differential Equations | 7 | 12 |
| Work Integrated Learning (WIL) | WIL701S | All courses up to Semester 4 | 7 | 12 |

Semester 6

| | | | | |
|------------------------------------|---------|-----------------------------|-----|----|
| Mathematical Modelling 2 | MMO702S | Mathematical Modelling 1 | 7 | 12 |
| Design and Analysis of Experiments | DAE702S | Regression Analysis & ANOVA | 7 | 12 |
| Sustainability and Development | CIS601S | N/A | N/A | |
| | SYD611S | None | 6 | 12 |
| Numerical Methods 2 | NUM702S | Numerical Methods 1 | 7 | 12 |
| Complex Analysis | CAN702S | Real Analysis | 7 | 12 |

Plus ONE of the following Elective courses:

| | | | | |
|-------------------------------|---------|---------------------------------|---|----|
| Mechanics | MCS702S | Ordinary Differential Equations | 7 | 12 |
| Applied Econometric Modelling | AEM702S | Regression Analysis & ANOVA | 7 | 12 |

Transitional Arrangements

The Bachelor of Science in Applied Mathematics and Statistics (old curriculum), was phased out systematically in 2019 with minimal disruption to existing students’ learning progression. The last intake of 1st year students for the out-phasing programme (old curriculum) was in January 2014.

Students who were registered in 2014 for the 1st year of the out-phasing programme (old curriculum), and who failed more than 50 % of the courses at the end of the year, will be required to change their registration to the new programme and will be granted credits on a course-by-course basis in accordance with information in Table 1 below. Students who were registered in 2014 for the 1st year of the out-phasing programme (old curriculum) and who met all requirements to progress to the 2nd year in 2015 may be allowed to transition to the revised programme (new curriculum) but, may lose credits.

The revised Bachelor of Science in Applied Mathematics and Statistics (New curriculum) took effect from January 2015 with the concurrent completion of the 1st and 2nd year (2015) and the implementation of the 3rd year in 2016. Courses will only be offered based on the new/revised syllabi in 2015 (1st and 2nd year) and 2016 (3rd year). Students who are admitted to the examination but fail any of the courses on the old curriculum will only be granted two opportunities to pass such courses in accordance with the NUST general rules. Students who fail any of the courses on the old curriculum will be required to repeat the failed courses based on syllabi of new/revised corresponding courses. Please refer to Table 2, below, for detailed information on the new/revised corresponding courses to be done if courses on the old curriculum are failed.

The deadline for complete phasing out of the Bachelor of Science in Applied Mathematics and Statistics (old curriculum) was 2019 after which students must automatically switch to the new programme and fulfil all requirements based on the new curriculum.

Table 1: Corresponding Courses

| Course Code | Bachelor of Sciences in Applied Maths and Stats (Old Courses) | Course Code | Bachelor of Sciences in Applied Maths and Stats (New/Revised Corresponding Courses to be Done, if Failed) |
|-------------|---|-------------|---|
| LIA121S | Linear Algebra 1 | LIN502S | Linear Algebra 1 |
| FIM121S | Financial Mathematics 1 | FIM502S | Financial Mathematics 1 |
| CLS120S | Calculus | CLS502S | Calculus 1 |
| SIN211S | Statistical Inference 1 | SIN502S | Statistical Inference 1 |
| CUS411S | Computer User Skills | CUS411S | Computer User Skills |
| EAP511S | English For Academic Purposes | EAP511S | English For Academic Purposes |
| LIA211S | Linear Algebra 2 | LIA601S | Linear Algebra 2 |
| FIM221S | Financial Mathematics 2 | FIM602S | Financial Mathematics 2 |
| DEQ211S | Differential Equations | ODE602S | Ordinary Differential Equations |
| DMG321S | Demography | DEM602S | Demography |

| | | | |
|---------|----------------------|---------|---------------------|
| RAN311S | Real Analysis | RAN701S | Real Analysis |
| NAN311S | Numerical Analysis 1 | NUM701S | Numerical Methods 1 |
| NAN321S | Numerical Analysis 2 | TSA701S | Numerical Methods 2 |
| CAN311S | Complex Analysis 1 | CAN702S | Complex Analysis |
| MCH321S | Mechanics | MCS702S | Mechanics |

Table 2: Corresponding Courses (Please note that this is not a credit table)

| Course Code | Bachelor of Sciences in Applied Maths and Stats (Old Courses) | Course Code | Bachelor of Sciences in Applied Maths and Stats (New/Revised Corresponding Courses to be Done, if Failed) |
|--------------------|--|--------------------|--|
| ALT111S | Algebra and Trigonometry | SAT501S | Sets, Algebra and Trigonometry |
| IMS111S | Introduction to Mathematics Structures | MAS501S | Mathematical Structures |
| INS111S | Introduction to Statistics | IAS501S | Introduction to Applied Statistics |
| CLC121S | Calculus | CLS502S | Calculus 1 |
| LIA121S | Linear Algebra 1 | LIA502S | Linear Algebra 1 |
| FIM121S | Financial Mathematics 1 | FIM502S | Financial Mathematics 1 |
| PBT211S | Probability Theory | PBT501S | Probability Theory 1 |
| DEQ211S | Differential Equations 1 | ODE602S | Ordinary Differential Equations |
| LIA211S | Linear Algebra 2 | LIA601S | Linear Algebra 2 |
| SMC211S | Mathematical & Statistical Computing | AMS602S | Applied Mathematical & Statistical Computing |
| MHP221S | Mathematical Programming 1 | MAO602S | Mathematical Programming |
| RAA221S | Regression Analysis & ANOVA | RAA602S | Regression Analysis & ANOVA |
| SIN221S | Statistical Inference 1 | SIN502S | Statistical Inference 1 |
| MMO221S | Mathematical Modelling 1 | MMO701S | Mathematical Modelling 1 |
| RAN311S | Real Analysis | RAN701S | Real Analysis |
| NAN311S | Numerical Analysis 1 | NUM701S | Numerical Analysis 1 |
| CAN311S | Complex Analysis 1 | CAN702S | Complex Analysis |
| SIN311S | Statistical Inference 2 | SIN601S | Statistical Inference 2 |
| MMO311S | Mathematical Modelling 2 | MMO702S | Mathematical Modelling 2 |
| DMG321S | Demography | DEM602S | Demography |
| SST321S | Survey Methodology | SMS701S | Survey Methods and Sampling Techniques |
| FIM221S | Financial Mathematics 2 | FIM601S | Financial Mathematics 2 |
| NAN321S | Numerical Analysis 2 | NUM702S | Numerical Methods 2 |
| MCH321S | Mechanics | MCS702S | Mechanics |

Please Note:

The following courses on the out-phasing programme (old curriculum) do not have corresponding courses on the new curriculum and was offered until the old curriculum was completely phased out in 2019.

- Official Statistics 1 (OST120S)
- Official Statistics 2 (OST320S)
- Mathematical Programming 2 (MHP311S)

NQF Level: 7

NQF Credits: 455 (Accounting Option)
461(Economics Option)

NQF Qualification ID: Q0110

Admission Requirements

In addition to the general admission requirements of the University, a candidate should have obtained a minimum B symbol in NSSC Mathematics or its equivalent. Candidates that obtained a C symbol in Mathematics will be required to sit for an entrance test in Mathematics.

Candidates who left formal school eight (8) or more years earlier will be considered for admission under Rule GI2.3 in the NUST General Information and Regulations Yearbook.

Modes of Study

The programme will run in the full-time and part-time modes.

CURRICULUM

Year 1

Semester 1

| Course Title | Course Code | Prerequisite(s) | NQF Level | NQF Credits |
|---|--------------------|------------------------|------------------|--------------------|
| Algebra and Trigonometry | ALT111S | None | 4 | 12 |
| Introduction to Mathematical Structures | IMS111S | None | 4 | 12 |
| Introduction to Statistics | INS111S | None | 4 | 12 |
| Computer User Skills | CUS411S | None | 4 | 12 |
| English for Academic Purposes | EAP511S | None | | |

Any one of the following (electives):

| | | | | |
|------------------------------|---------|------|---|----|
| Financial Accounting 101 | FAC511S | None | 4 | 12 |
| Principles of Microeconomics | PMI511S | None | 5 | 15 |

Semester 2

| | | | | |
|-------------------------|---------|---|---|----|
| Official Statistics | OST121S | None | 5 | 12 |
| Calculus | CLS121S | Algebra & Trig | 5 | 12 |
| Linear Algebra 1 | LIA121S | Algebra & Trig | 5 | 12 |
| Financial Mathematics 1 | FIM121S | None | 5 | 12 |
| Applied Programming | APR520S | Computer User Skills | 4 | 8 |
| Professional Writing | PWR611S | English for Academic Purposes or Communication Skills | 6 | 15 |

Any one of the following (electives):

| | | | | |
|------------------------------|---------|-----------------------------|---|----|
| Financial Accounting 102 | FAC512S | Financial Accounting 1A/101 | 5 | 12 |
| Principles of Macroeconomics | PMA512S | None | 5 | 15 |

Year 2

Semester 3

| | | | | |
|--------------------------------------|---------|----------------------|---|----|
| Probability Theory | PBT211S | Calculus | 5 | 12 |
| Differential Equations | DEQ211S | Calculus | 6 | 12 |
| Linear Algebra 2 | LIA211S | Linear Algebra 1 | 6 | 12 |
| Mathematical & Statistical Computing | SMC211S | Computer User Skills | 5 | 12 |
| Introduction to Business Management | BMI511S | None | 5 | 12 |
| Professional Communication | PC0611S | Professional Writing | 6 | 15 |

Any ONE of the following (electives):

| | | | | |
|------------------------------------|---------|------------------------------|---|----|
| Cost and Management Accounting 101 | CMA512S | Financial Accounting 1B/102 | 5 | 15 |
| Intermediate Microeconomics | IMI611S | Principles of Microeconomics | 6 | 15 |

Semester 4

| | | | | |
|--------------------------------|---------|---|---|----|
| Statistical Inference 1 | SIN211S | Probability Theory | 5 | 12 |
| Mathematical Programming 1 | MHP221S | Linear Algebra 1 | 6 | 12 |
| Financial Mathematics 2 | FIM221S | Financial Mathematics 1 | 6 | 12 |
| Mathematical Modelling 1 | MMO221S | Calculus | 6 | 12 |
| Business Ethics and Leadership | BEL112S | None | 6 | 12 |
| Regression Analysis of ANOVA | RAA221S | Statistical Inference 1 and Linear Algebra 1 | 6 | 12 |

Any ONE of the following (electives):

| | | | | |
|------------------------------------|---------|--------------------------------------|---|----|
| Cost and Management Accounting 201 | CMA611S | Cost and Management Accounting 2A | 6 | 15 |
| Intermediate Microeconomics | IMA612S | Principles of Macroeconomics | 6 | 15 |

Year 3**Semester 5**

| | | | | |
|----------------------------|---------|--------------------------|---|----|
| Real Analysis | RAN311S | Calculus | 7 | 12 |
| Numerical Analysis 1 | NAN311S | Differential Equations | 6 | 12 |
| Mathematical Programming 2 | MHP311S | Math Programming 1 | 7 | 12 |
| Mathematical Modelling 2 | MMO311S | Mathematical Modelling 1 | 7 | 12 |
| Business Operations | BSO221S | None | 6 | 12 |

Any ONE of the following (electives):

| | | | | |
|-------------------------|---------|-----------------------------|---|----|
| Complex Analysis 1 | CAN311S | Co-requisite: Real Analysis | 7 | 12 |
| Statistical Inference 2 | SIN221S | Statistical Inference 1 | 7 | 12 |

Semester 6

| | | | | |
|----------------------|---------|----------------------------|---|----|
| Demography | DMG321S | None | 7 | 12 |
| Survey Methodology | SST321S | Introduction to Statistics | 7 | 12 |
| Numerical Analysis 2 | NAN321S | Numerical Analysis 1 | 7 | 12 |
| Business Finance | BFS222S | None | 7 | 12 |
| Mechanics | MCH321S | Differential Equations | 5 | 12 |

DEPARTMENT OF NATURAL AND APPLIED SCIENCES

Code 41

QUALIFICATIONS OFFERED

Bachelor of Science

07BOSC

BACHELOR OF SCIENCE

07BOSC

NQF Level: 7

NQF Credits: 370

NQF Qualification ID: Q0723

Description

The Bachelor of Science is a single major degree programme, requiring students to minor in a second subject/cognate area, that aims at providing students with a coherent and systematic introduction to the broad knowledge, theories, principles, concepts and problem-solving techniques in the sub-field of natural sciences. The programme will enable students to acquire cognitive, problem-solving and key transferable skills necessary for addressing a wide range of pressing challenges in relation to Science, Technology, Engineering and Mathematics (STEM) in the current Namibian market and economy. This science degree provides a platform for developing scientific literacy and for building-up essential scientific knowledge and skills for lifelong learning in STEM. Additionally, the programme is designed to enable students to apply knowledge of the natural sciences to real life situations and appreciate the relationship between science and other disciplines. The programme structure facilitates exposure of students to a variety of disciplines, at least initially, but ultimately requiring specialisation in the final year in a major complemented by a component of Work Integrated Learning (WIL).

Admission Requirements

In addition to meeting the University's General Admission Requirements (GI2.1 in Part 1 of the NUST Yearbook), candidates must have a total of 15 points on the evaluation scale for Physical Science, Mathematics and Biology, in a combination of symbols on NSSC Higher or Ordinary Level or both. No symbol for any one or more of the subjects may be lower than a D on Ordinary Level or a 4 on Higher Level. Candidates must further have obtained at least an E on Ordinary Level for English.

The Head of Department or his/her nominee may admit candidates who do not have the required minimum symbol for one of the above subjects, provided that such candidates have very strong symbols for the other two subjects and that the total point score for the three subjects is not lower than 15. Such candidates may be required to enroll for a bridging course at the discretion of the department.

Candidates may be required to participate in a final selection test and/or interview at the discretion of the Faculty.

Requirements for Qualification Award

In the context of this degree, the major and minor combinations will be limited to the following:

Biology major and Chemistry minor, Biology major and Physics minor, Biology major and Mathematics minor, Chemistry major and Biology minor, Chemistry major and Physics minor, Chemistry major and Mathematics minor, Physics major and Biology minor, Physics major and Chemistry minor, Physics major and Mathematics minor, Mathematics major and Biology minor, Mathematics major and Chemistry minor, Mathematics major and Physics minor.

Transfer Arrangements

Transfer of credits will be dealt with according to the University's 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.

Special Arrangements

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 the student. This facilitation will make use of, classroom lectures, guided practical's, group and individual assignments, seminars, practical demonstrations, problem-solving workshops, group projects, class discussions, tutorials, review of on-line resources, and field trips (not all methods will be used in the context of each course). The peculiar teaching and learning strategies of each course can be found in the course specifications/syllabi. The qualification will be offered on a full-time mode of study in accordance with the University's rules and regulations.

This programme also includes Work Integrated Learning (WIL) which integrates work experiences with learning in a way traditional education cannot do.

Special Assessment Arrangements

The assessment of the student's academic performance will be on the basis of employing assessment methodologies and strategies appropriate to the learning outcomes of the applicable course. Students will be assessed using diversified continuous assessment methods only. The assessments will focus on the achievement of qualification outcomes and take the form of problem solving exercises, individual and/or group assignments and presentations, case studies, report and essay writing, application of theories and methods. All courses require a final mark of at least 50% to pass.

Quality Assurance Requirements

Each course will have one or more examiners and one moderator. Moderators will be identified internally and externally and approved by Senate. The required minimum qualification of the moderator will be at least a Master's degree in a particular major area of study (i.e. Biology, Chemistry, Physics or Mathematics), or the person must be a well-respected expert in the field. Lecturing staff will set and mark tests and/or examinations in accordance with set memorandums. The examinations, memorandums and course outlines will be forwarded to the identified moderators for moderation. This ensures quality and equity of assessments and the qualification as a whole. All exit level courses for this programme, i.e. NQF Level 7, will be externally moderated.

Transition Arrangements

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

CURRICULUM**Year 1****Semester 1**

| Course Code | Course Title | Prerequisites | NQF Level | NQF Credits |
|-------------|------------------------------------|---------------|-----------|-------------|
| PLU411S | Principles of English Language Use | None | 4 | NCB |
| CUS411S | Computer User Skills | None | 4 | 10 |
| GNB501S | General Biology 1A | None | 5 | 12 |
| GNC501S | General Chemistry 1A | None | 5 | 12 |
| GNP501S | General Physics 1A | None | 5 | 12 |
| SAT501S | Sets, Algebra and Trigonometry | None | 5 | 12 |

Semester 2

| | | | | |
|---------|------------------------------------|------------------------------------|---|-----|
| EPR511S | English in Practice | Principles of English Language Use | 5 | NCB |
| ICT521S | Information Competence | None | 5 | 10 |
| GNB502S | General Biology 1B | General Biology 1A | 5 | 12 |
| GNC502S | General Chemistry 1B | General Chemistry 1A | 5 | 12 |
| GNP502S | General Physics 1B | None | 5 | 12 |
| IAS501S | Introduction to Applied Statistics | None | 5 | 12 |

Year 2**Semester 3**

| | | | | |
|---------|---------------------|--------------------------------|---|----|
| CLS502S | Calculus/Calculus 1 | Sets, Algebra and Trigonometry | 5 | 12 |
|---------|---------------------|--------------------------------|---|----|

PLUS two strands depending on intended major and minor**Biology**

| | | | | |
|---------|-----------------------------------|--------------------|---|----|
| CEB601S | Cell Biology | General Biology 1A | 6 | 12 |
| EBD601S | Evolution of Biological Diversity | General Biology 1A | 6 | 12 |

Chemistry

| | | | | |
|---------|------------------------------------|----------------------|---|----|
| APP601S | Analytical Principles and Practice | General Chemistry 1B | 6 | 12 |
| ORC601S | Organic Chemistry 1 | General Chemistry 1B | 6 | 12 |

Physics

| | | | | |
|---------|---------------------------|--------------------|---|----|
| EAM601S | Electricity and Magnetism | General Physics 1A | 6 | 12 |
| TPH601S | Thermal Physics | General Physics 1A | 6 | 12 |

Mathematics

| | | | | |
|---------|-------------------------|--------------------------------|---|----|
| LIA502S | Linear Algebra 1 | Sets, Algebra and Trigonometry | 5 | 12 |
| MAS501S | Mathematical Structures | None | 5 | 12 |

Semester 4

| | | | | |
|---------|-------------------------------|---------------------|---|----|
| EAP511S | English for Academic Purposes | English in Practice | 5 | 14 |
|---------|-------------------------------|---------------------|---|----|

PLUS two strands depending on intended major and minor**Biology**

| | | | | |
|---------|------------------------------|-----------------------------------|---|----|
| GEN602S | Genetics | Cell Biology | 6 | 12 |
| PSF602S | Plant Structure and Function | Evolution of Biological Diversity | 6 | 12 |

Chemistry

| | | | | |
|--|--|--|---|----|
| PCH602S | Physical Chemistry | General Chemistry 1B and Calculus | 6 | 12 |
| ICH602S | Inorganic Chemistry | General Chemistry 1B | 6 | 12 |
| Physics | | | | |
| ECE602S | Electrical Circuits & Electronics | Electricity & Magnetism | 6 | 12 |
| MPH602S | Modern Physics | General Physics 1B | 6 | 12 |
| Mathematics | | | | |
| ODE602S | Ordinary Differential Equations | Calculus 1 | 6 | 12 |
| LIA601S | Linear Algebra 2 | Linear Algebra 1 | 6 | 12 |
| Compulsory Elective for Biology Major | | | | |
| PBT501S | Probability Theory 1 | None | 5 | 12 |
| Compulsory Elective for Chemistry, Physics, Mathematics Major | | | | |
| CLS601S | Calculus 2 | Calculus 1 | 6 | 12 |
| Year 3 | | | | |
| Semester 5 | | | | |
| SYD611S | Sustainability and Development | None | 6 | 12 |
| PLUS one strand/major (based on programme rules and choices made in previous semesters) | | | | |
| Biology | | | | |
| ECO701S | Ecology | General Biology 1B | 7 | 12 |
| ASF701S | Animal Structure and Function | General Biology 1B | 7 | 12 |
| MIB701S | Microbiology | Evolution of Biological Diversity and Genetics | 7 | 12 |
| MAB701S | Marine Biology 3A | Evolution of Biology Diversity | 7 | 12 |
| Chemistry | | | | |
| OCH701S | Organic Chemistry 2 | Organic Chemistry 1 | 7 | 12 |
| MSC701S | Molecular Spectroscopy & Chemical Separation Methods | Analytical Principles and Practice | 7 | 12 |
| ACS701S | Applied Colloid and Surface Chemistry | Physical Chemistry | 7 | 12 |
| QCM701S | Quantum Chemistry & Molecular Spectroscopy | Physical Chemistry | 7 | 12 |
| Physics | | | | |
| MMP701S | Mathematical Methods in Physics | None | 7 | 12 |
| EEN701S | Energy & Environment | Thermal Physics and Electricity and Magnetism | 7 | 12 |
| SSP701S | Solid State Physics | Modern Physics | 7 | 12 |
| GPH701S | Geophysics | Electricity and Magnetism and Modern Physics | 7 | 12 |
| Mathematics | | | | |
| MAP602S | Mathematical Programming | Linear Algebra 1 | 6 | 12 |
| RAN701S | Real Analysis | Calculus 2 | 7 | 12 |
| NUM701S | Numerical Methods 1 | Ordinary Differential Equations | 7 | 12 |
| MMO701S | Mathematical Modelling 1 | Ordinary Differential Equations | 7 | 12 |
| Semester 6 | | | | |
| WIL702S | Work Integrated Learning | All courses up to Semester 4 | 7 | 36 |
| PLUS one strand/major (based on programme rules and choice made in previous semester) | | | | |
| Biology | | | | |
| BIO702S | Biotechnology | Microbiology | 7 | 12 |
| MAB702S | Marine Biology 3B | Marine Biology 3A | 7 | 12 |
| Chemistry | | | | |
| BPP702S | Biochemistry: Biochemical Principles & Practice | Organic Chemistry 2 | 7 | 12 |
| ENC702S | Environmental Chemistry | Molecular Spectroscopy and Chemical Separation Methods | 7 | 12 |
| Physics | | | | |
| QPH702S | Quantum Physics | Modern Physics | 7 | 12 |
| BPH702S | Biomedical Physics | Modern Physics | 7 | 12 |
| Mathematics | | | | |
| NUM702S | Numerical Methods 2 | Numerical Methods 1 | 7 | 12 |
| MMO702S | Mathematical Modelling 2 | Mathematical Modelling 1 | 7 | 12 |

POSTGRADUATE PROGRAMMES**DEPARTMENT OF HEALTH SCIENCES****QUALIFICATIONS OFFERED**

| | |
|--|--------|
| Postgraduate Diploma in Health Information Systems Management (Phased in 2016) | 08PGHM |
| Bachelor of Emergency Medical Care Honours (New Programme) (Phased in 2019) | 08BMCH |
| Master of Health Sciences (Phased in 2017) | 09MOHS |

POSTGRADUATE DIPLOMA IN HEALTH INFORMATION SYSTEMS MANAGEMENT (Phased in 2017)**08PGHM****NQF Level: 8****NQF Credits: 135****NQF Qualification ID: Q0892****Description**

The Postgraduate Diploma in Health Information Systems Management programme is primarily designed to provide students with deeper insight, intellectual and cognitive skills related to their professional field and area of employment and help them to advance their career of choice. This programme will expose students to advanced concepts, theories, tools, and methods of Health Information Systems Management. In the same vein, this programme will enable students to acquire the necessary skills for conducting research, capturing, processing, storing and reporting health data including health information systems and technology. This Postgraduate Diploma is intended for students with a health sciences background who wish to further equip and consolidate their knowledge and understanding on the principles of Health Information Systems Management (HISM).

Admission Criteria

Candidates may be admitted to this programme if they have a Health Sciences Bachelor degree at NQF Level 7 or an equivalent qualification from a recognised institution, with an emphasis in Health Sciences. A three-year tertiary pre-NQF qualification with emphasis in Health Sciences will also be considered.

Articulation Arrangements

The transfer of credits will be dealt with according to the University's 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 credits that can be granted are 50% of the credits for a qualification.

Graduates from this programme will ordinarily be able to pursue further studies in Health Information Systems and Management, or a similar/related cognate area of learning, at NQF Level 9.

Mode of Delivery

The programme will be offered on the part-time mode of study through block-release sessions in accordance with University rules.

Requirements for Qualification Award

The Postgraduate Diploma in Health Information Systems Management will be awarded to students credited with a minimum of 120 NQF credits at NQF Level 8, and who have met the detailed qualification requirements for the programme as set out below. Students are required to do seven compulsory courses (worth 105 credits) and one elective course (worth 15 credits). In addition, students should meet the administrative and financial requirements as spelt out in the Yearbooks of the University.

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 programme 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 the student. This facilitation will make use of, inter alia, practical projects, tutorials, case studies, field trips, software demonstration, problem based learning and individual and/or group work. The progress of learning embedded in such tasks will be monitored, recorded and assessed.

Assessment Strategies

Students will be assessed through continuous and summative assessment. These assessments will focus on the achievement of qualification outcomes and take the form of problem solving exercises, individual/group assignments and presentations, case studies, report writing, practical application of skills and competencies, tutorials, practical projects and questioning (tests and/or examinations). The use of validating end of term assessments may be minimised in order to free students’ intellectual capacity for broader cognitive development. Assessment by means of tests and/or examinations will, therefore, be restricted to situations where it is necessary to establish that a previous specific performance can be repeated or a specific skill can be transferred. In accordance with NUST policy on diversified continuous assessment, each course will have a minimum of six assessment events .A Final Mark of 50% is required to pass the course.

Transition Arrangements

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

CURRICULUM

Year 1

Semester 1

| Course Code | Course Title | Prerequisite | NQF Level | NQF Credits |
|-------------|---|--------------|-----------|-------------|
| IMH811S | Information Management and Healthcare Systems | None | 8 | 15 |
| HPP811S | Health Management Principles and Practice | None | 8 | 15 |
| IDC811S | International disease Classification and Coding | None | 8 | 15 |
| AHS811S | Advanced Health Statistics | None | 8 | 15 |

Semester 2

| | | | | |
|---------|------------------------------------|------|---|----|
| IST821S | Information Systems and Technology | None | 8 | 15 |
| HLP821S | HISM Laboratory Practices | None | 8 | 15 |
| QMC821S | Quality Management in Health Care | None | 8 | 15 |

Plus ONE of the following elective courses:

| | | | | |
|---------|--|------|---|----|
| SHM821S | Strategic Health Care Planning and Marketing | None | 8 | 15 |
| FMC821S | Financial Management in Health Care | None | 8 | 15 |

**BACHELOR OF EMERGENCY MEDICAL CARE HONOURS
(New Programme) (Phased in 2019)****08BMCH****NQF Level: 8****NQF Credits: 135****NQF Qualification ID: Q1110****Description**

The Bachelor of Emergency Medical Care Honours is a postgraduate degree programme that is designed to create an opportunity for further tertiary education in the emergency medical care field which is aligned with the National Development Plan (NDP4) and the NUST strategic Plan (NSP4). Currently there is only the three-year undergraduate programme that is offered at NUST. The programme aims to equip students with comprehensive and systematic knowledge and expertise in this discipline. The programme will enable students to develop their capacity to conduct supervised research of an applied nature as well as appraise existing or new treatment protocols in to develop implementation strategies within the Namibian context. Furthermore, students will be equipped with the relevant knowledge and skills in disaster management, community health paramedicine and clinical care applicable to the emergency medical care setting.

Admission Criteria

Candidates will be considered for admission to the Bachelor of Emergency Medical Care Honours programme if they have a Bachelor of Emergency Medical Care (Formerly Bachelor of Pre-hospital Emergency Medical Care) at NQF level 7 (with at least 360 NQF credits) from NUST or an equivalent NQF level qualification from a recognised institution or relevant pre-NQF qualification from a recognised institution worth at least 360 credits.

NB: Applicants must also be registered with the HPCNA or equivalent registration body, as a Paramedic (Advanced Life Support Practitioner). Proof of Registration must be attached to the Application form.

Articulation Arrangements

Transfer of credits will be dealt with according to the NUST's 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 total credits for a qualification.

Students who complete the Bachelor of Emergency Medical Care Honours will ordinarily be able to further studies in Emergency Medical Care, Health Sciences, or a related cognate area of learning at NQF level 9.

Mode of Delivery

The Bachelor of Emergency Medical Care Honours will be delivered on a full-time basis with a block release learning and distance learning mode that would be complemented by NUST E-Learning.

Requirements for Qualification Award

The Bachelor of Emergency Medical Care Honours will be awarded to candidates credited with a minimum of 120 NQF credits, (all at NQF Level 8). Students are required to complete all compulsory courses (worth 120 credits).

In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

Transition Arrangements

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

CURRICULUM**Year 1****Semester 1**

| Course Code | Course Title | Prerequisite | NQF Level | NQF Credits |
|--------------------|---------------------------------------|---------------------|------------------|--------------------|
| RME810S | Research Methodology | None | 8 | 15 |
| CCT811S | Clinical Care Theory 1 | None | 8 | 15 |
| CHP811S | Community Health Paramedicine | None | 8 | 15 |
| DMI811S | Disaster and Mass Incident Management | None | 8 | 15 |

Semester 2

| | | | | |
|---------|------------------------|------------------------|---|----|
| EMC821S | Mini-Thesis | Research Methodology | 8 | 30 |
| CCP821S | Clinical Care Practice | Clinical Care Theory 1 | 8 | 15 |
| CCT821S | Clinical Care Theory 2 | Clinical Theory 1 | 8 | 15 |

NQF Level: 9

NQF Credits: 240

NQF Qualification ID: Q1107

Description

The Master of Health Sciences is a postgraduate degree programme by full thesis at NQF level 9. It aims at developing skilled individuals with the ability to conceptualise, develop and conduct applied research in the field of Health Sciences. The degree is designed for candidates with Health Sciences background who seek to deepen and enhance competencies in specific area of Health Sciences. The programme builds on previously acquired theoretical and practical knowledge at NQF level 8 and other industrial experiences to investigate and develop innovative ideas and products to solve problems in the field of Health Sciences. Hence, it is designed to enhance critical thinking and applied techniques in order to contribute meaningfully to the advancement of innovative and applied research in Health Sciences for the benefit of the society.

Admission Criteria

Candidates may be considered for admission into the Master of Health Sciences if they possess a Bachelor of Environmental Health Sciences, Bachelor of Biomedical Sciences or Bachelor of Emergency Medical Care Honours at NQF Level 8 from the Namibia University of Science and Technology or equivalent qualification from recognised institutions. A four-year tertiary pre-NQF qualification with emphasis in Health Sciences may also be considered. Hence, holders of appropriate qualifications in Health Sciences that meet the requirements will be considered on a case-by-case basis depending on internal capacity.

Articulation Arrangements

Successful completion of the Master of Health Sciences programme will provide access to Doctor of Philosophy (PhD) research in Health Sciences or related cognate area of learning at NQF Level 10.

Mode of Delivery

The programme is by full thesis (full research) and will be offered through the full-time and part-time modes of study in accordance with the University's rules and regulations.

Requirements for Qualification Award

The Master of Health Sciences degree will be awarded to students credited with a minimum of 240 credits (all at NQF Level 9). The thesis will represent the entire body of work to be assessed and must meet the University's requirements as detailed in the rules for postgraduate studies. In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the University Yearbook. Students will be required to make oral presentations of their research proposals within the first six (6) months of registration. It will be mandatory for students to attend seminars and workshops prescribed by the department and or the supervisor in order to improve the quality of their theses.

Free text, following the qualification title would be utilised to identify the cognate area of research in which students' research topics might focus. A minimum of two years and a maximum period of four years are required to complete the programme, if registered on the full-time mode. A minimum of three years and a maximum period of six years are required to complete the programme, if registered on the part-time mode.

Teaching and Learning Strategies

The teaching and learning strategies are structured in line with the expected learning outcomes at NQF level 9. This is geared towards the acquisition of critical thinking and problem solving skills and competence in applied research in Health Sciences. Hence, students will conduct interactive research work under the guidance of assigned supervisor(s). In general, students will be required to conduct independent research work in accordance with a pre-agreed research plan. Students will be supervised, guided and supported through regular contact sessions using all available means during which study planning, progress and other relevant academic issues/milestones are discussed. Academic support will be provided in accordance with the University rules and procedures for postgraduate studies leading to the award of research degrees.

The strategic learning processes include conduction of an in-depth, thorough and relevant literature review geared towards problem solving and societal relevant research. This is essential so as to align research activities to the strategic plan of the institution and that of the country. Students will be encouraged to attend research seminars, workshops and conferences on the recommendation of the Head of Department (HoD) and or the supervisor. Students shall implement the research plan with specific milestones as agreed and signed by both the student and supervisor and endorsed by the HoD. Review of the signed milestone could occur based on valid circumstances from either party. Hence, supervisory guidance and learning activities will include research proposal development using approved format together with plagiarism report, fulfilment of research ethics requirements, implementation of research methodology, data acquisition, data presentation and interpretation processes, report writing and others.

Additional academic support will be provided in accordance with the University rules and procedures for postgraduate studies and ethical issues will be ensured in all required cases.

Assessment Strategies

Students are required to submit a research proposal within six months for approval by the Postgraduate Studies Committee and then make oral presentation of the proposal. Attendance of prescribed seminars, workshops and conferences shall be compulsory for all students. Students are required to present work-in-progress every six months during research seminars for progress monitoring and assessment purposes. Students who fail the initial assessment of the research proposal will receive an extension of three months for re-approval.

In compliance with the general requirements of Senate of NUST, students are required to submit a thesis for evaluation, which should comply with international academic standards. The thesis requires students to work and conduct research investigation independently. Students are required to cultivate a professional work ethic to deliver the combination of research, analysis, communication and presentation demanded by their theses. The thesis will be assessed in accordance with the rules for studies at postgraduate level.

Students will present and defend their theses before an appropriately constituted committee in accordance with the rules for postgraduate studies at the University. The thesis will be returned to the student for correction before final binding and archiving. Final mark of the thesis will only be released after all corrections have been effected to the satisfaction of the faculty/supervisor.

Transition Arrangements

This is a new programme and does not replace any existing qualification. Transition arrangements as may be required shall be carried out when the programme is due for revision.

| Full time | | | Part time | | |
|-----------------------|------------------|--------------|--|------------------|--------------|
| Course Code | Course Title | Prerequisite | Course Code | Course Title | Prerequisite |
| Year 1 | | | | | |
| Semester 1 THS911S | Thesis | None | Semester 1 THS911P | Thesis | None |
| Semester 2 THS912S | Thesis | None | Semester 2 THS912P | Thesis | None |
| Year 2 | | | | | |
| Semester 3 THS913S | Thesis | None | Semester 3 THS913P | Thesis | None |
| Semester 4 THS914S | Thesis | None | Semester 4 THS914P | Thesis | None |
| Year 3 | | | | | |
| Semester 5 THS915X | Thesis Extension | None | Semester 5 THS915P Semester 6 THS916P | Thesis | None |
| Year 4 | | | | | |
| | | | Semester 7 THS917P Semester 8 THS918P | Thesis | None |
| Year 5 | | | | | |
| | | | Semester 9 THS919X | Thesis Extension | None |

DEPARTMENT OF NATURAL AND APPLIED SCIENCES

QUALIFICATIONS OFFERED

| | |
|---|--------|
| Postgraduate Diploma in Applied Radiation Science and Technology (Phased in 2016) | 08PGRS |
| Bachelor of Science Honours (New Programme) (Phased in 2018) | 08BOSH |

POSTGRADUATE DIPLOMA IN APPLIED RADIATION SCIENCE AND TECHNOLOGY (Phased in 2016) 08PGRS

NQF Level: 8 NQF Credits: 120 NQF Qualification ID: Q0890

Description

The Postgraduate Diploma in Applied Radiation Science and Technology is a postgraduate specialisation qualification that aims at consolidating and deepening the knowledge and expertise in the applied radiation science and technology disciplines, and to develop student’s capacity to conduct supervised research of an applied nature. The programme is purposefully designed to enable students to evaluate and apply theoretical and practical aspects of radiation science and technology in general, in order to serve the current and future needs of the public and private sectors, like the various ministries, institutes and the mining and mineral processing industries.

The Postgraduate Diploma in Applied Radiation Science and Technology is intended for students with knowledge and understanding on nuclear sciences, the principals involved in the interaction of the different kinds of matter. This programme will also focus on and cover commercial applications, of nuclear techniques in the fields of energy, agriculture and water resource management, biology and medicine, environmental and nuclear waste minimisation and nuclear security.

The proposed programme is fully compliant with requirements of the National Qualifications Framework (NQF) and the NUST Curriculum Framework.

Admission Criteria

Candidates will be considered for admission to the Postgraduate Diploma in Applied Radiation Science and Technology programme if they have a Bachelor of Science degree which incorporates physics or chemistry as a major subject. It is strongly recommended that chemistry or physics as a minor subject in the above mentioned Bachelor of Science degree should be at a second year level (NQF Level 6). An equivalent qualification at NQF Level 7 which incorporates one or more of the following disciplines: biology, biochemistry, geology and mathematics, will be evaluated on an individual basis at the discretion of the department/ Postgraduate Committee for suitability of admission.

Articulation Arrangements

Transfer of credits will be dealt with according to the University’s regulations on Recognition of Prior Learning. These provide for course-by-course credits as well as credit transfer by volume under certain academic conditions. The maximum credit that can be granted is 50 % of the credits for a qualification. Students whom may articulate to a related Bachelor Honours degree, would gain credit for relevant courses passed, for credit recognition in the Postgraduate Diploma in Applied Radiation Science.

Conversely, students who successfully completed this programme may utilise these for credits (course-by-course), if wishing ultimately, to articulate to a related Master’s degree at NQF Level 9.

Mode of Delivery

This programme will be offered on the part-time with flexible modes of delivery incorporating methodologies such as face to face lectures, block release courses, e-learning and so forth, in accordance with the University’s rules and regulations. The programme, however, may be offered via both, full- and part-time modes at a later date if required.

Requirements for Qualification Award

The Postgraduate Diploma in Applied Radiation Science and Technology will be awarded to students credited with minimum of 120 NQF credits (all at NQF Level 8). Students are required to complete all compulsory courses (worth 120 credits).

In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

CURRICULUM**Year 1****Semester 1**

| Course Code | Course Title | Prerequisite | NQF Level | NQF Credits |
|--------------------|---|---------------------|------------------|--------------------|
| PRR811S | Principles of Radiation and Radioactivity | None | 8 | 15 |
| ANP811S | Applied Nuclear Physics | None | 8 | 15 |
| ANC811S | Applied Nuclear Chemistry | None | 8 | 15 |
| LPR811S | Laboratory Practices 1 | None | 8 | 15 |

Semester 2

| | | | | |
|---------|--|--|---|----|
| HPR821S | Health Physics and Radiobiology | Applied Nuclear Physics Applied Nuclear Chemistry | 8 | 15 |
| NWM821S | Nuclear Waste Management & the Environment | Applied Nuclear Physics Applied Nuclear Chemistry | 8 | 15 |
| RFN821S | Regulatory Framework & Nuclear Security | Applied Nuclear Physics | 8 | 15 |
| LPR821S | Laboratory Practices 2 | Applied Nuclear Physics, Applied Nuclear Chemistry, Laboratory Practices 1 | 8 | 15 |

**BACHELOR OF SCIENCE HONOURS
(New Programme) (Phased in 2018)**

08BOSH

NQF Level: 8

NQF Credits: 135

NQF Qualification ID: Q1064

Description

The Bachelor of Science Honours aims at consolidating and deepening the knowledge and expertise in applied natural science disciplines and to develop student's capacity to conduct supervised research of an applied nature. The programme is purposefully designed to expose students to advanced scientific concepts, theories, tools, and methods. Students will be able to critically evaluate and apply theoretical and practical aspects of natural sciences in general; develop advanced information acquisition and have the skills required to analyse and solve a wide range of pressing challenges and needs in relation to science, technology, engineering and Mathematics (STEM) in the current Namibian market and economy.

This programme provides a platform for developing scientific literacy and for increasing essential scientific knowledge and skills for lifelong learning in STEM. Additionally, the programme is designed to enable students to appreciate the relationship between science and other disciplines. Thus, the programme will enable students to demonstrate deepened, comprehensive and systematic scientific knowledge required to effectively communicate research results in written and oral formats.

In following this programme, students will have had the opportunity to develop such skills, in particular relating to communication, interpersonal skills, learning skills, research skills, numeracy, self-management, use of IT and problem-solving and will have been encouraged to further develop and enhance the full set of skills through a variety of opportunities available outside their curriculum.

Criteria for Admission

Candidates will be considered for admission to the Bachelor of Science Honours programme if they have a Bachelor of Science degree (with a major in Biology, or Chemistry or Physics) at NQF Level 7 from NUST. Alternatively, candidates should have an equivalent qualification at NQF level 7 from a recognised institution, worth at least 360 NQF credits, or a pre-NQF Bachelor degree of at least three years duration from a recognised institution with specialisations in Biology, Chemistry or Physics.

***NB: Admission into a specialisation will be based on the major undertaken previously at the undergraduate level (NQF Level 7).
Articulation Arrangements***

Transfer of credits will be dealt with according to the NUST's 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 Science Honours programme will be able to pursue further studies in applied natural sciences, or a related cognate area of learning, at NQF level 9.

Mode of Delivery

This programme will be offered on the full-time mode of study in accordance with NUST rules and regulations.

Requirements for Qualification Award

The Bachelor of Science Honours degree will be awarded to students credited with a minimum of 120 NQF credits (all at NQF Level 8). The programme allows for specialisation in Applied Biology; Biotechnology; Applied Chemistry, and Applied Physics, of which students must complete one core compulsory course (worth 15 credits); three strand compulsory courses (worth 45 credits); two strand elective courses (worth 30 credits); as well as a mini-thesis (worth 30 credits). In addition, students must meet the administrative and financial requirements as stipulated in Part 1 of the NUST Yearbook.

NB: A specialisation/strand will be offered subject to the number of students enrolled or demand.

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.

The learning process will be facilitated both inside and outside the classroom, requiring specific tasks to be carried out by the student. Depending on the context of each course, the facilitation methods will make use of any of the following: classroom lectures; guided laboratory classes and practical demonstrations; group and individual assignments and/or projects; seminars and workshops; directed and independent study involving electronic/online resources, textbooks and other study materials; training and practice in the use of IT and software packages; problem-solving workshops or problem-based learning; class discussions; and tutorials. The progress of learning embedded in such tasks will be monitored, recorded and assessed. The particular teaching and learning strategies of each course can be found in the course specifications/syllabi.

Assessment Strategies

Students will be assessed through continuous and summative assessment. These assessments will focus on the achievement of competencies and take the form of problem solving exercises (both of a practical and written format), individual/group assignments, oral, audio-visual and poster presentations, computer-based assessments, critical analysis of case studies, report writing, practical application of skills and competencies, tutorials, practical projects and questioning (tests and/or examinations), peer and self-assessments and dissertations (mini-thesis). In accordance with NUST policy on diversified continuous assessment, each course will have a minimum of six assessment events. Courses that are assessed using a combination of continuous assessment and a final end-of- semester examination must have at least three assessments. In order to be admitted to the final examination in any course, a minimum semester mark of 40% has to be obtained. This mark is determined by continuous assessment (CA) of a student's achievement by means of tests and/or assignments/seminars/practicals/tutorials. The weighting of the CA types will be assessed in accordance with stipulations in the syllabus of each course.

Where a student misses a continuous assessment or scores below 40% in the overall continuous assessment, the following rule will apply:

- A student can only supplement and/or resubmit a maximum of ONE continuous assessment. Any supplementary continuous assessment will be written at the end of the semester, before the examination component.
- The semester mark and the exam mark will be used in a 60:40 ratio, respectively, to determine the Final Mark. A student will have to obtain a minimum average of 50% as final mark to pass a course, subject to a sub-minimum of 40% in the examination mark.
- The Mini-thesis will be assessed in accordance with NUST's rules for studies at postgraduate level.

Quality Assurance Requirements

Each course (please refer to the Detailed Qualification Requirements) 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 study 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 purposes, therefore, ensuring quality of the assessment and the qualification as a whole. Courses at this NQF Level 8 will be externally moderated. Moderation of the mini-thesis will be done in accordance with NUST rules for studies at postgraduate level.

Transition Arrangements

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

CURRICULUM

Year 1

Semester 1

| Course Code | Course Title | Prerequisite | NQF Level | NQF Credits |
|-------------|----------------------|--------------|-----------|-------------|
| RME810S | Research Methodology | None | 8 | 15 |

Plus ONE of the following strands compulsory depending on specialisation:

Applied Biology Strand: 08BOSH

| | | | | |
|---------|--|------|---|----|
| EBM811S | Environmental Biology and Aquatic Ecosystem Management | None | 8 | 15 |
| MRT811S | Methods in Recombinant DNA Technology | None | 8 | 15 |
| MSP811S | Microbial Systematics and Processes | None | | |

Biotechnology Strand: 08BSHB

| | | | | |
|---------|---------------------------------------|------|---|----|
| BIO811S | Bioinformatics | None | 8 | 15 |
| MRT811S | Methods in Recombinant DNA Technology | None | 8 | 15 |
| PAB811S | Plant and Animal Biotechnology | None | 8 | 15 |

Applied Chemistry Strand: 08BSHC

| | | | | |
|---------|--|------|---|----|
| AAC811S | Advanced Analytical Methods and Chemometrics | None | 8 | 15 |
| BBC811S | Bioinorganic and Biophysical Chemistry | None | 8 | 15 |
| AOC811S | Advanced Organic Chemistry | None | 8 | 15 |

Applied Physics Strand: 08BSHP

| | | | | |
|---------|-------------------------|------|---|----|
| ENP811S | Environmental Physics | None | 8 | 15 |
| AGE811S | Advanced Geophysics | None | 8 | 15 |
| ISP811S | Instrumentation Physics | None | 8 | 15 |

Semester 2

| | | | | |
|---------|-------------|----------------------|---|----|
| MSH821S | Mini-thesis | Research Methodology | 8 | 30 |
|---------|-------------|----------------------|---|----|

Plus TWO of the following Strand Elective courses for Strand/Specialisation in Applied Biology (based on demand): 08BOSH

| | | | | |
|---------|---|------|---|----|
| AMB821S | Advanced Microbiology | None | 8 | 15 |
| BPM821S | Biosynthetic Pathways and Molecular Biology | None | 8 | 15 |
| ENS821S | Entrepreneurship | None | 8 | 15 |

Plus TWO of the following Strand Elective courses for Strand/Specialisation in Biotechnology (based on demand): 08BSHB

| | | | | |
|---------|---|------|---|----|
| EIM821S | Environmental, Industrial and Medical Biotechnology | None | 8 | 15 |
| BPM821S | Biosynthetic Pathways and Molecular Biology | None | 8 | 15 |
| ENS821S | Entrepreneurship | None | 8 | 15 |

Plus TWO of the following Strand Elective courses for Strand/Specialisation in Applied Chemistry (based on demand): 08BSHC

| | | | | |
|---------|---|------|---|----|
| SAM821S | Synthetic Aspects in Medicinal Chemistry | None | 8 | 15 |
| EPM821S | Environmental Pollution, Monitoring & Remediation | None | 8 | 15 |
| ENS821S | Entrepreneurship | None | 8 | 15 |

Plus TWO of the following Strand Elective courses for Strand/Specialisation in Applied Physics (based on demand): 08BSHP

| | | | | |
|---------|-------------------|------|---|----|
| ASO821S | Astrophysics | None | 8 | 15 |
| MAP821S | Materials Physics | None | 8 | 15 |
| ENS821S | Entrepreneurship | None | 8 | 15 |

QUALIFICATIONS OFFERED

| | |
|---|--------|
| Bachelor of Science Honours in Applied Mathematics (Revised) (Phased in 2015) | 08BSMH |
| Master of Science in Applied Mathematics (Phased in 2016) | 09MSAM |
| Bachelor of Science Honours in Applied Statistics (Revised) (Phased in 2015) | 08BSSH |
| Master of Science in Applied Statistics (Phased in 2016) | 09MSAS |

**BACHELOR OF SCIENCE HONOURS IN APPLIED MATHEMATICS
(Revised Programme) (Phased in from 2015)****08BSMH****NQF Level: 8****NQF Credits: 135****NQF Qualification ID: Q0710****Description**

The Bachelor of Science Honours in Applied Mathematics is a postgraduate specialisation degree that aims at consolidating and deepening the knowledge and expertise in the mathematics discipline, and to develop student's capacity to conduct supervised research of an applied nature. The programme is purposefully designed to enable students to evaluate and apply mathematical theories, techniques and models to solve complex mathematical related problems that face the public and private sectors.

Admission Requirements

Candidates for the Honours degree would have completed the B.Sc. degree Mathematics or equivalent with a minimum average of 60% in the major subjects. However, the admission to the B.Sc. Honours is competitive.

| Course Title | Course Code | Prerequisite(s) | NQF Level | NQF Level |
|---|-------------|----------------------|-----------|-----------|
| Semester 1 | | | | |
| Partial Differential Equations | PDE801S | None | 8 | 15 |
| Applied Numerical Analysis | ANA801S | None | 8 | 15 |
| Research Methodology | RME801S | None | 8 | 15 |
| Plus ONE of the following Electives: | | | | |
| Advanced Complex Analysis | ACA801S | None | 8 | 15 |
| Advanced Calculus | ADC801S | None | 8 | 15 |
| Semester 2 | | | | |
| Applied Operations Research | AOR802S | None | 8 | 15 |
| Functional Analysis | FAN802S | None | 8 | 15 |
| Mini-Thesis | MTS802S | Research Methodology | 8 | 15 |

Transition Arrangements

The current one-year Bachelor of Science Honours in Applied Mathematics will be allowed to continue with the existing curriculum until 2016. The current programme (old curriculum) will be completely phased out by the end of 2016 after which students in this category must automatically switch to the revised programme (new curriculum) and fulfil all requirements based on the new curriculum in accordance with information in Table 1 below:

Table 1: Corresponding Courses

| Course Code | Bachelor of Sciences in Applied Maths Honours (Old Courses) | Course Code | Bachelor of Sciences Honours in Applied Maths (New/Revised Corresponding Courses to be Done, if Failed) |
|-------------|---|-------------|---|
| PDE410S | Partial Differential Equations | PDE801S | Partial Differential Equations |
| CAN410S | Complex Analysis 2 | ACA801S | Advanced Complex Analysis |
| ADC410S | Advanced Calculus 1 | ADC801S | Advanced Calculus |
| ADC402S | Advanced Calculus 2 | ADC801S | Advanced Calculus |
| ANA410S | Applied Numerical Analysis | ANA801S | Applied Numerical Analysis |
| MHP420S | Mathematical Programming 3 | AOR802S | Applied Operations Research |
| FAN420S | Functional Analysis | FAN802S | Functional Analysis |
| RPM420S | Research Project | MTS802S | Mini-Thesis |
| RMA411S | Research Methodology | N/A | Research Methodology |

NQF Level: 9

NQF Credits: 240

NQF Qualification ID: Q0894

Description

The Master of Science in Applied Mathematics is a postgraduate specialisation degree that aims at consolidating and deepening the knowledge and expertise in the Mathematics discipline, and to develop student's capacity to conduct supervised research of an applied nature. The programme is purposefully designed to enable students to evaluate and apply mathematical theories, techniques and models to solve complex mathematical related problems in the specialised areas of Optimisation (including Operations Research), Generalised Fluid Dynamics, Financial Mathematics, Computational Methods, Biomathematics and Mathematical Ecology, that face the public and private sectors.

Admission Criteria

Candidates will be considered for admission into the Master of Science in Applied Mathematics if they have a minimum of Bachelor of Science in Applied Mathematics Honours from The Namibia University of Science and Technology (NUST) or equivalent qualification in a related discipline from any other recognised institutions. In either case, the candidate should have proven evidence of having conducted supervised research. Evidence of communication proficiency in the English language is required. Candidates may be required to attend a pre-selection interview at the discretion of the Postgraduate Study Committee, to ascertain their competencies for independent research in a specialised area of Applied Mathematics.

Registration prior to the approval of a research proposal is provisional and will be made official only when the proposal is approved by the Postgraduate Studies Committee. These procedures will be fully explained to each prospective student during their personal interview.

Articulation Arrangements

Students who complete the Master of Science in Applied Mathematics programme successfully will be able to pursue a Doctor of Philosophy (PhD.) research in Mathematics, or a related cognate area of learning, at NQF Level 10.

Mode of Delivery

This programme will be offered on the full time and part-time modes of study in accordance with the University's rules and regulations. The delivery mode will also employ the blended learning strategy of the University, which includes the online learning (i.e., E-Learning) facilitation.

Requirements for Qualification Award

The Master of Science in Applied Mathematics will be awarded to students credited with a minimum of 240 NQF credits (all at NQF Level 9). The thesis will represent the entire body of work to be assessed and must meet the University's requirements as detailed in the rules for postgraduate studies. However, students are required to make oral presentations of their research proposals within the first six months of registering for the programme and attend a number of scheduled seminars at the discretion of the supervisors to evaluate their progress and be provided useful feedback towards improving the quality of their theses.

In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook. 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 interactive research activities through supervised and collaborative work with supervisors and peers in order to provide for the development of generic research and intellectual skills in Applied Mathematics, with respect to the proposed areas of specialisation listed above.

This research activities and facilitation will include in-depth literature review and problem-solving seminars. Students will be encouraged to engage with the industry in Namibia to identify problems solvable by their research contributions, and also to take advantage of updating their knowledge through conferences and workshops both locally and internationally during the research programme.

The Postgraduate Studies Committee, on the recommendation of the Departmental Postgraduate Research Committee, will appoint supervisor(s)/co-supervisor(s) for each student. Students will be required to work independently in accordance with a pre-agreed research plan. Students will be supervised, guided and supported through regular contact sessions using all available means during which study planning, progress, and other relevant topics are discussed. Academic support will be provided in accordance with the University's rules and procedures for postgraduate studies leading to the award of research degrees.

Assessment Strategies

Students are required to submit a research proposal within six months for approval by the Postgraduate Studies Committee. It is compulsory that students attend regular research methodology seminars until successful defence and approval of the research proposal. Students are required to present work-in-progress every six months during research seminars for monitoring and assessment purposes. Students who fail the initial assessment of the research proposal will receive an extension of three months for re-approval.

In compliance with the general requirements of Senate, students are required to submit a thesis for evaluation, which should comply with international academic standards. The thesis requires students to work independently and to investigate their own individual research topic. Students are required to cultivate professional work ethics to deliver the combination of research, analysis, communication and presentation demanded by their theses. The thesis will be assessed in accordance with the rules for studies at postgraduate level.

Students will present and defend their theses before an appropriate constituted committee and an External Examiner in accordance with the rules for postgraduate studies at the University. Each thesis will be returned to the student for correction, before final binding and archiving. Final mark will only be released after the suggested correction(s) have been implemented in the thesis.

Transition Arrangements

This is a new programme and does not replace any existing NQF registered qualification. Transition arrangements will be developed and applied when the programme is due for revision.

| Full time | | | Part time | | |
|-------------------|------------------|--------------|-------------------|------------------|--------------|
| Course Code | Course Title | Prerequisite | Course Code | Course Title | Prerequisite |
| Year 1 | | | | | |
| Semester 1 | | | Semester 1 | | |
| TAM911S | Thesis | None | TAM911P | Thesis | None |
| Semester 2 | | | Semester 2 | | |
| TAM912S | Thesis | None | TAM912P | Thesis | None |
| Year 2 | | | | | |
| Semester 3 | | | Semester 3 | | |
| TAM913S | Thesis | None | TAM913P | Thesis | None |
| Semester 4 | | | Semester 4 | | |
| TAM914S | Thesis | None | TAM914P | Thesis | None |
| Year 3 | | | | | |
| Semester 5 | | | Semester 5 | | |
| TAM915X | Thesis Extension | | TAM915P | | |
| | | | Semester 6 | | |
| | | | TAM916P | Thesis | |
| Year 4 | | | | | |
| | | | Semester 7 | | |
| | | | TAM917P | Thesis | |
| | | | Semester 8 | | |
| | | | TAM918P | Thesis | |
| Year 5 | | | | | |
| | | | Semester 9 | | |
| | | | TAM919X | Thesis Extension | |

NQF Level: 8

NQF Credits: 150

NQF Qualification ID: Q0711

Description

The Bachelor of Science Honours in Applied Statistics is a postgraduate specialisation degree that aims at consolidating and deepening the knowledge and expertise in the statistics discipline, and to develop student’s capacity to conduct supervised research of an applied nature. The programme is purposefully designed to enable students to evaluate and apply statistical theories, techniques and models to solve complex statistically related problems that face the public and private sectors.

Admission requirements

Candidates for the Honours degree would have completed the B.Sc. degree or equivalent with a minimum average of 60 % in the major subjects. However, the admission to the B.Sc. Honours is competitive.

CURRICULUM

Semester 1

| Course Title | Course Code | Prerequisite(s) | NQF Level | NQF Credits |
|-----------------------------|--------------------|------------------------|------------------|--------------------|
| Statistical Quality Control | SQC801S | None | 8 | 15 |
| Stochastic Processes | STP801S | None | 8 | 15 |
| Research Methodology | RME801S | None | 8 | 15 |

Plus ONE of the following Electives:

| | | | | |
|-------------------|---------|------|---|----|
| Advanced Calculus | ADC801S | None | 8 | 15 |
| Biostatistics | BIO801S | None | 8 | 15 |

Semester 2

| | | | | |
|-----------------------|---------|----------------------|---|----|
| Multivariate Analysis | MVA802S | None | 8 | 15 |
| Mini-Thesis | MTS802S | Research Methodology | 8 | 30 |

Plus ONE of the following Electives:

| | | | | |
|-----------------------------|---------|------|---|----|
| Sampling Theory | SAT802S | None | 8 | 15 |
| Applied Operations Research | AOR802S | None | 8 | 15 |

Transition Arrangements

The current one-year Bachelor of Science Honours in Applied Statistics (old curriculum) will be allowed to continue with the existing curriculum until 2016. The current programme (old curriculum) will be completely phased out by the end of 2016 after which students in this category must automatically switch to the revised programme (new curriculum) and fulfil all requirements based on the new curriculum in accordance with information in Table 1 below:

Table 1: Corresponding Courses

| Course Code | Bachelor of Sciences in Applied Stats Honours (Old Courses) | Course Code | Bachelor of Sciences Honours in Applied Stats (New/Revised Corresponding Courses to be Done, if Failed) |
|--------------------|--|--------------------|--|
| ADC411S | Advanced Calculus 1 | ADC801S | Advance Calculus |
| RMA411S | Research Methodology | RME801S | Research Methodology |
| SQC411S | Statistical Quality Control | SQC801S | Statistical Quality Control |
| NPS411S | Non Parametric Statistics | STP801S | Stochastic Processes |
| MVA421S | Multivariate Analysis | MVA802S | Multivariate Analysis |
| RPM420S | Research Project | MTS802S | Mini-Thesis |
| MHP421S | Mathematical Programming 3 | AOR802S | Applied Operations Research |
| TSA421S | Time Series Analysis and Forecasting | SAT802S | Sampling Theory |
| | None | BIO801S | Biostatistics |
| DAE411S | Design & Analysis of Experiments | | None |

**MASTER OF SCIENCE IN APPLIED STATISTICS
(Phased in 2016)****09MSAS****NQF Level: 9****NQF Credits: 240****NQF Qualification ID: Q0893****Description**

The Master of Science in Applied Statistics is of interdisciplinary nature that aims at consolidating and deepening the knowledge and expertise in the Statistics discipline, and to develop student's capacity to conduct supervised research of applied nature.

The programme is fully aligned with requirements of the National Qualifications Framework (NQF) and the NUST Curriculum Framework. It also conforms to the regional and international standards and quality requirements

Admission Criteria

Applicants will be considered for admission into the Master of Science in Applied Statistic if they have a minimum of Bachelor of Science in Applied Statistics Honours from the Namibia University of Science and Technology, or equivalent qualification in a related discipline from any other recognised institutions. Applicants need to provide evidence of having conducted supervised research; possess communication proficiency in the English language and may be required to make-up specific deficiencies in coursework at the discretion of the Postgraduate Studies Committee. In addition, applicants may be required to attend a pre-selection interview and/or test at the discretion of the department.

Applicants from other institutions must submit detailed information on all courses in their previous qualifications, as well as contact details of three referees. This also applies to applicants who have been working in the field subsequent to obtaining their previous qualifications.

Registration prior to the approval of a research proposal is provisional and will be made official only when the proposal is approved by the Postgraduate Studies Committee. These procedures will be fully explained to each prospective student during their personal interview.

Articulation Arrangements

The Master of Science in Applied Statistics will ordinarily provide access to further studies in the same area or related cognate area at Doctoral degree level, i.e., NQF Level 10.

Mode of Delivery

This programme will be delivered on a full-time and part-time basis in accordance with the Namibia University of Science and Technology rules. The delivery mode will also employ the blended learning strategy of the University, which includes the online learning (i.e., e-Learning) facilitation.

Requirements for Qualification Award

This qualification will be awarded to candidates credited with a minimum of 240 credits (all at NQF Level 9). The thesis will represent the entire body of work to be assessed and must meet the University's requirements as detailed in the rules for postgraduate studies. In addition, students should meet the administrative and financial requirements spelt out in Part 1 of the NUST Yearbook.

Teaching and Learning Strategies

The Postgraduate Studies Committee, on the recommendation of the Head of Department, will appoint supervisor(s)/co-supervisor(s) for each student. Students will be required to work independently in accordance with a pre-agreed research plan. Students will be supervised, guided and supported through regular contact sessions, using all available means during which study planning, progress, and other relevant topics are discussed. Academic support will be provided in accordance with the University's rules and procedures for postgraduate studies leading to the award of research degrees.

Candidates are encouraged to pursue part of their research within the industries in Namibia, or at other recognised and established tertiary institutions abroad. The possibility to gain international exposure by participating in an international workshop/symposium will be promoted.

Assessment Strategies

Students are required to submit a research proposal within six months of registering for the programme, for approval by the Postgraduate Studies Committee. It is compulsory that students attend regular research seminars until successful defence and approval of their thesis. Furthermore, students are required to present work-in-progress every six months during research seminars, for monitoring and assessment purposes. Students who fail the initial assessment of the research proposal will receive an extension of six months for re-approval.

In compliance with the general requirements of Senate, students are required to submit a thesis for evaluation, which should comply with international academic standards. The thesis requires students to work independently and to investigate their own individual research topic. Students are required to cultivate a professional work ethic to deliver the combination of research, analysis, communication and presentation demanded by their thesis. The thesis will be assessed in accordance with the rules for studies at postgraduate level.

Students will present and defend their thesis before an appropriate constituted committee in accordance with the rules for postgraduate studies at the University. The thesis will be returned to students for correction before final binding and archiving. Final mark will only be released after the suggested correction(s) have been implemented in the thesis.

Transition Arrangements

This is a new qualification. It does not replace any existing NQF registered qualification.

| Full time | | | Part time | | |
|-------------------|------------------|--------------|-------------------|------------------|--------------|
| Course Code | Course Title | Prerequisite | Course Code | Course Title | Prerequisite |
| Year 1 | | | | | |
| Semester 1 | | | Semester 1 | | |
| TAS910S | Thesis | None | TAS910P | Thesis | None |
| Semester 2 | | | Semester 2 | | |
| TAS912S | Thesis | None | TAS912P | Thesis | None |
| Year 2 | | | | | |
| Semester 3 | | | Semester 3 | | |
| TAS913S | Thesis | | TAS913P | Thesis | |
| Semester 4 | | | Semester 4 | | |
| TAS914S | Thesis | | TAS914P | Thesis | |
| Year 3 | | | | | |
| Semester 5 | | | Semester 5 | | |
| TAS915X | Thesis Extension | | TAS915P | | |
| | | | Semester 6 | | |
| | | | TAS916P | | |
| Year 4 | | | | | |
| | | | Semester 7 | | |
| | | | TAS917P | | |
| | | | Semester 8 | | |
| | | | TAS918P | | |
| Year 5 | | | | | |
| | | | Semester 9 | | |
| | | | TAS919X | Thesis Extension | |



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