NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Office of the Registrar

2023 Yearbook - Part 3

Faculty of Computing and Informatics

NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY

YEARBOOK 2023

PART 3

FACULTY OF COMPUTING AND INFORMATICS

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

NOTE

The ***Yearbook for the Faculty of Computing and Informatics*** is valid for 2023 only. Curricula and syllabi may be amended for 2024. It is obtainable free of charge from:

The Registrar
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NAMIBIA

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Although the information contained in this Yearbook has been compiled as accurately as possible, Council and Senate accept no responsibility for any errors and omissions, which may occur. The University retains the right to amend regulations or conditions without prior notice.

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 2023.

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CONTENTS

FACULTY OF COMPUTING AND INFORMATICS **FACULTY CODE 1**

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CENTRE OF EXCELLENCE IN INFORMATION TECHNOLOGY **Code 22**

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Secretary : Vacant

UNDERGRADUATE PROGRAMMES

QUALIFICATIONS OFFERED	CODES
Certificate in Advanced Web Technologies	07CAWT
Certificate in Big Data Technologies	07CBDT
Certificate in Ethical Hacking and Information Security	07CEHI
Bachelor of Computer Science (Systems Administration, Communication Networks or Software Development) (Phasing out from 2020-2024)	07BACS
Bachelor of Computer Science (Systems Administration or Communication Networks) (Revised – Phased in 2020)	07BCMS
Bachelor of Computer Science (Software Development) (Revised – Phased in 2020)	07BCMS
Bachelor of Computer Science in Cyber Security (Phasing out from 2021 - 2025)	07BCCS
Bachelor of Computer Science in Cyber Security (Revised -Phased in 2021)	07BCCY
Bachelor of Informatics (Phasing out from 2020 - 2024)	07BAIF
Bachelor of Informatics (Revised - Phased in 2020)	07BAIT
Bachelor of Journalism and Media Technology	07BJOU

Description

Computer Science and Informatics refer to the skills and knowledge needed to design applications and operate computer systems. Computer Science and Informatics studies at the Namibia University of Science and Technology offer different areas of specialisations as well as different exit levels. Journalism and Media Technology equips students with theoretical knowledge and practical skills to produce news for a variety of media and responsibly report on a wide range of social issues, as well as to represent organisations as public relations practitioners.

Bachelor of Computer Science in Cyber Security: for those who successfully completed all requirements for the three-year degree of the phasing in (2021) programme.

Bachelor of Computer Science (Systems Administration, Communication Networks or Software Development) or Bachelor of Informatics: for those who successfully completed all requirements for the three-year degree of the phasing in (2020) programme.

Certificate in Advanced Web Technologies, Certificate in Big Data Technologies and Certificate in Ethical Hacking and Information Security: for those who successfully completed all requirements for the one semester certificate of the three CEIT programmes.

Bachelor of Journalism and Media Technology: for those who successfully completed all requirements for the three-year degree of the phasing in (2021) programme.

Special Faculty Assessment Regulations

There are situations where assessment of an individual course provided by other Faculties will supersede assessment regulations. This is reflected in the course documentation.

Final Examination consists of two papers: Theory and Practical

- A sub-minimum of 40% must be obtained in each paper. The combined examination mark must be at least 50% overall.
- In-course mark and examination mark shall be used jointly to determine the final mark in the ratio of 50% (semester mark) to 50% (examination mark) or 60% (semester mark) to 40% (examination mark) or as specified in the course outline.

Course Evaluation for all courses offered by the Faculty utilising in-course assessment and a Theory Paper

- An in-course mark is determined by continuous evaluation made up of tests and assignments during the semester.
- Students must have satisfactorily completed to the minimum standard (40% overall) all assignments and tests during the semester to be admitted to the final examination.

Final examination consists of one Theory Paper

- A sub-minimum of 40% must be obtained in the examination.
- In-course mark and examination mark shall be used jointly to determine the final mark in the ratio of 50% semester mark to 50% examination mark.

- In-course mark and examination mark shall be used jointly to determine the final mark in the ratio of 50% (semester mark) to 50% (examination mark) or 60% (semester mark) to 40% (examination mark) or as specified in the course outline.

Course Evaluation for all courses offered by the Faculty using Continuous Evaluation only

- The semester mark is determined by continuous evaluation made up of a minimum of four assessments during the semester.
- The course mark is the final mark.
- Students must obtain a 50% mark to pass the course.
- Supplementary tests and extensions will be defined within the individual course outline.

Remote Teaching, Learning and Assessment (RTLA)

- The semester mark is determined by continuous evaluation made up of a minimum of four assessments during the semester
- the number of assessments for both existing continuous assessment courses and converted exam-based courses to continuous assessment courses are reduced from a minimum of four (4) assessments as per current regulation to three (3) assessments to ensure a consistent and equal number of assessments for all students;
- 50% of the weight of the assessments should be conducted under controlled conditions.
- 50% can be different assessments, for example: two tests, but it should be conducted under controlled conditions similar to those under which the institutional examinations are conducted.
- Controlled conditions include the following:
- Timed tests on the MOODLE Platform;
- Structured questions that students answer on paper using a cam scanner and upload it after the test within 15 minutes; and/or
- Using software (Safe Exam Browser) that block/restrict the use of any applications on a student's device.

NB: *For all assessments, the NUST plagiarism policy applies.*

CENTRE OF EXCELLENCE IN INFORMATION TECHNOLOGY (CERTIFICATE PROGRAMMES) Code 23

CERTIFICATE IN ADVANCED WEB TECHNOLOGIES 07CAWT

NQF Level: 7 **NQF Credits: 60** **NQF Qualification ID: Q 2016**

Description

The Certificate in Advanced Web Technologies provides students with an understanding of the emerging approaches in Web technologies. It seeks to equip students with the practical skills required to design and implement Web applications. The programme will further expose students to advanced concepts, tools and methods used to build Internet-based applications. The programme further aims to develop student's ability to communicate these insights to stakeholders within their respective organisations.

Graduates of this programme will be able to find employment in both the public and private sectors, in roles that include, but are not limited to lead developers in Software Development teams or designers. They can also team-up with other graduates and participate in joint venture.

Admission Requirements

Applicants must have completed a Diploma programme at NQF level 6 in Computer Science, Information Systems, Information Technology or Informatics or an equivalent qualification from an accredited institution. Applicants with one year experience in the afore-mentioned fields will be given priority.

Applicants from other science and engineering disciplines or with prior learning experience may be admitted into this programme at the discretion of the Centre. Such applicants may be required to write a test or an interview to guide the selection.

Articulation Arrangements

Transfer of credits will be dealt with according to NUST regulations on Recognition of Prior Learning. This provides 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 total credits for the qualification.

The Certificate is a programme with a single exit route, referred to as the professional route and as such, articulation arrangements are only acceptable between programmes offered by the CEIT. The Certificate in Advanced Web Technologies will not lead to further academic study.

Mode of Delivery

The programme will be delivered on full-time (day and/or evening) in accordance with NUST rules. The e-learning platform, provided all requirements for such delivery mode are met, will be part and parcel of the delivery mode to enhance course content reachability and administration of assessments and student engagement.

CURRICULUM

Year 1 Semester 1/2 Course Code	**Course Title**	**Prerequisites**	**NQF Levels**	**NQF Credits**
CPC711S	Computer Programming Concepts	None	5	10
WPG711S	Web Programming 1	None	7	8
DCS711S	Database Concepts	None	7	8
WPG721S	Web Programming 2	None	7	12
JWT711S	JavaScript-based Web Technologies	None	7	10
PRJ711S	Project	None	7	12

CERTIFICATE IN BIG DATA TECHNOLOGIES 07CBDT

NQF Level: 7 **NQF Credits: 62** **NQF Qualification ID: Q 2015**

Description

The Certificate in Big Data Technologies (CBDT) provides students with an understanding of the emerging technologies that facilitate the storage, processing, and analysis of big data. It seeks to equip students with the practical skills required to turn large volumes of data into actionable insights. The programme exposes students to the design and building of platforms and systems that can handle the gigantic amount of data available today. The programme further aims to develop students' ability to communicate these insights to stakeholders within their respective organisations.

Graduates of this programme will be able to find employment in both the public and private sectors, in roles that include, but are not limited to, software development, data analytics, Dev-ops (a new job description at the frontier of software development and infrastructure operations) and systems administration,

Admission Requirements

Applicants must have completed a Diploma programme at NQF level 6 in Computer Science, Information Systems, Information Technology or Informatics or an equivalent qualification from an accredited institution. Applicants with one-year experience in the afore-mentioned fields will be given priority.

Applicants from other science and engineering disciplines or with prior learning experience may be admitted into this programme at the discretion of the Centre. Such applicants may be required to write a test or an interview to guide the selection.

Articulation Arrangements

Transfer of credits will be dealt with according to NUST regulations on Recognition of Prior Learning. This provides 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 total credits for the qualification.

The Certificate is a programme with a single exit route, referred to as the professional route and as such, articulation arrangements are only acceptable between programmes offered by the Centre. The Certificate in Big Data Technologies will not lead to further academic study. E.g. Honours or Masters. The Certificate in Big Data Technologies will not lead to further academic study.

Mode of Delivery

The programme will be delivered on full-time (day and/or evening) in accordance with NUST rules. The e-learning platform, provided all requirements for such delivery mode are met, will be part and parcel of the delivery mode to enhance course content reachability and administration of assessments and student engagement.

CURRICULUM

Year 1
Semester 1/2

Course Code	Course Title	Prerequisites	NQF Levels	NQF Credits
FLB711S	Fundamentals of Linux Programming	None	7	10
JVP711S	Java Programming	None	7	10
DCD711S	Database Concepts & Data Collection	None	7	10
BDT711S	Big Data Technologies	None	7	20
PRB711S	Project	None	7	12

CERTIFICATE IN ETHICAL HACKING AND INFORMATION SECURITY 07CEHI

NQF Level: 7 **NQF Credits: 63** **NQF Qualification ID: Q 2019**

Description

The Certificate in Ethical Hacking and Information Security aims to provide students with deeper insight, intellectual and cognitive skills related to the Information Technology (IT) security domain as well as prepare students to keep abreast with the ever evolving demands of the IT industry. It seeks to equip students with the practical skills required to design and implement security measures in Computer Networks and Systems.

The programme will further expose students to advanced concepts, tools and methods used to protect Internet-based systems and applications. Students will be able to take-up a certification course in the field of Information Security and may become members of professional/association bodies such as Certified Information Systems Security (CISSP), Certified Intrusion Analyst (CIA) and System Security Certified Practitioner (SSCP). The programme further aims to develop students' ability to communicate these insights to stakeholders within their respective organisations.

Graduates of this programme will be able to find employment in both the public and private sectors, in middle level positions that include, but are not limited to Penetration Testers, IT Security Engineers, and Security Analysis.

Admission Requirements

Applicants must have completed a Diploma programme at NQF level 6 in Computer Science, Information Systems, Information Technology or Informatics or an equivalent qualification from an accredited institution. Applicants with one-year experience in the afore-mentioned fields will be given priority.

Applicants from other science and engineering disciplines or with prior learning experience may be admitted into this programme at the discretion of the Centre. Such applicants may be required to write a test or an interview to guide the selection.

Articulation Arrangements

Transfer of credits will be dealt with according to NUST regulations on Recognition of Prior Learning. This provides 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 total credits for the qualification.

The Certificate is a programme with a single exit route, referred to as the professional route and as such, articulation arrangements are only acceptable between programmes offered by the Centre. The Certificate in Ethical Hacking and Information Security will not lead to further academic study. E.g. Honours or Masters.

Mode of Delivery

The programme will be delivered on full-time (day and/or evening) in accordance with NUST rules. The e-learning platform, provided all requirements for such delivery mode are met, will be part and parcel of the delivery mode to enhance course content reachability and administration of assessments and student engagement.

CURRICULUM

Year 1 Semester 1/2 Course Code	Course Title	Prerequisites	NQF Levels	NQF Credits
FLP711S	Fundamentals of Linux Programming	None	7	10
JVC711S	Java Programming with Crypto API	None	7	12
SPP711S	Secured Python Programming	None	7	7
IAS711S	Information and Application Security	None	7	10
ETH711S	Ethical Hacking	None	7	12
PRJ711S	Project	None	7	12

SCHOOL OF COMPUTING

DEPARTMENT OF COMPUTER SCIENCE

QUALIFICATIONS OFFERED

Bachelor of Computer Science 07BACS
Bachelor of Computer Science 07BCMS

BACHELOR OF COMPUTER SCIENCE
(Systems Administration, Communication Networks or Software Development) 07BACS
(Phasing out 2020 - 2024)

NQF Level: 7 **NQF Credits: 365** **NQF Qualification ID: Q0513**

Description

The Bachelor of Computer Science aims at providing educational opportunities for students who are interested in and motivated to work as Computer Scientists, Software Developers, Systems Administrators or Communication Networks Specialists. This programme is purposefully designed to provide skillful, competent and motivated graduates for the increasing and numerous challenging tasks of Computing and Information Technology (CIT) in the country and the Khomas region at large. Students will have the opportunity to develop the required cognitive/intellectual skills, practical as well as key transferable skills, and apply these to address/solve CIT related problems/ challenges in the context of an organisation, or the community. Overall, this degree specifically aims to:

- Provide students with a sound foundation in the fundamental concepts, theories, frameworks and problem-solving techniques of CIT;
- Develop the ability of students to analyse information from a wide range of sources;
- Equip students with the requisite skills to work effectively as individuals and as members of a team;
- Enable students to communicate effectively in the workplace.

The programme intends to provide a diverse range of skills and competencies that are both discipline-specific and job-related. The curriculum is structured to facilitate specialisation in the areas of Systems Administration, Communication Networks and Software Development. The programme also intends to facilitate the development of highly generic cognitive and intellectual skills that will enable graduates to apply their knowledge and learnt competencies to the practices of CIT taking into consideration international generally accepted practices.

Admission Requirements

Candidates may be considered for admission to the Bachelor of Computer Science if they meet the University's General Admission Requirements (GI2.1 in Part 1 of the Yearbook). In addition, students must have a minimum "D"-symbol in NSSC Mathematics at Ordinary Level, or equivalent. The Faculty reserves the right to consider candidates who have a "D"-symbol in NSS Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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.

Upon successful completion of the Bachelor of Computer Science, students will ordinarily be able to pursue further studies in the same, or a related cognate area of learning, at NQF Level 8.

CURRICULUM

Year 1
Semester 1

Course Code	Course Title	Prerequisites	NQF Levels	NQF Credits
BSC410S	Basic Science	None	4	8
MIT112S	Mathematics for IT 1A	None	5	10
PRG510S	Programming 1	None	5	10
PLU411S	Principles of English Language Use	None	4	NCB
MNS511S	Management Information Systems	None	5	10
COA511S	Computer Organisation and Architecture	None	5	10

Semester 2

OOP521S	Object Oriented Programming	Programming 1	5	10
ICT521S	Information Competence	None	5	10
MIT122S	Mathematics for IT 1B	Mathematics for IT 1A	5	10
WDF521S	Web Development Fundamentals	None		
EPR511S	English in Practice	Principles of English Language Use	5	NCB
OSN521S	Intro. to Operating Systems & Networks	Computer Organisation and Architecture	5	10

Year 2
Semester3

EAP511S	English for Academic Purposes	English in Practice	5	14
ISS610S	IT Systems Security	Introduction to Operating Systems and Networks	6	12
DSA610S	Data Structures and Algorithms	None	6	12
DBF510S	Database Fundamentals	None	5	10
ICN511S	Introduction to Computer Networking	Introduction to Operating Systems and Networks	5	10
ASP610S	Applied Statistics & Probability for IT	Mathematics for IT 1B	9	14

Semester 4

ONE of the following Strands depending on specialisation:

SYSTEMS ADMINISTRATION STRAND

OPS621S	Operating Systems	Introduction to Operating Systems and Networks	6	12
WTN620S	Web Technologies	Introduction to Operating Systems and Networks	6	12
SAD622S	Systems Administration	Introduction to Operating Systems and Networks	6	12
DTS620S	Distributed Systems	Introduction to Computer Networking	6	12
SAU620S	Systems Audit	IT Systems Security		

COMMUNICATION NETWORKS STRAND

OPS621S	Operating Systems	Introduction to Operating Systems and Networks	6	12
CMN620S	Communication Networks	Introduction to Computer Networking	6	12
SAD622S	Systems Administration	Introduction to Operating Systems and Networks	6	12
NWS620S	Network Security	IT Systems Security; and Introduction to Computer Networking	6	12
WLT620S	Wireless Technologies	Introduction to Computer Networking	6	12

SOFTWARE DEVELOPMENT STRAND

OPS621S	Operating Systems	Introduction to Operating Systems and Networks	6	12
DSP620S	Distributed Systems Programming	Object Oriented Programming	6	12
PRG620S	Programming 2	Programming 1	6	12
SEH620S	Software Engineering 1 and HCI	Web Development Fundamentals	6	12
DPT621S	Database Programming and Techniques	Database Fundamentals	6	12

Year 3
Semester 5

SYD611S	Sustainability and Development	None	6	12

***Plus ONE of the following Strands depending on specialisation, and based on choice made in* Semester 4:**

SYSTEMS ADMINISTRATION STRAND

ICE712S	Innovation, Creativity & Entrepreneurship	None	7	12
IIS711S	Internet and Intranet Systems Administration		7	12
CFR712S	Computer Forensics	Systems Audit	7	12
SVT710S	Systems Virtualisation	Operating Systems	7	12

COMMUNICATION NETWORKS STRAND

ICE712S	Innovation, Creativity & Entrepreneurship	None	7	12
IWT711S	Internet and WAN Telecommunication	Communication Networks	7	12
NDP710S	Network Design and Performance	Communication Networks	7	12
SVT710S	Systems Virtualisation	Operating Systems	7	12

SOFTWARE DEVELOPMENT STRAND

ICE712S	Innovation, Creativity & Entrepreneurship	None	7	12
AIG710S	Artificial Intelligence and Computer	Applied Statistics & Graphics Probability for IT; and Data Structures and Algorithms	7	12
DWM710S	Data and Web Mining	Database Programming and Techniques	7	12
APG710S	Advanced Programming	Data Structures and Algorithms	7	12

Year 3
Semester 6

WIL710S	Work Integrated Learning (WIL)	All semester 4 courses; and a maximum Of 2 outstanding semester 5 courses	7	48

Plus ONE of the following Strands depending on specialisation, and based on choice made in previous Semesters:

SYSTEMS ADMINISTRATION AND COMMUNICATION NETWORKS STRANDS

PTM721S	Project Management	None	7	12
DBA721S	Database Administration	Database Fundamentals; and Systems Administration		

SOFTWARE DEVELOPMENT STRAND

PTM721S	Project Management	None	7	12
SEN721S	Software Engineering 2	Software Engineering 1 and HCI	7	12

BACHELOR OF COMPUTER SCIENCE (SYSTEMS ADMINISTRATION OR COMMUNICATION NETWORKS) (Revised- Phased in 2020) **07BCMS**

NQF Level: 7 **NQF Credits: 395** **NQF Identification ID:Q2250**

Description

The Bachelor of Computer Science aims at providing educational opportunities for students who wish to be trained in computer science with a specialisation in Systems Administration or Communication Networks. The programme will give students an opportunity to apply principles of computing and develop the cognitive and practical skills to address the growing demand in Systems Administration and Communication Networks in the country, the region and worldwide. Additionally, the programme aims to equip students with the technical and soft skills required to build software that appeals to their users and addresses real problems. Through this programme, students will also be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the programme's discipline.

Graduates of this programme will be able to find employment in public and private sectors in various roles of Systems Administrators and Network specialists. Furthermore, they will have the ability to exercise their creativity and create start-ups and companies with innovative solutions.

Admission Requirements

Candidates may be considered for admission to the Bachelor of Computer Science if they meet the NUST General Admission Requirements (Part 1 of the Yearbook). In addition, applicants must have a minimum "D"-symbol in Grade 12/NSSC Mathematics at Ordinary Level, or equivalent. The Faculty reserves the right to consider candidates who have a "D"-symbol in NSS Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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. Upon successful completion of the Bachelor of Computer Science Degree, graduates will be able to pursue their further studies in the same, or a related cognate area of learning at NQF Level 8.

Mode of Delivery:

The programme will be delivered on full-time and/or part-time modes in accordance with NUST rules. The Faculty may consider online mode with the provision that there is a reliable mechanism to monitor student access on the E-learning platform.

CURRICULUM

Year1 Semester 1 Course Code	**Course Title**	**Prerequisites**	**NQF Levels**	**NQF Credits**
PLU411S	Principles of English Language Use	None	4	NCB
BSC410S	Basic Science	None	4	8
ICG511S	Introduction to Computing	None	5	8
MCI511S	Mathematics for Computing and Informatics 1A	None	5	10
BMC511S	Business Management Information Systems	None	5	10
DBF510S	Database Fundamentals	None	5	10
DST511S	Design Thinking	None	5	8
Semester 2				
COA511S	Computer Organisation and Architecture	Mathematics for Computing and Informatics	5	12
PRG510S	Programming 1	Introduction to Computing	5	10
MCI521S	Mathematics for Computing and Informatics 1B	Mathematics for Computing and Informatics 1A	5	10
EPR511S	English in Practice	Principles of English Language Use	5	NCB
DSA521S	Data Structures and Algorithm 1	Introduction to Computing	5	10
SAD622S	Systems Administration (System Administration and Communication Networks)	None	6	12

Year 2				
Semester 3				
EAP511S	English for Academic Purpose	English in Practice, or	5	14
OPS611S	Operating Systems	Computer Organisation and Architecture	6	12
PRG621S	Programming 2	Programming 1	6	10
ISS611S	Information Systems Security Essentials	None	6	10
DTN611S	Data Networks	None	6	12
ASP611S	Applied Statistics and Probability for Computing and Informatics	Mathematics for Computing and Informatics 1B	6	12
Semester 4				
EFC621S	Ethics for Computing	None	6	10
ICE712S	Innovation, Creativity and Entrepreneurship	None	7	15

Plus ONE of the following Strand Compulsory depending on specialisation:

SYSTEMS ADMINISTRATION STRAND				
WLT620S	Wireless Technologies	Data Networks	6	12
CMN620S	Communication Networks	Data Networks	6	12
CNE621S	Core Networks Engineering	Data Networks	6	12
LSA721S	Linux Systems Administration	Operating Systems	7	12
COMMUNICATION NETWORKS				
WLT620S	Wireless Technologies	Data Networks	6	12
CMN620S	Communication Networks	Data Networks	6	12
DSA612S	Distributed Systems and Applications	Programming 2, Data Structures and Algorithms	6	12
CNE621S	Core Networks Engineering	Data Networks	6	12
Year 3				
Semester 5				
SYSTEMS ADMINISTRATION STRAND				
ADS711S	Advanced Network Security	Communication Networks	7	12
SVT710S	Systems Virtualisation	Operating Systems	7	12
ITA711S	IT Infrastructure Administration and Services	Systems Administration	7	12
DBA721S	Database Administration	Database Fundamentals	7	12
HPC711S	High Performance Computing	Linux Systems Administration	7	12
DTM611S	Data Centre Infrastructure Management	Computer Organisation and Architecture	6	12
COMMUNICATION NETWORKS STRAND				
CNT711S	Cloud Networking	None	7	12
ADS711S	Advanced Network Security	Communication Networks	7	12
ITC711S	Internet Computing	Communication Networks	7	12
NDM711S	Network Design and Management	Communication Networks	7	12
DSA711S	Data Structures and Algorithms 2	Data Structures and Algorithm 1	7	12
NPG611S	Network Programming	Data Networks	6	12
Semester 6				
PTM721S	Project Management	None	7	12
SYD611S	Sustainability and Development	None	6	12

Plus ONE of the following depending on specialisation:

WCN721S	Work Integrated Learning (Communication Networks)	All Semester 4 courses; and a maximum of 2 outstanding Semester 5 courses	7	48
WSA721S	Work Integrated Learning (Systems Administration)	All Semester 4 courses; and a maximum of 2 outstanding Semester 5 courses	7	48

Transition Arrangements:
The Bachelor of Computer Science with specialisations in Systems Administration and Communication Networks (old curricula) will be phased out systematically until 2024 with minimal disruption to existing students' learning progression.

The last intake of 1st year students for the Bachelor of Computer Science degree in Systems Administration and Communication Networks (old curricula) was in January 2019. Students who registered in 2019 for the 1st year of the Bachelor of Computer Science in Software Development strand, Systems Administration strand and Communication Networks strand (old curricula), and failed more than 50 % of the courses at the end of 2019, will be required to change their registration to their respective strand in the new/revised Bachelor of Computer Science. They will, however be granted credits on a course-by-course basis in accordance with the information in Table 1 below.

The Bachelor of Computer Science in Systems Administration and Communication Networks (new/revised curriculum), will take effect from January 2020 and will be completely phased in by 2022. Courses will only be offered based on the syllabi of new/revised courses in 2020 (1st year), 2021 (2nd year) and 2022 (3rd year). The new/revised curriculum will be offered from 2020. Students who fail any of the courses in the old curricula will be required to repeat failed courses based on the syllabi of new/revised corresponding courses.

Please refer to Table 1, below, for detailed information on the new/updated corresponding courses.

The deadline for the complete phasing out of the Bachelor of Computer Science in Software Development, Systems Administration and Communication Networks (old curricula) is 2024 after which students must automatically switch to the (revised curriculum).

Table 1: Corresponding Courses to be done (if failed) - This is not a credit table!

Students who fail the following old courses must register for the new/revised courses in the Bachelor of Computer Science as listed in Table 1.

Table 1: Corresponding Courses to be done (if failed)

Bachelor of Computer Science (Systems Administration, Communication Networks and Software Development Strand) (Old Courses)		**Bachelor of Computer Science (Systems Administration, Communication Networks and Software Development Strand) (Corresponding New/Revised Courses to be done, if failed)**	
Course Code	**Course Title**	**Course Code**	**Course Title**
MIT112S	Mathematics for IT 1A	MCI511S	Mathematics for Computing and Informatics 1A
PRG510S	Programming 1	PRG510S	Programming 1
MNS511S	Management Information Systems	BMC511S	Business Management Information Systems
COA511S	Computer Organisation and Architecture	COA511S	Computer Organisation and Architecture
OOP521S	Object-Oriented Programming	PRG620S	Programming 2
MIT122S	Mathematics for IT 1B	MCI521S	Mathematics for Computing and Informatics 1B
WDF521S	Web Development Fundamentals	WAD621S	Web Application Development
OSN521S	Introduction to Operating Systems & Networks	OPS611S	Operating Systems
ISS610S	IT Systems Security	ISS611S	Information Systems Security Essentials
DSA610S	Data Structures and Algorithms	DSA521S	Data Structures and Algorithms 1
DBF510S	Database Fundamentals	DBF510S	Database Fundamentals
ICN511S	Introduction to Computer Networks	DTN611S	Data Networks
ASP610S	Applied Statistics & Probability for IT	ASP611S	Applied Statistics and Probability for Computing and Informatics
OPS621S	Operating Systems	OPS621S	Operating Systems
WTN620S	Web Technologies	WAS621S	Web Application Security
SAD622S	Systems Administration	SAD622S	Systems Administration
DTS620S	Distributed Systems	DSA612S	Distributed Systems and Applications
SAU620S	Systems Audit		None
CMN620S	Communication Networks	CMN620S	Communication Networks

NWS620S	Network Security	ADS711S	Advanced Network Security
WLT620S	Wireless Technologies	WLT620S	Wireless Technologies
IWT711S	Internet and WAN Telecommunication		None
DSP620S	Distributed Systems Programming	DSA612S	Distributed Systems and Applications
IIS711S	Internet and Intranet Systems Administration	ITA711S	IT Infrastructure Administration and Services
CFR712S	Computer Forensics		None
SVT710S	Systems Virtualisation	SVT710S	Systems Virtualisation
NDP710S	Network Design and Performance	NDM711S	Network Design and Management
WIL710S	Work Integrated Learning	WCN721S	Work Integrated Learning (Communication Networks)
		WSA721S	Work Integrated Learning (Systems Administration)
PTM721S	Project Management	PTM721S	Project Management
DBA721S	Database Administration	DBA721S	Database Administration

Table 1: only highlights new/revised core courses in Computer Science that should be done if courses in the old curricula are failed. Service courses from other Departments are excluded, but the rules of relevant Departments apply to this programme as well.

The following old courses do not have corresponding courses in the Bachelor of Computer Science (new curriculum) and will be offered until the Bachelor of Computer Science (old curricula) phased out completely in 2024:

- Systems Audit (SAU620S)
- Computer Forensics (CFR712S)

DEPARTMENT OF CYBER SECURITY

QUALIFICATIONS OFFERED

Bachelor of Computer Science in Cyber Security	07BCCS
Bachelor of Computer Science in Cyber Security	07BCCY

BACHELOR OF COMPUTER SCIENCE IN CYBER SECURITY **07BCCS**
(Phasing out from 2021-2025)

NQF Level: 7 **NQF Credits: 372** **NQF Qualification ID: Q0656**

Description

The Bachelor of Computer Science in Cyber Security aims at providing educational opportunities for students who are interested in and motivated to work as Cyber Security Professionals. Cyber Security is a computing discipline that deals with digital information assurance and its security. This programme is purposefully designed to provide skilled, competent and motivated graduates for the increasing and numerous challenging tasks of Computing and Information Assurance and Security (IAS) in the country and the region at large. Students will have the opportunity to develop the required cognitive/intellectual skills, practical as well as key transferable skills, and apply these to address/solve Information Assurance and Security related problems/challenges in the context of an organisation, a country or individual end-user.

Admission Requirements

Candidates may be considered for admission to the Bachelor of Computer Science in Cyber Security if they meet the University's General Admission Requirements (GI2.1 in Part 1 of the NUST Yearbook). In addition, students must have a minimum "C"-symbol in Grade 12/ NSSC Mathematics at Ordinary Level, or equivalent. The Faculty reserves the right to consider candidates who have a "D"-symbol in NSS Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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. Maximum credit that can be granted is 50 % of the credits for a qualification.

Upon successful completion of the Bachelor of Computer Science in Cyber Security, students will ordinarily be able to pursue further studies in the same, or a related cognate area of learning, at NQF Level 8.

Mode of Delivery

The programme will be delivered on the full-time and/or part-time modes in accordance with the University's rules. The e-learning mode will only be considered after the programme is deemed to have reached a certain level of maturity.

Requirements for Qualification Award

The Bachelor of Computer Science in Cyber Security degree will be awarded to students credited with a minimum of 372 NQF credits, and who have met the detailed requirements as set out below. In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

Teaching and Learning Strategies

Teaching and learning strategies are described in the syllabus outlines for the different courses. 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, including the following:

- Formal weekly face-to-face (interactive) contact and presentation using PowerPoint slides, smart boards, whiteboards and handouts
- Formal weekly laboratory exercises and practice
- Student portfolios
- Formal tutorial and supervised self-study sessions
- Self-learning through online links
- Promotion of team learning through group projects
- Individual and home assignments
- Use of e-learning platform (including emails and blog/- forum)
- Discussion and student presentations (assignment results and other activities)

- Guest lecturers with open discussion, when appropriate
- Webinar/ Online conferencing/ excursion
- Computer/- Web-based simulation
- Seminars

Work Integrated Learning (WIL)

This programme also includes a component of Work Integrated Learning (WIL), which integrates work experiences with learning in a way traditional education cannot do. It provides students with opportunities to:

- Execute tasks related to Cyber Security at the workplace;
- Network with professionals and build relationships that can help students in their future endeavours;
- Have access to companies for full-time positions after graduation once good rapport has been established between the students and the companies;
- Interact with people from diverse backgrounds and develop interpersonal skills that are not possible in a classroom environment.

The three courses that are done in the same semester as WIL, will be taught before the students go for WIL, and will be done through an accelerated teaching approach, and assessed using "Diversified Continuous Assessment" mode; some of the assessments will be carried out while the students are busy with their WIL.

Transition Arrangements

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

CURRICULUM

Course Code	Course Title	Prerequisites	NQF Level	NQF Credits
Year 1				
Semester 1				
BSC410S	Basic Science	None	4	8
MIT112S	Mathematics for IT 1A	None	5	10
PRG510S	Programming 1	None	5	10
PLU411S	Principles of English Language Use	None	4	NCB
IIS511S	Introduction to Information Security	None	5	10
COA511S	Computer Organisation and Architecture	None	5	10
Semester 2				
OOP521S	Object Oriented Programming	Programming 1	5	10
ICT521S	Information Competence	None	5	10
MIT122S	Mathematics for IT 1B	Mathematics for IT 1A	5	10
WDF521S	Web Development Fundamentals	None	5	10
EPR 511S	English in Practice	Principles of English Language Use/ Language in Practice, or Language in Practice A, or Module 2, or Exemption	5	NCB
OSN521S	Introduction to Operating Systems and Networks	Computer Organisation and Architecture	5	10
Year 2				
Semester 3				
EAP511S	English for Academic Purposes	English in Practice, or Language in, Practice B or Module 3, or Exemption	5	14
ISS610S	IT Systems Security Networks	Introduction to Operating Systems and	6	12
DSA610S	Data Structures and Algorithms	None	6	12
DBF510S	Database Fundamentals	None	5	10
ICN511S	Intro. to Computer Networking	Introduction to Operating Systems and Networks	5	10
ASP610S	Applied Statistics & Probability for IT	Mathematics for IT 1B	6	14
Semester 4				
WTN620S	Web Technologies	Intro. to Operating Systems and Networks	6	12
SAD622S	Systems Administration	Intro. to Operating Systems and Networks	6	12
CMN620S	Communication Networks	Intro. to Computer Networking	6	12
ITC621S	Introduction to Cryptography	None	6	12
WLT620S	Wireless Technologies	Introduction to Computer Networking	6	12
DSP620S	Distributed Systems Programming	Object Oriented Programming	6	12

Year 3

Semester5

NWS620S	Network Security	IT Systems Security and Introduction to Computer Networking	6	12
DFC711S	Digital Forensics 1 – Forensics Computing	Introduction to Cryptography	7	12
SYD611S	Sustainability and Development	None	6	12
IWT711S	Internet and WAN Telecommunication	Communication Networks	7	12
OPS621S	Operating Systems	Introduction to Operating Systems	6	12

Semester 6

WCS721S	Work Integrated Learning (WIL)	All semester 4 courses; and a maximum of 2 outstanding Semester 5 courses	7	36
CIP721S	Critical Infrastructure Protection Control Systems Security		7	12
DFC721S	Digital Forensics 2 – Internet Forensics and Steganography	Digital Forensics 1 – Forensics Computing	7	10
IAR721S	Intrusion Analysis and Response	Network Security	7	12

BACHELOR OF COMPUTER SCIENCE IN CYBER SECURITY **07BCCY**
(Revised – Phased in 2021)

NQF Level: 7 **NQF Credits: 383** **NQF Qualification ID: Q2253**

Description
The Bachelor of Computer Science in Cyber Security is designed to provide skillful, competent and motivated graduates for the increasing and numerous challenging tasks of Computing and Information Assurance and Security (IAS) in the country, the region and the world at large. Students will have the opportunity to develop the required cognitive, practical as well as key transferable skills, and apply these to address IAS related problems and challenges.

Admission Requirements
Candidates may be considered for admission to the Bachelor of Computer Science in Cyber Security if they meet the University's General Admission Requirements (GI2.1 in Part 1 of the NUST Yearbook). In addition, students must have a minimum "C"-symbol in Mathematics and have two subjects from Natural Sciences and Technology, all at NSSC Ordinary Level, or equivalent. The Faculty reserves the right to filter candidates who have a "D"-symbol in NSSC Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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.

Upon successful completion of the Bachelor of Computer Science in Cyber Security, graduates will be able to pursue further studies in the same, or a related cognate area of learning at NQF Level 8.

Mode of Delivery
The programme will be delivered on the full-time and/or part-time modes in accordance with the University's rules. The e-learning mode will only be considered after the programme is deemed to have reached a certain level of maturity.

Career Opportunities
The Bachelor of Cyber Security degree provides knowledge and skills which will allow graduates, after the successful completion of this programme, to pursue careers at mid-level positions in cyber security related fields both in the public and the private sector as computer and information systems security officers, computer systems security analysts, database and computer systems security administrators, information security analysts as well as in mobile, web and computer (digital) forensics.

CURRICULUM

Year 1
Semester 1

Course Code	Course Title	Prerequisites	NQF Level	NQF Credits
BSC410S	Basic Science	None	4	8
BMC511S	Business Management Information Systems	None	5	10
DBF510S	Database Fundamentals	None	5	10
DST511S	Design Thinking	None	5	8
ICG511S	Introduction to Computing	None	5	8
MCI511S	Mathematics for Computing and Informatics 1A	None	5	8
PLU411S	Principles of English Language Use	None	4	NCB
Semester 2				
COA511S	Computer Organisation and Architecture	Mathematics for Computing and Informatics 1A	5	10
DSA521S	Data Structures and Algorithm 1	Introduction to Computing	5	10
EPR511S	English in Practice	Principles of English Language Use/ 5	5	10
MCI521S	Mathematics for Computing and Informatics	Mathematics for Computing and Informatics 1A	5	10
PRG510S	Programming 1	Introduction to Computing	5	10
SAD622S	Systems Administration		6	12

Year 2				
Semester 3				
ASP611S	Applied Statistics and Probability	Mathematics for Computing and Informatics 1B	6	12
DTN611S	Data Networks	None	6	12
EAP511S	English for Academic Purposes	English in Practice, or Language in Practice B, or Module 3, or Exemption	5	10
ISS611S	Information Systems Security Essentials	None	6	10
OPS611S	Operating Systems	Computer Organisation and Architecture	6	12
PRG621S	Programming 2	Programming 1	6	10
Semester 2				
CMN620S	Communication Networks	Data Networks	6	12
CGF622S	Cryptography Fundamentals	None	6	12
DFC622S	Digital Forensics	Operating Systems	7	12
EFG621S	Ethics for Computing	None	6	10
ICE712S	Innovation, Creativity and Entrepreneurship	None	7	15
WAS621S	Web Application Security	Information Systems Security Essentials	6	12
Year 3				
Semester 5				
ADS711S	Advanced Network Security	Communication Networks	7	12
HCI711S	Human Computer Interaction Security	None	7	12
IAR721S	Intrusion Analysis and Response	Information Systems Security Essentials	7	12
MBF712S	Mobile Forensics	Digital Forensics	7	12
OSS711S	Operating Systems Security	Operating Systems	7	12
Semester 6				
WCS721S	Work Integrated Learning	All semester 4 courses; and a maximum of 2 outstanding Semester 5 courses	7	48
PTM721S	Project Management	None	7	12
SYD611S	Sustainability and Development	None	6	12

Transition Arrangements:
The Bachelor of Computer Science in Cyber Security (old curricula) will be phased out systematically until 2025 with minimal disruption to existing students' learning progression.

The last intake of 1st year students for the Bachelor of Computer Science degree in Cyber Security (old curricula) was in January 2020. Students who were registered in 2020 for the 1st year of the Bachelor of Computer Science in Cyber Security (old curricula), and who failed more than 50% of the courses at the end of 2020, will be required to change their registration to the Bachelor of Computer Science in Cyber Security (new revised curriculum) and will be granted credits on a course by course basis in accordance with the information in Table 3 below.

The Bachelor of Computer Science in Cyber Security (new/revised curriculum), will take effect from January 2021 and will be completely phased in by 2023. Courses will only be offered based on the syllabi of new/revised courses in 2021 (1st year), 2022 (2nd year) and 2023 (3rd year). The new/revised curriculum will be offered from 2021. Students who fail any of the courses in the old curricula will be required to repeat failed courses based on the syllabi of new/revised corresponding courses.

Please refer to Table 3 below, for detailed information on the new/updated corresponding courses.
The deadline for the complete phasing out of the Bachelor of Computer Science in Cyber Security (old curricula) is 2025 after which students must automatically switch to the (revised curriculum).

Table 3: 1st Year Courses to be credited

Bachelor of Computer Science in Cyber Security(Old Courses) (2015- 2020)		**Bachelor of Computer Science in Cyber Security (New/revised Equivalent Courses)**	
Course Code	**Course Name**	**Course Code**	**Course Title**
BSC410S	Basic Science	BSC410S	Basic Science
MIT112S	Mathematics for IT 1A	MCI511S	Mathematics for Computing and Informatics 1A
PRG510S	Programming 1	PRG510S	Programming 1

PLU411S	Principles of English Language Use	PLU411S	Principles of English Language Use
COA511S	Computer Organisation and Architecture	COA511S	Computer Organisation and Architecture
MIT122S	Mathematics for IT 1B	MCI521S	Mathematics for Computing and Informatics 1B
EPR511S	English in Practice	EPR511S	English in Practice

Table 4: Corresponding Courses to be done (if failed) - This is not a credit table!]

Bachelor of Computer Science in Cyber Security (Old Courses)		**Bachelor of Computer Science in Cyber Security (New/revised Equivalent Courses)**	
Course Code	**Course Name**	**Course Code**	**Course Title**
MIT112S	Mathematics for IT 1A	MCI511S	Mathematics for Computing and Informatics 1A
PRG510S	Programming 1	PRG510S	Programming 1
COA511S	Computer Organisation and Architecture	COA511S	Computer Organisation and Architecture
OOP521S	Object-Oriented Programming	PRG620S	Programming 2
MIT122S	Mathematics for IT 1B	MCI521S	Mathematics for Computing and Informatics 1B
OSN521S	Introduction to Operating Systems & Networks	OPS611S	Operating Systems
ISS610S	IT Systems Security Networks	IIS611S	Information Systems Security Essentials
DSA610S	Data Structures and Algorithms	DSA521S	Data Structures and Algorithms 1
DBF510S	Database Fundamentals	DBF511S	Database Fundamentals
ICN511S	Introduction to Computer Networking	DTN611S	Data Networks
ASP610S	Applied Statistics & Probability for IT	ASP611S	Applied Statistics and Probability for Computing and Informatics
OPS621S	Operating Systems	OPS621S	Operating Systems
WTN620S	Web Technologies	WAS621S	Web Application Security
SAD622S	Systems Administration	SAD622S	Systems Administration
CMN620S	Communication Networks	CMN620S	Communication Networks
ITC621S	Introduction to Cryptography	CFG622S	Cryptography Fundamentals
NWS620S	Network Security	ADS711S	Advanced Network Security
DFC711S	Digital Forensics 1- Forensics Computing	DFC622S	Digital Forensics
CIP721S	Critical Infrastructure Protection and Control System Security	OSS711S	Operating Systems Security
DFC721S	Digital Forensics 2- Internet Forensics and Steganography	MBF712S	Mobile Forensics
IAR721s	Intrusion Analysis and Response	IAR721S	Intrusion Analysis and Response
	None	BMC511S	Business Management Information Systems
	None	DST511S	Design Thinking
	None	EFG621S	Ethics for Computing
	None	ICG511S	Introduction to Computing
	None	HCI711S	Human Computer Interaction Security
	None	PTM721S	Project Management
WCS721S	Work Integrated Learning	WCS721S	Work Integrated Learning
IIS511S	Introduction to Information Security		None
WDF521S	Web Development Fundamentals		None
WLT620S	Wireless Technologies		None
DSP620S	Distributed Systems Programming		None
IWT711S	Internet and WAN Telecommunications		None

Table 4 above only highlights new/revised core courses in Computer Science that should be done if courses in the old curricula are failed. Service courses from other Departments are excluded, but the rules of relevant Departments apply to this programme as well.

The following old courses do not have corresponding courses in the Bachelor of Computer Science in Cyber Security (new curriculum) and will be offered until the Bachelor of Computer Science in Cyber Security (old curricula) will be phased out completely in 2025:

- Introduction to Information Security (IIS511S)
- Information Competence (ICT521S)
- Web Development Fundamentals (WDF521S)
- Wireless Technologies (WLT620S)
- Distributed Systems Programming (DSP620S)
- Internet and WAN Telecommunications (IWT711S)

DEPARTMENT OF SOFTWARE ENGINEERING

BACHELOR OF COMPUTER SCIENCE (SOFTWARE DEVELOPMENT) (Revised-Phased in 2020) — 07BCMS

NQF Level: 7 **NQF Credits: 395** **NQF Identification ID:Q2250**

Description

The Bachelor of Computer Science aims at providing educational opportunities for students who wish to be trained in computer science with a specialisation in Software Development. The programme will give students an opportunity to apply principles of computing and develop the cognitive and practical skills to address the growing demand in the country, the region and worldwide. Additionally, the programme aims to equip students with the technical and soft skills required to build software that appeals to their users and addresses real problems. Through this programme, students will also be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the programme's discipline.

Graduates of this programme will be able to find employment in public and private sectors in various roles of software development specialists. Furthermore, they will have the ability to exercise their creativity and create start-ups and companies with innovative solutions.

Admission Requirements

Candidates may be considered for admission to the Bachelor of Computer Science (Software Development) if they meet the NUST General Admission Requirements (Part 1 of the Yearbook). In addition, applicants must have a minimum "D"-symbol in Grade 12/NSSC Mathematics at Ordinary Level, or equivalent. The Faculty reserves the right to consider candidates who have a "D"-symbol in NSS Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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. Upon successful completion of the Bachelor of Computer Science Degree, graduates will be able to pursue their further studies in the same, or a related cognate area of learning at NQF Level 8.

Mode of Delivery:

The programme will be delivered on full-time and/or part-time modes in accordance with NUST rules. The Faculty may consider online mode with the provision that there is a reliable mechanism to monitor student access on the E-learning platform.

CURRICULUM

Year1 Semester 1 Course Code	Course Title	Prerequisites	NQF Levels	NQF Credits
PLU411S	Principles of English Language Use	None	4	NCB
BSC410S	Basic Science	None	4	8
ICG511S	Introduction to Computing	None	5	8
MCI511S	Mathematics for Computing and Informatics 1A	None	5	10
BMC511S	Business Management Information Systems	None	5	10
DBF510S	Database Fundamentals	None	5	10
DST511S	Design Thinking	None	5	8
Semester 2				
COA511S	Computer Organisation and Architecture	Mathematics for Computing and Informatics 1A	5	12
PRG510S	Programming 1	Introduction to Computing	5	10
MCI521S	Mathematics for Computing and Informatics 1B	Mathematics for Computing and Informatics 1A	5	10
EPR511S	English in Practice	Principles of English Language Use	5	NCB
DSA521S	Data Structures and Algorithm 1	Introduction to Computing	5	10
DPG621S	Database Programming (Software Development)	Database Fundamentals	6	12

Year 2

Semester 3

EAP511S	English for Academic Purpose	English in Practice, or	5	14
OPS611S	Operating Systems	Computer Organisation and Architecture	6	12
PRG621S	Programming 2	Programming 1	6	10
ISS611S	Information Systems Security Essentials	None	6	10
DTN611S	Data Networks	None	6	12
ASP611S	Applied Statistics and Probability for Computing and Informatics	Mathematics for Computing and Informatics 1B	6	12

Semester 4

EFC621S	Ethics for Computing	None	6	10
ICE712S	Innovation, Creativity and Entrepreneurship	None	7	15
DSA612S	Distributed Systems and Applications	Programming 2, Data Structures and Algorithms 1	6	12
DTA621S	Data Analytics	Applied Statistics and Probability for Computing and Informatics	6	12
SDN621S	Software Design	Design Thinking	6	12
WAD621S	Web Application Development	Programming 2	7	12

Year 3

Semester 5

ARI711S	Artificial Intelligence	Programming 2, Applied Statistics and Probability for Computing and Informatics	7	12
CTE711S	Compiler Techniques	Programming 2	7	12
MAP711S	Mobile Application Development	Programming 2	7	12
SPS611S	Software Processes	None	7	12
SVV711S	Software Verification and Validation	Software Design	7	12

Semester 6

PTM721S	Project Management	None	7
SYD611S	Sustainability and Development	None	6
WSD721S	Work Integrated Learning (Software Development)	All Semester 4 courses; and a maximum of 2 outstanding Semester 5 courses	7

Transition Arrangements:

The Bachelor of Computer Science with specialisation in Software Development (old curricula) will be phased out systematically until 2024 with minimal disruption to existing students' learning progression.

The last intake of 1st year students for the Bachelor of Computer Science degree (Software Development) old curricula was in January 2019. Students who registered in 2019 for the 1st year of the Bachelor of Computer Science in Software Development strand, Systems Administration strand and Communication Networks strand (old curricula), and failed more than 50 % of the courses at the end of 2019, will be required to change their registration to their respective strand in the new/revised Bachelor of Computer Science. They will, however be granted credits on a course-by-course basis in accordance with the information in Table 1 below.

The Bachelor of Computer Science in Software Development (new/revised curriculum), will take effect from January 2020 and will be completely phased in by 2022. Courses will only be offered based on the syllabi of new/revised courses in 2020 (1st year), 2021 (2nd year) and 2022 (3rd year). The new/revised curriculum will be offered from 2020. Students who fail any of the courses in the old curricula will be required to repeat failed courses based on the syllabi of new/revised corresponding courses.

Please refer to Table 1, below, for detailed information on the new/updated corresponding courses.

The deadline for the complete phasing out of the Bachelor of Computer Science in Software Development (old curricula) is 2024 after which students must automatically switch to the (revised curriculum).

Students who fail the following old courses must register for the new/revised courses in the Bachelor of Computer Science (Software Development) as listed in Table 2 below.

Table 2: Corresponding Courses to be done (if failed)

Bachelor of Computer Science (Systems Administration, Communication Networks and Software Development Strand) (Old Courses)		Bachelor of Computer Science (Systems Administration, Communication Networks and Software Development Strand) (Corresponding New/Revised Courses to be done, if failed)	
Course Code	**Course Title**	**Course Code**	**Course Title**
MIT112S	Mathematics for IT 1A	MCI511S	Mathematics for Computing and Informatics 1A
PRG510S	Programming 1	PRG510S	Programming 1
MNS511S	Management Information Systems	BMC511S	Business Management Information Systems
COA511S	Computer Organisation and Architecture	COA511S	Computer Organisation and Architecture
OOP521S	Object-Oriented Programming	PRG620S	Programming 2
MIT122S	Mathematics for IT 1B	MCI521S	Mathematics for Computing and Informatics 1B
WDF521S	Web Development Fundamentals	WAD621S	Web Application Development
OSN521S	Introduction to Operating Systems & Networks	OPS611S	Operating Systems
ISS610S	IT Systems Security	ISS611S	Information Systems Security Essentials
DSA610S	Data Structures and Algorithms	DSA521S	Data Structures and Algorithms 1
DBF510S	Database Fundamentals	DBF510S	Database Fundamentals
ICN511S	Introduction to Computer Networks	DTN611S	Data Networks
ASP610S	Applied Statistics & Probability for IT	ASP611S	Applied Statistics and Probability for Computing and Informatics
OPS621S	Operating Systems	OPS621S	Operating Systems
WTN620S	Web Technologies	WAS621S	Web Application Security
SAD622S	Systems Administration	SAD622S	Systems Administration
DTS620S	Distributed Systems	DSA612S	Distributed Systems and Applications
DSP620S	Distributed Systems Programming	DSA612S	Distributed Systems and Applications
SEH721S	Software Engineering 1 and HCI	SDN621S	Software Design
DPT621S	Database Programming and Techniques	DPG621S	Database Programming
AIG710S	Artificial Intelligence and Computer Graphics	ARI711S	Artificial Intelligence
DWM710S	Data and Web Mining	DTA621S	Data Analytics
APG710S	Advanced Programming	MAP711S	Mobile Application Development
WIL710S	Work Integrated Learning	WSD721S	Work Integrated Learning (Software Development)
PTM721S	Project Management	PTM721S	Project Management
DBA721S	Database Administration	DBA721S	Database Administration
SEN721S	Software Engineering 2	SPS611S	Software Processes

SCHOOL OF INFORMATICS, JOURNALISM AND MEDIA TECHNOLOGY

DEPARTMENT OF INFORMATICS
QUALIFICATIONS OFFERED

Bachelor of Informatics	07BAIF
Bachelor of Informatics	07BAIT

BACHELOR OF INFORMATICS **07BAIF**
(Phasing out 2020-2024)

NQF Level: 7 **NQF Credits: 375** **NQF Qualification ID: Q0512**

Description
The Bachelor of Informatics aims at providing educational opportunities for students who are interested in and motivated to work as Informatics Specialists in Business Computing, Information Systems or related practices. This programme is purposefully designed to provide skillful, competent and motivated graduates for the increasing and numerous challenging tasks of Business Computing and Informatics in the country and the region at large. Students will have the opportunity to develop the required cognitive/intellectual skills, practical as well as key transferable skills, and apply these in order to address/solve Computing and Informatics (CI) problems/ challenges in the context of an organisation.

Overall, this programme aims at:
- Providing students with a sound foundation in the fundamental concepts, theories and frameworks of Business Computing and Informatics;
- Developing the ability of students to analyse information from a wide range of sources;
- Equipping students with the requisite skills to work effectively as individuals and as members of a team;
- Enabling students to communicate effectively in the workplace.

The programme intends to provide a diverse range of skills and competencies that are both discipline-specific and job-related. The programme also intends to facilitate the development of highly generic cognitive and intellectual skills that would enable graduates to apply their knowledge and learnt competencies to the practices of Business Computing and Informatics, taking into consideration international generally accepted practices.

Admission Requirements
Candidates may be considered for admission to the Bachelor of Computer Science in Cyber Security if they meet the University's General Admission Requirements (GI2.1 in Part 1 of the NUST Yearbook). In addition, students must have a minimum "D"-symbol in Grade 12/ NSSC Mathematics at Ordinary Level, or equivalent. The Faculty reserves the right to consider candidates who have a "D"-symbol in NSS Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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. Maximum credit that can be granted is 50 % of the credit for a qualification.

Upon successful completion of the Bachelor of Informatics, students will ordinarily be able to pursue further studies in Informatics, or a related cognate area of learning, at NQF Level 8.

CURRICULUM

Year 1 Semester 1 Course Code	**Course Title**	**Prerequisites**	**NQF Level**	**NQF Credits**
BSC410S	Basic Science	None	4	8
MIT112S	Mathematics for IT 1A	None	5	10
PRG510S	Programming 1	None	5	10
PLU411S	Principles of English Language Use	None	4	NCB
MNS511S	Management Information Systems	None	5	10
COA511S	Computer Organisation and Architecture	None	5	10

Semester 2				
OOP521S	Object Oriented Programming	Programming 1	5	10
ICT521S	Information Competence	None	5	10
MIT122S	Mathematics for IT 1B	Mathematics for IT 1A	5	10
WDF521S	Web Development Fundamentals	None	5	10
EPR511S	English in Practice	Principles of English Language Use/ Language in Practice, or Language in Practice A, or Module 2, or Exemption	NCB 5	
OSN521S	Introduction to Operating Systems and Networks	Computer Organisation and Architecture	5	10
Year 2				
Semester 3				
EAP511S	English for Academic Purposes	English in Practice, or Language in Practice B, or Module 3, or Exemption	5	14
ISS610S	IT Systems Security	Intro. to Operating Systems and Networks	6	12
DSA610S	Data Structures and Algorithms	None	6	12
DBF510S	Database Fundamentals	None	5	10
ICN511S	Introduction to Computer Networking and Networks	Intro. to Operating Systems	5	10
ASP610S	Applied Statistics & Probability for IT	Mathematics for IT 1B	6	14
Semester 4				
SEH620S	Software Engineering 1 and HCI	Web Dev. Fundamentals	6	12
DPT621S	Database Programming and Techniques	Database Fundamentals	6	12
HIT620S	Health Information Systems & Technology	None	6	12
BAP620S	Business Analysis & Process Management	Management Information Systems	6	12
BAI620S	Business Accounting for Informatics	None	6	12
EWD621S	Enterprise Web Application Development	Object Oriented Programming	7	12
Year 3				
Semester 5				
IME511S	Introduction to Marketing and It's Environment	None	5	10
MMA710S	Multimedia Applications	None	7	12
CSH710S	Computer Systems for Healthcare Services	Business Analysis & Process Mgmt.	7	12
SYD611S	Sustainability and Development	None	6	12
ICE712S	Innovation, Creativity & Entrepreneurship	None	7	15
Semester 6				
WIL710S	Work Integrated Learning (WIL)	All courses up to semester 4 and a maximum of 2 outstanding semester 5 courses	7	48
ERP720S	Enterprise Resource Planning Systems	Management Information Systems	7	12
PTM721S	Project Management	None	7	12

Transition Arrangements

The Bachelor of Informatics (new curriculum), took effect from January 2014 and will be completely phased in by 2016. Courses will only be offered based on the syllabi of new/revised courses in 2014 (1st year), 2015 (2nd year) and 2016 (3rd year). Students who fail any of the courses on the Bachelor of Information Technology in Business Computing (old curriculum) will be required to repeat such failed courses based on the syllabi of new/revised corresponding courses.

BACHELOR OF INFORMATICS (REVISED - Phased in 2020) **07BAIT**

NQF Level 7 **NQF Credits 395** **NQF Identification ID: Q2251**

Description

The Bachelor of Informatics aims at providing educational opportunities for students who are interested and motivated to work as Informatics Specialists or in related practices. This programme is purposefully designed to provide skilful, competent and motivated graduates for the increasing and numerous challenging tasks of Informatics in the country and the region at large. Students will have the opportunity to develop the required cognitive/intellectual skills, practical as well as key transferable skills, and apply these to address/solve Computing and Informatics (CI) problems/challenges in the context of an organisation. Graduates of this programme will be able to find employment in the public and private sectors as Informatics specialists (e.g. Analyst Programmer, Information Architect, Web and Data Analyst) working in a broad range of mid-level positions in organisations.

Admission Requirements

Candidates may be considered for admission to the Bachelor of Informatics if they meet the NUST General Admission Requirements (Part 1 of the Yearbook). In addition, applicants must have a minimum "D"-symbol in Grade 12/NSSC Mathematics at Ordinary Level, or equivalent. The Faculty reserves the right to consider candidates who have a "D"-symbol in NSS Mathematics at Ordinary Level, or equivalent through other relevant criteria.

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 credit for a qualification. Upon successful completion of the Bachelor of Informatics, students will ordinarily be able to pursue further studies in Informatics, or a related cognate area of learning, at NQF Level 8.

Mode of Delivery

The programme will be delivered on both full-time and part-time modes in accordance with NUST rules.

CURRICULUM

Year1

Semester 1

Course Code	Course Title	Prerequisites	NQF Levels	NQF Credits
PLU411S	Principles of English Language Use	None	4	NCB
BSC410S	Basic Science	None	4	8
ICG511S	Introduction to Computing	None	5	8
MCI511S	Mathematics for Computing and Informatics 1A	None	5	10
BMC511S	Business Management Information Systems	None	5	10
DBF510S	Database Fundamentals	None	5	10
DST511S	Design Thinking	None	5	8
Semester 2				
COA511S	Computer Organisation and Architecture	Mathematics for Computing and Informatics	5	12
PRG510S	Programming 1	Introduction to Computing	5	10
MCI521S	Mathematics for Computing and Informatics 1B	Mathematics for Computing and Informatics 1A	5	10
EPR511S	English in Practice	Principles of English Language Use	5	NCB
DSA521S	Data Structures and Algorithm 1	Introduction to Computing	5	10
DPG621S	Database Programming	Database Fundamentals	6	12

Year 2

Semester 3

EAP511S	English for Academic Purpose	English in Practice	5	14
OPS611S	Operating Systems	Computer Organisation and Architecture	6	12
PRG620S	Programming 2	Programming 1	6	10
ISS611S	Information Systems Security Essentials	None	6	10
DTN611S	Data Networks	None	6	12
ASP611S	Applied Statistics and Probability for Computing and Informatics	Mathematics for Computing and Informatics 1B	6	12

Semester 4				
EFC621S	Ethics for Computing	None	6	10
SAD621S	Systems Analysis and Design	None	6	12
PAI621S	Principles and Applications of Informatics	None	6	12
DTA621S	Data Analytics	Applied Statistics for Computing and Informatics	6	12
WAD621S	Web Application Development	Programming 2	6	12
ICE712S	Innovation, Creativity and Entrepreneurship	None	7	15
Year 3				
ERP720S	Enterprise Resource Planning Systems	None	7	12
MMA710S	Multimedia Application	None	7	12
ISG711S	Information Systems Strategy and Governance	Systems Analysis and Design	7	12
BIA711S	Business Intelligence and Analytics	Data Analytics	7	12
WPM711S	Web Programming	Web Application Development	7	12
AAI711S	Advanced Applications of Informatics	None	7	12
Semester 6				
SYD611S	Sustainability and Development	None	6	12
PTM721S	Project Management	None	7	12
WOL720S	Work Integrated Learning for Informatics	All Semester 4 courses; and a maximum of 2 outstanding Semester 5 courses	7	48

Transition Arrangements

The Bachelor of Informatics (old curriculum) will be phased-out systematically until 2024 with minimal disruption to existing students' learning progression. The last intake of 1st year students for the Bachelor of Informatics (old curriculum) was in January 2019. Students who are registered in 2019 for the 1st year of the Bachelor of Informatics (old curriculum) and who fail more than 50% of the courses at the end of 2019, will be required to change their registration to the Bachelor of Informatics (revised curriculum) and will be granted credits on a course-by-course basis in accordance with the information in Table 3 below.

The Bachelor of Informatics (revised curriculum), will take effect from January 2020 and will be completely phased-in by 2022. Courses will only be offered based on the syllabi of new/revised courses in 2020 (1st year), 2021 (2nd year) and 2022 (3rd year). Students who fail any of the courses on the Bachelor of Informatics (old curriculum) will be required to repeat such failed courses based on the syllabi of new/revised corresponding courses. Please refer to Table 3, below, for detailed information on the new/revised corresponding courses to be done if courses in the old curriculum are failed.

Table 5: Corresponding courses to be done (if failed). This is not a credit table.

Bachelor of Informatics (Old Courses)		**Bachelor of Informatics (Revised Curriculum)**	
Course Code	**Course Name**	**Course Code**	**Course Title**
MIT112S	Mathematics for IT 1 A	MCI511S	Mathematics for Computing and Informatics 1A
PRG510S	Programming 1	PRG510S	Programming 1
MNS511S	Management Information Systems	BMC511S	Business Management Information Systems
COA511S	Computer Organisation and Architecture	COA511S	Computer Organisation and Architecture
OOP521S	Object Oriented Programming	PRG620S	Programming 2
MIT122S	Mathematics for IT 1B	MCI521S	Mathematics for Computing and Informatics 1B
WDF521S	Web Development Fundamentals	WAD621S	Web Application Development
OSN521S	Introduction to Operating Systems and Networks	OPS611S	Operating Systems
ISS610S	IT Systems Security	ISS611S	Information Systems Security Essentials
DSA610S	Data Structures and Algorithms	DSA521S	Data Structure and Algorithms 1
DBF510S	Database Fundamentals	DBF510S	Database Fundamentals
ICN511S	Introduction to Computer Networking	DTN611S	Data Networks
ASP610S	Applied Statistics and Probability for IT	ASP611S	Applied Statistics and Probability for Computing and Informatics
SEH620S	Software Engineering and HCI	SAD621S	Systems Analysis and Design

DPT621S	Database Programming and Techniques	DPG621S	Database Programming
HIT620S	Health Information Systems and Technology		None
BAP620S	Business Analysis and Process Management		None
BAI620S	Business Accounting for Informatics		None
EWD621S	Enterprise Web Application Development	WPM711S	Web programming
IME511S	Introduction to Marketing and its Environment		None
MMA710S	Multimedia Applications	MMA710S	Multimedia Applications
CSH710S	Computer Systems for Healthcare Services		None
ERP720S	Enterprise Resource Planning Systems	ERP720S	Enterprise Resource Planning Systems
PTM721S	Project Management	PTM721S	Project Management
WIL710S	Work Integrated Learning	WIL720S	Work Integrated Learning

NB: Exemption may not be granted for part of a course. Hence, in cases where more than one course in the old curriculum is replaced by one course in the revised curriculum, students who have failed any of the corresponding courses in the old curriculum will have to do the entire new course in the revised curriculum.

Please note:
Table 4 above only highlights new/revised core courses in Bachelor of Informatics 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.

The following old courses do not have corresponding courses in the Bachelor of Informatics (new curriculum), and will be offered until the Bachelor of Informatics (old curricula) will be phased out completely in 2024:

- BAP620S: Business Analysis & Process Management
- BAI620S: Business Accounting for Informatics
- HIT620S: Health Information Systems and Technology
- CSH710S: Computer Systems for Healthcare Services

DEPARTMENT OF JOURNALISM AND MEDIA TECHNOLOGY

QUALIFICATIONS OFFERED

Bachelor of Journalism and Media Technology 07BJOU

BACHELOR OF JOURNALISM AND MEDIA TECHNOLOGY 07BJOU

NQF Level: 7 **NQF Credits: 417** **NQF Identification: Q0677**

Description

The Bachelor of Journalism and Media Technology Degree (Revised Curriculum, 2021) has replaced the Bachelor of Journalism and Media Technology (Old Curriculum, 2015) Degree currently registered on the NQF. The programme has been revised to ensure its continued relevance, as well as full compliance with the Curriculum Framework and National Qualifications Framework (NQF) requirements.

In keeping with the NUST's requirement regarding curriculum development and review, the degree programme has been benchmarked against similar degree programmes offered at local, regional and international partner institutions. The Bachelor of Journalism andMedia Technology is revised to address the ongoing need for qualified personnel in both the public and private sectors, as confirmedwith stakeholders during consultations. These include not only the official Programme Advisory Committee (PAC) members, but also current and former students, as well as informal consultations with key Namibian media organisations. Additionally, the programmeis revised to ensure continued relevance and fit for purpose in accordance with the NQF requirements. Graduates of this programmewill be able to contribute significantly to the attainment of national development objectives in the economy by taking up relevant jobs in the public and private sectors of Namibia. Graduates will also be prepared to create jobs by setting up media ventures or operatingas freelancers.

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 theNUST Yearbook).

Candidates who meet the minimum admission requirements will be required to write a special Final Selection English test, as well as a journalism-related General Knowledge test.

Candidates who meet the Mature Age Entry requirement of the University (GI2.2 in Part 1 of the NUST Yearbook) will also be considered for admission.

Articulation Arrangements

Transfer of credits will be dealt with according to the University's regulations on Recognition of Prior Learning (RPL). 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.Graduates of the Bachelor of Journalism and Media Technology Degree will ordinarily be able to pursue further studies in Journalism and Media Studies, or a related cognate area of learning, at NQF 8.

Mode of Delivery

The Programme will be offered via the part time mode of study, in accordance with University rules. The Programme, however, maybe offered via both full- and part-time modes at a later date if required.

Requirements for Qualification Award

This qualification will be awarded to students credited with a minimum of 361 NQF credits, and who have met the detailed requirements below. Furthermore, students should comply with the administrative and financial requirements as indicated in Part 1 of the NUST Yearbook.

CURRICULUM

Year 1 Semester 1 Course Title	**Course Title**	**Prerequisite(s)**	**NQF Level**	**NQF Credit**
PLU411S	Principles of English Language Use	None	4	NCB
MTS511S	Introduction to Media, Technology and Society	None	5	13
CUS411S	Computer User Skills	None	4	10
IGA511S	Information Gathering and Writing	None	5	12
IPG511S	Introduction to Photography	None	5	12

Semester 2				
ICT521S	Information Competence	None	5	10
BMS411S	Basic Mathematics	None	4	12
BJO521S	Broadcast Journalism	None	5	12
JNW521S	Journalistic Writing 1	None	5	12
MTH521S	Media Theory	None	5	15
Year 2				
Semester 3				
MDL611S	Media Law	None	6	13
MDP611S	Multimedia Design and Production	None	6	13
JNW611S	Journalistic Writing II	None	6	13
AVM611S	Audio-Visual Media	None	6	13
BCS410S	Basic Science	None	4	8
Semester 4				
NRW611S	News Reporting and Writing	None	6	13
MDE621S	Media Ethics	Media Law	6	13
DEP612S	Print Design, Editing and Production	Information Gathering and Writing	6	13
DAD721S	Digital Art and Design	Multimedia Design and Production	7	14
PRT721S	Public Relations: Theory and Practice	None	7	14
Year 3				
Semester 5				
WMC711S	Work Integrated Learning (WIL)	All cognate-area courses up to Semester 4	7	60
Semester 6				
SYD611S	Sustainability and Development	None	6	12
MEN721S	Media Entrepreneurship	None	7	14
MTA721S	Media Textual Analysis	Media Theory	7	15

Plus one of the following Strand Electives depending on the specializing:

Multi-media Strand				
AWD721S	Advanced Web Design	Digital Art and Design	7	14
WIM721S	Writing and Imaging for Multimedia	Digital Art and Design	7	14
Public Relations Strand				
RCS721S	Public Relations Campaign and Special Events	Public Relations Theory and Practice	7	14
MAS721S	Media Advertising Strategies	Public Relations Theory and Practice	7	14
Jounalism Strand				
TVP721S	Television Production	News Reporting and Writing	7	14
RPR721S	Radio Production	News Reporting and Writing	7	14

Assessment Strategies

Students will be assessed through formative, 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 presentation, 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 assignments may be minimized 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 thata 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 that is assessed in this way will have a minimum of four assessment events. Courses that are assessedusing a combination of continuous assessment and a final end-of-semester examination must have at least three assessments.

WIL will be assessed on the basis of the following:

- Immediate WIL Industry supervisor's report;
- Academic supervisors/assessor's mark (the academic assessor will interview both the students and the WIL immediate supervisorand give a mark);
- WIL report which is to be written following the guidelines given by the department. This report should be signed by either thesupervisor or the manager at the workplace;
- Pre-WIL workshops attendance
- Portfolio of Evidence

Transition Arrangements

There is no significant difference between the old curriculum and the revised Bachelor of Journalism and Media Technology. In this light, the transition arrangement will be as follows: The Bachelor of Journalism and Media Technology (Old curriculum) has been phased out completely by end of the year 2020. The last intake of 1st year of the phased-out programme (old curriculum) was in January 2020.

Students who were registered in 2020 for the 1st year of the phased-out programme (old curriculum) and who failed more than 50% of courses at the end of 2020, will be required to change their registration to the revised programme in 2021. Similarly, students who were registered in 2020 for the 1st year of the out-phasing programme (old curriculum) and who meet all the requirements to progress to 2nd year will be required to transition to the revised curriculum in 2021. Students in this category will be required to pick up credits on a course-by-course basis in accordance with information in Table 1 below.

The revised Bachelor of Journalism and Media Technology programme will be implemented at all levels in 2021 with concurrent implementation of 1st; 2nd and 3rd year. Courses will only be offered based on the new/revised syllabi in 2021. 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).

The deadline for completely phasing out of the Bachelor of Journalism and Media Technology (old curriculum) was the end of the 2020 academic year, after which students must switch to the revised programme and fulfil all requirements based on the revised curriculum.

Table 6: Courses to be credited

Course Code	Bachelor of English (old courses)	Course Code	Bachelor of English (equivalent new/revised courses)
MTS611S	Media, Technology and Society	MTS511S	Introduction to Media, Technology and Society
IGW511S	Information Gathering	IGA511S	Information Gathering and Writing
IBJ521S	Introduction to Broadcast Journalism	BJO521S	Broadcast Journalism
CDA721S	Critical Discourse Analysis	MTA721S	Media Textual Analysis
AUP721S	Audio Production	RPR721S	Radio Production

Table 7: Corresponding Courses (if Failed). This is not a credit table

Course Code	Bachelor of English (old courses)	Course Code	Bachelor of English (equivalent new/revised courses)
IGW511S	Information Gathering	IGA511S	Information Gathering and Writing
IPG511S	Introduction to Photography	IPG511S	Introduction to Photography
IBJ521S	Introduction to Broadcast Journalism	BJO521S	Broadcast Journalism
JNW521S	Journalistic Writing I	JNW521S	Journalistic Writing I
MTH521S	Media Theory	MTH521S	Media Theory
MDL611S	Media Law	MDL521S	Media Law
MDP611S	Multimedia Design and Production	MDP611S	Multimedia Design and Production
DEP611S	Print Design, Editing and Production	DEP611S	Print Design, Editing and Production
AVM611S	Audio-Visual Media	AVM611S	Audio-Visual Media
MTS611S	Media, Technology and Society	MTS511S	Introduction to Media, Technology and Society
NRW621S	News Reporting and Writing	NRW721W	News Reporting and Writing
MDE621S	Media Ethics	MDE621S	Media Ethics
JNW621S	Journalistic Writing II	JNW621S	Journalistic Writing II

DAD721S	Digital Art and Design	DAD721S	Digital Art and Design
WMC711S	Work Integrated Learning	WMC711S	Work Integrated Learning
PRT721S	Public Relations Theory and Practice	PRT721S	Public Relations Theory and Practice
AWD721S	Advanced Web Design and Production	AWD721S	Advanced Web Design
WIN721S	Writing and Imaging for Multimedia	WIN721S	Writing and Imaging for Multimedia
MEN721S	Media Entrepreneurship	MEN721S	Media Entrepreneurship
CDA721S	Critical Discourse Analysis	MTA721S	Media Textual Analysis
AUP721S	Audio Production	RPR721S	Radio Production
TVP721S	Television Production	TVP721S	Television Production
RCS721S	Public Relations Campaigns and Special Events	RCS721S	Public Relations Campaigns and Special Events
MAS721S	Media Advertising Strategies	MAS721S	Media Advertising Strategies

Please Note:
Table 7 above only highlights new/revised core courses in Journalism and Media Technology 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.

POSTGRADUATE PROGRAMMES

SCHOOL OF COMPUTING

DEPARTMENT OF COMPUTER SCIENCE

BACHELOR OF COMPUTER SCIENCE HONOURS (COMMUNICATION NETWORKS) 08BCCH

NQF Level: 8 **NQF Credits: 120** **NQF Identification: Q0509**

Description

The Bachelor of Computer Science Honours is a postgraduate specialisation degree that aims at consolidating and deepening the knowledge and skills of students in the main cognate area of learning, as well as developing their capacity to conduct supervised research of an applied nature. The programme is purposefully designed to expose students to advanced concepts, theories, tools, and methods of Computer Science. In this context, specific emphasis is placed on internationally accepted general standards and practices, as well as key attributes that would enable graduates to assume supervisory/middle management and applied research positions in the Computing industry, academia, and in the public sector in general.

The curriculum is structured to facilitate specialisation in the areas of Communication Networks, Software Development, Information Security and Digital Forensics.

Admission Requirements

Applicants may be considered for admission to this programme if they have a Bachelor's degree in Computer Science, preferably in Communication Networks or an equivalent qualification at NQF Level 7 from a recognised institution, worth at least 360 credits. Additional admission criteria may apply as set at the discretion of the Department. Applicants are required to submit the following documents with their applications:

- A professional resume, highlighting practical and professional Computing and IT experience, if applicable;
- A written proposal/motivation for undertaking further studies;
- A transcript of the undergraduate study.

Articulation Requirements

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.

Upon successful completion of the Bachelor of Computer Science Honours, students will ordinarily be able to pursue further studies in the same, or a related cognate area of learning, at NQF Level 9.

CURRICULUM

Year 1

Semester 1

Course Code	Course Title	Prerequisites
RIT812S	Research Methodology	None
BBN810S	Broadband Networks	None
ECN811S	Emerging and Open Issues in Communication Networks	None
MNA810S	Mobile Networks and Architectures	None

Semester 2

MTH820S	Mini-Thesis	Research Methodology

PLUS one of the following elective courses:

MMC821S	Multimedia Communications	None
SDN821S	Software Defined Networking	None
NVS821S	Network Vulnerabilities and Security	None
DCM821S	Datacentre Management	None

Table 8: Corresponding Courses to be done (if failed) - This is not a credit table!

Bachelor of Computer Science Honours (Communication Networks) (Old Courses)		**Bachelor of Computer Science Honours (Communication Networks) (Corresponding New/Revised Courses to be done, if failed)**	
Course Code	**Course Name**	**Course Code**	**Course Title**
RIT812S	Research Methodology	RIT812S	Research Methodology
MTH820S	Mini-Thesis	MTH820S	Mini-Thesis
COMMUNICATION NETWORKS STRAND			
BBN810S	Broadband Networks	BBN810S	Broadband Networks
ECN811S	Emerging and Open Issues in Communication Networks	ECN811S	Emerging and Open Issues in Communication Networks
MNA810S	Mobile Networks Architecture	MNA810S	Mobile Networks Architecture
WDS820S	Wireless Data Networks and Systems		None
SON820S	Simulation of Networks		None

Note: Students who failed the following old courses must register for the new/revised courses in the Bachelor of Computer Science Honours in Communication Networks as listed in Table 8 above.

DEPARTMENT OF CYBER SECURITY

BACHELOR OF COMPUTER SCIENCE HONOURS IN DIGITAL FORENSICS 08BHDS
(Revised- Phasing in 2021)

NQF Level: 8 **NQF Credits: 120** **NQF Identification:Q2260**

BACHELOR OF COMPUTER SCIENCE HONOURS IN INFORMATION SECURITY 08BHIF
(Revised- Phasing in 2021)

NQF Level: 8 **NQF Credits: 120** **NQF Identification:Q2261**

CURRICULUM

Year 1
Semester 1

Course Code	Course Title	Prerequisites
RIT812S	Research Methodology	None

PLUS one of the following Strands Compulsory depending on Specialisation:

DIGITAL FORENSIC STRAND: ***(Register ALL courses from the strand selected)***

AIL811S	Advanced Intrusion and Log Analysis	None
DFM811S	Digital Forensics Management	None
MCF811S	Mobile and Cloud Forensics	None

INFORMATION SECURITY STRAND: ***(Register All the courses from the strand elected)***

APC811S	Applied Cryptography	None
ENH811S	Ethical Network Hacking	None
ISM811S	Information Security Management and Assurance	None

Semester 2

MTH820S	Mini-Thesis	Research Methodology

PLUS one of the following Strands Compulsory depending on Specialisation:

DIGITAL FORENSIC STRAND: ***(Register only ONE course from the strand selected)***

CPS821S	Criminal Procedures	None
MMF821S	Multimedia Forensics	None
SAS821S	Security Analytics	None
SAU821S	Systems Audit	None

INFORMATION SECURITY STRAND*: (Register only ONE course from the strand* selected)

CPS821S	Critical Information Infrastructure Protection and Control System Security	None
DSD821S	Database Security and Data Protection	None
SAS821S	Security Analytics	None
SSS811S	Secure Systems	None

Table 9: Courses to be credited

Bachelor of Computer Science Honours in Digital Forensics Strand (Old Courses)		**Bachelor of Computer Science Honours in Digital Forensics Strand (New/revised Equivalent Courses)**	
Course Code	**Course Name**	**Course Code**	**Course Title**
RIT812S	Research Methodology	RIT812S	Research Methodology
MTH820S	Mini Thesis	MTH820S	Mini Thesis
PTS811S	Practical Network Security	AIL811S	Advanced Intrusions and Log Analysis
DFM811S	Digital Forensics Management	DFM811S	Digital Forensics Management

Table 10: Corresponding Courses to be done (if failed) - This is not a credit table!
Students who failed the following old courses must register for the new/revised courses in the Bachelor of Computer Science Honours in Digital Forensics as listed in Table 10.

Bachelor of Computer Science Honours in Digital Forensics Strand (Old Courses)		Bachelor of Computer Science Honours in Digital Forensics Strand (Corresponding New/Revised Courses to be done, if failed)	
Course Code	Course Name	Course Code	Course Title
RIT812S	Research Methodology	RIT812S	Research Methodology
PTS811S	Practical Network Security	AIL811S	Advanced Intrusions and Log Analysis
APC811S	Applied Cryptography	MCF811S	Mobile and Cloud Forensics
DFM811S	Digital Forensics Management	DFM811S	Digital Forensics Management
MTH820S	Mini Thesis	MTH820S	Mini Thesis
CMF821S	Computer and Multimedia Forensics	MMF821S	Multimedia Forensics
MBF821S	Mobile Forensics	SAU821S	Systems Audit
		CPS821S	Criminal Procedures
		SAS821S	Security Analytics

NB: For Mobile Forensics, students are required to take only one elective from Systems Audit, Criminal Procedures and Secure Analytics

Table 11: Corresponding Courses to be done (if failed) - This is not a credit table!
Students who failed the following old courses must register for the new/revised courses in the Bachelor of Computer Science Honours in Information Security as listed in Table 11.

Bachelor of Computer Science Honours in Information Security (Old Courses)		**Bachelor of Computer Science Honours in Information Security (Corresponding New/Revised Courses to be done, if failed)**	
Course Code	**Course Name**	**Course Code**	**Course Title**
RIT812S	Research Methodology	RIT812S	Research Methodology
PTS811S	Practical Network Security	ENH811S	Ethical Network Hacking
APC811S	Applied Cryptography	APC811S	Applied Cryptography
ISM811S	Information Security Management and Assurance	ISM811S	Information Security Management and Assurance
MTH820S	Mini Thesis	MTH820S	Mini Thesis
CIT821S	Critical Infrastructure Protection	CIP822S	Critical Information Infrastructure Protection and Control System Security
		DSD821S	Database Security and Data Protection
		SSS811S	Secure Systems
		SAS821S	Security Analytics
DSD821S	Database Security and Data Protection	DSD821S	Database Security and Data Protection
		CIP822S	Critical Information Infrastructure Protection and Control System Security
		SSS811S	Secure Systems
		SAS821S	Security Analytics

DEPARTMENT OF SOFTWARE ENGINEERING

BACHELOR OF COMPUTER SCIENCE HONOURS (SOFTWARE DEVELOPMENT) **08BCHS**
(Revised – Phased in 2020)

NQF Level: 8 **NQF Credits: 120** **NQF Identification: Q0509**

Description
The Bachelor of Computer Science Honours is a postgraduate specialisation degree that aims at consolidating and deepening the knowledge and skills of students in the main cognate area of learning, as well as developing their capacity to conduct supervised research of an applied nature. The programme is purposefully designed to expose students to advanced concepts, theories, tools, and methods of Computer Science. In this context, specific emphasis is placed on internationally accepted general standards and practices, as well as key attributes that would enable graduates to assume supervisory/middle management and applied research positions in the Computing industry, academia, and in the public sector in general.

The curriculum is structured to facilitate specialisation in the areas of Communication Networks, Software Development, Information Security and Digital Forensics.

Admission Requirements
Applicants may be considered for admission to this programme if they have a Bachelor's degree in Computer Science, preferably in Communication Networks or an equivalent qualification at NQF Level 7 from a recognised institution, worth at least 360 credits. Additional admission criteria may apply as set at the discretion of the Department. Applicants are required to submit the following documents with their applications:

- A professional resume, highlighting practical and professional Computing and IT experience, if applicable;
- A written proposal/motivation for undertaking further studies;
- A transcript of the undergraduate study.

Articulation Requirements
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.

Upon successful completion of the Bachelor of Computer Science Honours, students will ordinarily be able to pursue further studies in the same, or a related cognate area of learning, at NQF Level 9.

CURRICULUM

Year 1
Semester 1

Course Code	Course Title	Prerequisites
RIT812S	Research Methodology	None
ASD810S	Advanced Software Development	None
ESD811S	Emerging and Open Issues in Software Development	None
SSS811S	Secure Systems	None

Semester 1

MTH820S	Mini-Thesis	Research Methodology

PLUS one of the following Strand Elective courses

IDN821S	Interaction Design	None
MPD820S	Mobile Platforms and Development Environments	None
FMM820S	Formal Methods	None
PRS821S	Programming for Security	None

Table 12: Corresponding Courses to be done (if failed) - This is not a credit table!
Students who failed the following old courses must register for the new/revised courses in the Bachelor of Computer Science Honours(Software Development) as listed in Table 12.

Bachelor of Computer Science Honours in Digital Forensics Strand (Old Courses)		Bachelor of Computer Science Honours in Digital Forensics Strand (Corresponding New/Revised Courses to be done, if failed)	
Course Code	Course Name	Course Code	Course Title
RIT812S	Research Methodology	RIT812S	Research Methodology
ASD810S	Advanced Software Development	ASD810S	Advanced Software Development
ESD811S	Emerging and Open Issues in Software Development	ESD811S	Emerging and Open Issues in Software Development
FMM810S	Formal Methods	FMM820S	Formal Methods
MTH820S	Mini Thesis	MTH820S	Mini Thesis
MAD811S	Mobile Applications Development	MPD820S	Mobile Platforms and Development Environments
PLC820S	Programming Lanaguages and Compilers		None

MASTER OF COMPUTER SCIENCE **09MACS**
(With specialisation in Communication Networks, Forensic Computing, Information Security, Software Development) (Revised – Phased in 2021)

NQF Level: 9 **NQF Credits: 240** **NQF Identification ID:Q0504**

Description
The Master of Computer Science programme is of interdisciplinary nature and aims at students interested in, and adequately qualified and motivated, for graduate education to become scientific researchers in various fields of study related to Computer Science. In this regard, the Computing Sciences Accreditation Board (CSAB) defines Computer Science as focusing on the 'theory of computation, algorithms and data structures, programming methodology and languages, and computer elements and architecture'. In addition to these four areas, the CSAB also identifies fields such as software engineering, artificial intelligence, computer networking and communication, database systems, parallel computation, distributed computation, computer-human interaction, computer graphics, operating systems, and numerical and symbolic computation as being important areas of computer science.

The programme will enable students to deepen their knowledge of a particular computer science speciality for application, research and/ or management purposes. Possible fields of specialisation include Communication Networks, Software Development, Mobile Development, Information Security and Forensic Computing. The precise focus of the research will be determined through dialogue between the candidate and supervising staff and will fall within the scope of the approved research clusters of the Faculty of Computing and Informatics.

Students will develop a thorough understanding of relevant methodological approaches, and develop competence in the application of qualitative, design, mixed-mode and quantitative research methods through participation in research projects under the supervision of experienced staff members. The development of research competence has prime priority in the context of this programme. Students are required to design, undertake and report on research where computer science is the research focus and apply techniques and/or deal with a specific application problem connected with the field of interest.

Admission Requirements
Applicants who hold qualifications from recognised institutions at NQF level 8, or equivalent, in disciplines related to computer science may be considered for admission to this programme. Applicants need to provide evidence of having conducted supervised
research and may be required to make-up specific deficiencies in coursework at the discretion of the Faculty Postgraduate 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. The latter also applies to applicants who have been working in the field subsequent to obtaining their

previous qualifications. The Faculty Postgraduate Committee may approve exceptions, and all admissions are at the discretion of the Faculty Postgraduate Committee.

Registration prior to the approval of a research proposal is provisional and will be made official only when the Higher Degrees Committee approves the proposal. These procedures will be fully explained to each prospective student during his or her personal interview.

Assessment Strategies
Students are required to submit a research proposal six months after registration for approval by the Higher Degrees 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 a work-in-progress report 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 appropriately 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 marks will only be released after correction of the thesis.

Articulation Arrangements
The Master in Computer Science is a terminal qualification; hence articulation arrangements are not applicable.

Mode of Delivery
By Research Only.

Teaching and Learning
By Research Only

Requirements for Qualification Award
This qualification will be awarded to candidates credited with a minimum of 240 credits (at NQF Level 09) and who have complied with all the requirements laid down in the University's rules and procedures for postgraduate studies leading to the award of research degrees.

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.

Students will be encouraged to submit at least one manuscript for publication in refereed journal or book chapter or peer-reviewed proceedings of conference, symposium, and workshop and provide a proof of the submitted manuscript. The submitted work in peer- reviewed sources should be in the area of the student thesis. In addition, students should meet the administrative and financial requirements as spelt out in part first (1) of the NUST Yearbook.

A minimum of two (2) years and a maximum period of three (3) years is required to complete the programme, if registered on the full-time mode. A minimum of four (4) years and a maximum of six (6) years is required if registered on a part-time mode. The maximum study period for the degree of Master shall not exceed twice the recommended study period for such degree and may only be extended at the discretion of Senate. Students who fail to complete the degree within the maximum study period must re-apply for admission to the degree.

Quality Assurance Arrangements
The final assessment of the thesis will be done by qualified academics and practitioners with Doctoral Degrees. The examiners must be knowledgeable and respected individuals in the field with experience in assessment of postgraduate scientific reports or theses and will be appointed by the Higher Degrees Committee upon the recommendation of the Faculty Postgraduate Committee.

Transition Arrangements
The structured/taught Master of Information Technology (MIT) programme was phased out systematically in 2016 with no disruption to existing students' learning progression. The last intake for the MIT (09MIFT) was in 2013. The old Master of Computer Science will phase out in 2020; the Revised Master of Computer Science will take effect from 2021.

DOCTOR OF PHILOSOPHY IN COMPUTER SCIENCE **10PDCS**
(with specialisation in Communication Networks, Forensic Computing, Information Security, Software Development) (Revised – Phased in 2021)

NQF Level: 10 **NQF Credits: 360** **NQF Identification ID:Q0505**

Description
The PhD in Computer Science was conceptualized against the backdrop of the above imperatives in order to train scientific in various fields of study related to Computer Science (e.g. Communication Networks, Software Development, Mobile Development, Information Security and Forensic Computing). Students will develop a thorough understanding of relevant methodological approaches, and develop competence in the application of qualitative, design, mixed-mode and quantitative research methodologies through participation in research projects under supervision of experienced staff members. The precise focus of the research will be determined through dialogue between the candidate and supervising staff, and will fall within the scope of the approved research clusters of the Faculty of Computing and Informatics.

The development of research competence has prime priority in the context of this PhD programme. Students are required to investigate, design, and conduct independent research, where Computer Science is the research focus, apply advanced methods and techniques and/ or deal with a sophisticated application problem connected with the topic of interest. The research output, in the form of a thesis, must contribute meaningfully and substantially to the existing body of knowledge in the field/area of specialisation through comprehension, application, analysis, synthesis and evaluation of existing knowledge.

Admission Requirements
Applicants, who hold qualifications from recognised institutions at NQF Level 9, or equivalent, in computer science or related cognate areas, may be considered for admission to this programme. Applicants need to provide evidence of having conducted supervised research at this level. In addition, applicants may be required to attend a pre-selection interview at the discretion of the department. The Higher Degrees Committee will approve the final selection and admission of candidates.

Registration prior to the approval of a research proposal is provisional and will be made official only when the Higher Degrees Committee approves the proposal. These procedures will be fully explained to each prospective student during his or her personal interview.

Articulation Arrangements
The PhD in Computer Science is a terminal qualification; hence articulation arrangements are not applicable.

Assessment Strategies
Students are required to submit a research proposal six months after registration for approval by the Higher Degrees Committee. It is compulsory that students attend regular research methodology seminars until successful defense and approval of the research proposal. Students are required to present a work-in-progress report 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 appropriately 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 marks will only be released after correction of the thesis. Any other special arrangements on assessments will be done in accordance with the University's rules and procedures for postgraduate studies.

Mode of Delivery
By Research Only

Requirements for Qualification Award
The Doctoral degree shall be awarded to candidates credited with a minimum of 360 credits at NQF Level 10 and who have complied with all the requirements laid down in the University's rules and procedures for postgraduate studies leading to the award of research degrees. 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.

Students will be required to satisfy the following additional condition: At least two manuscripts published/accepted for publication in refereed journals and/or book chapters and/or peer-reviewed proceedings of conferences, symposiums, and workshops. Full bibliographical details must be provided for each publication. For each publication indicated as being "accepted for publication" (not published yet), a copy of the letter of acceptance from the relative authority must be submitted. The submitted work in peer-reviewed sources should be in the area of the student thesis. In addition, students should meet the administrative and financial requirements as spelt out in part one (1) of the NUST Yearbook.

A minimum of three (3) years and a maximum period of five (5) years are required to complete the programme, if registered on the full- time mode. A minimum of six (6) years and a maximum of eight (8) years is required if registered on a part-time mode. The study period may be extended with the express approval of Senate.

Teaching and Learning
By Research Only

Quality Assurance Arrangements
Qualified academics and practitioners with Doctoral Degrees will do the final assessment of the thesis. The examiners must be knowledgeable and respected individuals in the field with experience in assessment of postgraduate scientific reports or theses and will be appointed by the Higher Degrees Committee upon the recommendation of the Faculty Postgraduate Committee.

Transition Arrangements
The old PhD in Computer Science will phase out in 2020; the Revised PhD in Computer Science will take effect from 2021.

SCHOOL OF INFORMATICS, JOURNALISM AND MEDIA TECHNOLOGY

DEPARTMENT OF INFORMATICS	**Code 24**
Postgraduate Certificate in Informatics (Information Systems Audit)	08PGIN
Bachelor of Informatics Honours (Web Informatics)	08BIHW
Bachelor of Informatics Honours (Business Informatics)	08BIFB
Master of Informatics (Revised - Phased in 2021)	09MAIN
Doctor of Philosophy in Informatics (Revised - Phased in 2021)	10DPIN

DEPARTMENT OF JOURNALISM AND MEDIA TECHNOLOGY	**CODE**
Bachelor of Journalism and Media Technology Honours	08BJOH
Master of Journalism and Media Technology	09MJMT

POSTGRADUATE CERTIFICATE IN INFORMATICS (INFORMATION SYSTEMS AUDIT) 08PGIN

NQF Level: 8 **NQF Credits: 60** **NQF Qualification ID:Q0583**

Description

The Postgraduate Certificate in Informatics (Information Systems Audit) 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 further expose students to advanced concepts, theories, tools, and methods of Information Systems Audit. The overarching aim of this programme is to prepare students for a career in the Information Technology
(IT) audit field and for certification as an information systems auditor or information security specialist. Students will be able to take up a certification course in this field and may become members of professional/association bodies such as the Information Systems Audit and Control Association (ISACA). The Postgraduate Certificate in Informatics (Information Systems Audit) will not lead to further academic study, but graduates would gain credit for relevant courses should they opt to register for the Bachelor of Informatics Honours.

Admission Requirements

Applicants must have a three-year Diploma or a Bachelor degree or an equivalent qualification on NQF Level 7 with an Information Systems emphasis from an accredited institution. Applicants should also have at least two years relevant work experience. Additional admission criteria may apply as set at the discretion of the Department.

Articulation Arrangements

Transfer of credits will be dealt with in accordance with 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 who commenced a Bachelor of Informatics Honours, but discontinued their studies, may utilise academic courses passed for credit recognition in the Postgraduate Certificate in Informatics (Information Systems Audit).
Conversely, students who passed academic courses as part of this programme may utilise these for credit, if wishing ultimately, to undertake the Bachelor of Informatics Honours.

Career Opportunities:

The Post Graduate Certificate in Informatics (Information Systems Audit) provides knowledge and skills which will allow graduates, after successful completion of this programme, to pursue a career as Information Systems Auditor or Informatics Technologists. Graduates will be able to take up middle level positions in both the public and private sectors.

Mode of Delivery

The programme will be delivered on full-time and/or part-time modes in accordance with NUST rules. The E-learning mode will only be considered after the programme has reached a certain level of maturity.

Requirements for Qualification Award

The Postgraduate Certificate in Informatics (Information Systems Audit) will be awarded to students credited with a minimum of 60 NQF credits at NQF Level 8, and who have met the detailed requirements as set out below. In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

CURRICULUM

Year1 Semester 1 Course Code	Course Title	Prerequisites	NQF Levels	NQF Credits
ISM811S	Information Security Management and Assurance	None	8	15
ISA822S	Information Systems Audit	None	8	15
Semester 2 PGP811S	Industry Project	Students must have passed at least one course	8	15
Plus ONE of the following electives:				
AIS822S	Accounting Information Systems	None	8	15
NFP821S	Finance for Non-Financial Professionals	None	8	15

Transition Arrangements:

The Post Graduate Certificate in Informatics (Information Systems Audit) (old curriculum) will phased-out completely end of 2020. The last intake of students for the Post Graduate Certificate in Informatics (Information Systems Audit) (old curriculum) was in January 2020.

Students who are registered in 2020 for the Post Graduate Certificate in Informatics (Information Systems Audit (old curriculum), and who fail more than 50% of the courses at the end of 2020, will be required to change their registration to the Post Graduate Certificate in Informatics (Information Systems Audit) (revised curriculum) and will be granted credits on a course-by-course basis in accordance with the information in Table 11 below.

The Post Graduate Certificate in Informatics (Information Systems Audit) (revised curriculum), will take effect from January 2021. Courses will only be offered based on the syllabi of new/revised courses in 2021. Students who fail any of the courses on the old curricula will be required to repeat such failed courses based on the syllabi of the new/revised corresponding courses. Please refer to Table 15.2 below, for detailed information on the new/revised corresponding courses to be done if courses on the Post Graduate Certificate in Informatics (Information Systems Audit) (old curriculum) are failed.

The deadline for complete phasing out of the Post Graduate Certificate in Informatics (Information Systems Audit) old curriculum) is 2020 after which students must automatically switch to the Post Graduate Certificate in Informatics (Information Systems Audit) (revised curriculum).

Table 13: Courses to be credited

Post Graduate Certificate in Informatics (Information Systems Audit) (Old Courses)		**Post Graduate Certificate in Informatics (Information Systems Audit) (New/Revised Equivalent Courses)**	
Course Code	**Course Name**	**Course Code**	**Course Name**
AIS822S	Accounting Information Systems	AIS822S	Accounting Information Systems
ISA822S	Information Systems Audit	ISA822S	Information Systems Audit
PGP811S	Industry Project	PGP811S	Industry Project
ISM811S	Information Security Management and Assurance	ISM811S	Information Security Management and Assurance

Table 14: Corresponding Courses to be done (if failed) - this is not a credit table!

Post Graduate Certificate in Informatics (Information Systems Audit) (Old Courses)		**Post Graduate Certificate in Informatics (Information Systems Audit) (New/Revised Equivalent Courses)**	
Course Code	**Course Name**	**Course Code**	**Course Name**
AIS822S	Accounting Information Systems	AIS822S	Accounting Information Systems
ISA822S	Information Systems Audit	ISA822S	Information Systems Audit
PGP811S	Industry Project	PGP811S	Industry Project
ISM811S	Information Security Management and Assurance	ISM811S	Information Security Management and Assurance

BACHELOR OF INFORMATICS HONOURS (WEB INFORMATICS) 08BIHW
(Revised- Phased in 2020)

BACHELOR OF INFORMATICS HONOURS (BUSINESS INFORMATICS) 08BIFB
(Revised- Phased in 2020)

NQF: 8 **NQF CREDITS: 120** **NQF IDENTIFICATION: Q2252**

Description
The Bachelor of Informatics Honours is a postgraduate specialisation degree that aims at providing educational opportunities for students who are interested in and motivated to work as Web and Business Informatics Specialists or related practices. This programme is purposefully designed to develop students' ability to conduct supervised research by applying advanced concepts, theories, tools, and methods of Informatics. In this context, specific emphasis is placed on internationally accepted general standards and practices, as well as key attributes that would enable graduates to assume supervisory/middle management and applied research positions in the Computing industry, academia, and in the public sector in general.

Graduates of this programme will be able to find employment or entrepreneurship in the public and private sectors as Informatics specialists (e.g. Research Assistants, Web and Data Analyst etc.). The programme is revised in consultation with stakeholders in the Computing and Informatics both in Namibia and abroad and has been endorsed by members of the Programme Advisory Committee (PAC).

This programme is fully aligned with the requirements of the National Qualifications Framework (NQF) and the NUST Curriculum Framework.

Criteria for Admission
Applicants may be considered for admission to this programme if they have a Bachelor's degree in Informatics from the Namibia University of Science and Technology (NUST), or an equivalent qualification at NQF Level 7 from a recognised institution, worth at least 360 credits. Additional admission criteria may apply as set at the discretion of the Department.

Applicants are required to submit the following documents with their applications:
- A professional resume, highlighting practical and professional Computing and IT experience, if applicable.

Articulation Arrangements
Transfer of credits will be dealt with according to the 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 credit that can be granted is 50% of the credits for a qualification.

Upon successful completion of the Bachelor of Informatics Honours, students will ordinarily be able to pursue further studies in the same, or a related cognate area of learning, at NQF Level 9.

Mode of Delivery
The programme will be delivered on full-time and/or part-time modes in accordance with NUST rules. The E-learning mode will only be considered after the programme has reached a certain level of maturity.

Requirements for Qualification Award
The Bachelor of Informatics Honours degree will be awarded to students credited with a minimum of 120 NQF credits at NQF Level 8, and who have met the detailed requirements as set out below. In addition, students should meet the administrative and financial requirements as spelt out in Part 1 of the NUST Yearbook.

Students can specialise in Web Informatics or Business and must complete one-core compulsory (CC) courses (worth 15 credits); four strand compulsory courses (SC) (worth 45 credits); one strand elective (SE) course (worth 15 credits); and a mini-thesis (worth 45 credits).

CURRICULUM

Year 1
Semester 1

Course Code	Course Title	Prerequisite
RIT812S	Research Methodology	None

PLUS one of the following Strands Compulsory depending on Specialisation:

WEB INFORMATICS STRAND

WED811S	Web Application Development and Testing	None
DMG811S	Digital Marketing	None
AMG811S	Advanced MultiMedia and Graphics Design	None

BUSINESS INFORMATICS STRAND

IKM811S	Information and Knowledge Management Systems	None
ISA822S	Information Systems Audit	None
EAT810S	Enterprise Architecture	None

Semester 2

MTH820S	Mini-Thesis	RIT812S

PLUS one of the following Strand Elective courses for Specialisation in Web Informatics
(Choose only one course from the selected strand)

MDE821S	Mobile Platforms and Development Environments	None
DSA821S	Data Science and Analytics	None
TEE821S	Technology Entrepreneurship	None

PLUS one of the following Strand Elective courses for Specialisation in Business Informatics
(Choose only one course from the selected strand)

DSA821S	Data Science and Analytics	None
NFP821S	Finance for Non-Financial Professionals	None
TEE821S	Technology Entrepreneurship	None

Transition Arrangements

The Bachelor of Informatics Honours (old curriculum) will be phased out systematically until 2021 with minimal disruption to existing students' learning progression. The last intake of students for the Bachelor of Informatics Honours (old curriculum) was in January 2019.

Students who are registered on the Bachelor of Informatics Honours (old curriculum) will be allowed to transition to the Bachelor of Informatics Honours (revised curriculum) but may lose credits. Students who are registered in 2019 for Bachelor of Informatics Honours (old curriculum), and who fail more than 50% of the courses at the end of 2019, will be required to change their registration to the Bachelor of Informatics Honours (revised curriculum) and will be granted credits on a course-by-course basis in accordance with the information in Table 0.1.

The Bachelor of Informatics Honours (revised curriculum), will take effect from January 2020. Students who fail any of the courses on the old curricula will be required to repeat such failed courses based on the syllabi of the new/revised corresponding courses.

The deadline for complete phasing out of the Bachelor of Informatics Honours (old curriculum) is 2021, after which, students must automatically switch to the Bachelor of Informatics Honours (revised curriculum).

Table 15: Courses to be credited:

Bachelor of Informatics Honours (Old Courses)		**Bachelor of Informatics Honours (New/Revised Equivalent Courses)**	
Course Code	**Course Name**	**Course Code**	**Course Name**
RIT812S	Research Methodology	RIT812S	Research Methodology
EAT810S	Enterprise Architecture	EAT810S	Enterprise Architecture
MTH820S	Mini-thesis	MTH820S	Mini-thesis

WEB INFORMATICS STRAND			
GDM810S	Graphics Design and Digital Media	AMG811S	Advance Multimedia and Graphics Design
AMM820S	Advanced Multimedia		
BWM810S	Business Web and Marketing	DMG811S	Digital Marketing
MAI821S	Mobile Applications in Informatics	MDE821S	Mobile Platforms and Development Environments
BUSINESS INFORMATICS STRAND			
BIN810S	Business Intelligence	DSA821S	Data Science and Analytics
ILM811S	IT in Logistics Management	None	None
ISA822S	Information Systems Audit	ISA822S	Information Systems Audit

Table 16: Corresponding Courses to be done (if failed) – this is not a credit table

Bachelor of Informatics Honours (Old Courses)		**Bachelor of Informatics Honours (Corresponding New/Revised Courses to be done, if failed)**	
Course Code	**Course Name**	**Course Code**	**Course Name**
RIT812S	Research Methodology	RIT812S	Research Methodology
EAT810S	Enterprise Architecture	EAT810S	Enterprise Architecture
MTH820S	Mini-thesis	MTH820S	Mini-thesis
GDM810S	Graphics Design and Digital Media	AMG811S	Advanced Multimedia and Graphics Design
AMM820S	Advanced Multimedia		
BWM810S	Business Web and Marketing	DMG811S	Digital Marketing
BIN810S	Business Intelligence	DSA821S	Data Science and Analytics
ILM811S	IT in Logistics Management	None	None
MAI821S	Mobile Applications in Informatics	MDE821S	Mobile Platforms and Development Environments
ISA822S	Information Systems Audit	ISA822S	Information Systems Audit
AIS822S	Accounting Information Systems	None	None

NB: Exemption may not be granted for part of a course. Hence, in cases where more than one course in the old curriculum is replaced by one course in the revised curriculum, students who have failed any of the corresponding courses in the old curriculum will have to do the entire new course in the revised curriculum.

Please note:
The following old courses do not have new/revised corresponding courses in the Bachelor of Informatics Honours (new curriculum), and will be offered until the Bachelor of Information Technology Honours in Business Computing (old curriculum) is phased out completely in 2021:

- IT in Logistics Management (ILM812S)
- Accounting Information Systems (AIS822S)

MASTER OF DATA SCIENCE **09MADS**
(New - Phased in 2022)

NQF Credits: 240

Description
The Master of Data Science is designed to provide students with sound theoretical, research and professional skills in data science. The programme will further, equip students with skills relevant to create, validate and transform data and derive insight from data. Students will gain deepened knowledge of contemporary data management and analysis technologies, including those for data collection, processing and storage, visualisation, cloud-based infrastructure, and software project management. More crucially, students will learn how to properly present and communicate results and data-driven insights to maximise their impact on business and industry.

Graduates will be capacitated to respond to the need in the industry for advanced data analytics skills, focused on various fields or application domains, including customer intelligence, bioinformatics and healthcare, agriculture, engineering, physics and its related sciences, computer vision, natural language processing and text analytics.

With this programme, students will also be able to work with vast amounts of (local and international) data in the industry, business, and government, using appropriate techniques and analytical tools and software to conduct data analytics and solve complex data-driven problems. They will be independent, with a strong personal and work ethic, and a desire to contribute towards, and effect change in the community and broader work environment. The programme is further, designed with an applied research component to enable students to contribute to research in Data Science. This is achieved through designing and executing a research study and effectively communicating the findings of their research output in the disciplines and fields related to data science, including artificial intelligence, machine learning, advanced data management, visualisation, and summarisation.

Criteria for Admission
Applicants may be considered for admission to this programme if they have a Bachelor Honours degree in any of the following fields: Computer Science, Informatics, Information Systems, Statistics, Engineering, Mathematics or Physics at NQF Level 8, or an equivalent qualification in a related discipline from a recognized institution with evidence of supervised research.

All applicants' proficiency in Mathematics for Data Science will be assessed. Applicants with a deficiency in mathematics (for data science) may be required to enrol for the relevant course to address the gap at the discretion of the Department.
Applicants are required to submit the following documents with their applications:

- A curriculum vitae, highlighting practical experience in Computing, Engineering, or data modelling. Applicants from other fields with professional experience in related fields may apply and will need to provide a resume highlighting the scope of experience and its relevance to data science.
- A written proposal or motivation for undertaking further studies.

Articulation Arrangements
Transfer of credits will be dealt with according to the NUST's regulations on Recognition of Prior Learning. These provide 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.
The Master of Data Science would ordinarily provide access to further studies in the same, or a related cognate area of learning, at NQF Level 10.

Mode of Delivery:
The programme will be delivered on full-time and/or part-time mode in accordance with NUST rules and at the discretion of the department and based on the yearly intake.

Requirements for Qualification Award:
The Master of Data Science degree will be awarded to students credited with a minimum of 240 NQF credits at NQF Level 9, and who have met the detailed requirements as set out below. Students are required to do compulsory courses (worth 140 credits), and a Thesis (worth 100 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
ASP911S	Advanced Statistics and Probability	None	9	20
DME911S	Data Management, Ethics and Security	None	9	20
TAI911S	Trends in Artificial Intelligence and Machine Learning	None	9	20

Semester 2

KDM912S	Knowledge Discovery and Data Mining	Advanced Statistics And Probability	9	20
STD912S	Software Tools for Data Science	None	9	20
RIT912S	Research Methodology	None	9	20

Year 2

Semester 3

Course Code	Course Title	Prerequisite	NQF Level	NQF Credits
DAO923S	Data Analytics Optimisation	Knowledge Discovery and Data Mining	9	20
Semester 3 and 4 (Year Course)				
DST923S	Thesis	Research Methodology	9	100

Assessment strategies

Courses will be assessed through diversified continuous assessment. For each of the courses, there will be a minimum of four (4) assessment activities. Continuous Assessments with Feedback will focus on the use of progressive, sufficient assessment events and evidence as a feedback tool to promote and improve learning and teaching approaches, and attaining the competencies required to demonstrate exit level outcomes rather than an accumulation of final pass marks through a series of assessment events. Intra-semester assessments will require prompt and constructive feedback.

Flexible and valid instruments will be used. Assessment methods will take the form of problem-solving exercises, and include, depending on the core skills expected to be demonstrated in relation to exit level outcomes, a combination of written questioning, observation of performance through written assignments, written tests, and individual or group assignment and presentations, case studies, report writing, and practical projects. The thesis will be assessed following the NUST's rules for studies at a postgraduate level. All courses require a final mark of at least 50% to pass.

Quality Assurance Requirements

Moderation of assessments will be done in accordance with the NUST's general rules and guidelines on moderation.
Each course (please refer to the detailed Qualification Requirements) will have one or more examiners and one or more moderators. Moderators will be identified from outside the Namibia University of Science and Technology and approved by the Senate. The required minimum qualification of the moderator should be a Doctoral degree, preferably in a field related to data science, including computer science and statistics, or the person must be a recognised expert in the field. Lecturing staff will set and grade assessments and/or examinations in accordance with set memoranda. Assessment instruments and memoranda will, together with relevant study material for that course and other material containing course learning outcomes in the context of the qualification learning outcomes, be forwarded to the moderator for moderation purposes.

The thesis will be moderated in accordance with the Namibia University of Science and Technology's rules for studies at a postgraduate level. Stakeholders will be invited to attend and comment on seminars and other presentations. This will ensure the quality of the assessment and the qualifications.
The following additional quality assurance arrangements will apply:

- Every course will be evaluated by the students immediately after its closure using an appropriate evaluation survey form - this will include student evaluation of lecturers,
- Course contents/syllabi will be updated each semester before the course is offered,
- The curriculum review cycle will be Five years, regardless of changes, and
- Wide and in-depth consultation and benchmarking of the Programme will be done nationally and internationally

MASTER OF INFORMATICS (Revised - Phased in 2021) 09MAIN

NQF Level: 9 **NQF Credits: 240** **NQF Identification ID:Q0506**

Description

The revised Master of Informatics programme is applied research-based (thesis) programme, designed to expand students' knowledge and expertise in Business Informatics, Web Informatics and other fields related to Informatics. Students will develop a thorough understanding of relevant methodological approaches, and develop competence in the application of theory, concepts, constructs and appropriate models for applied research including descriptive, explicative and simulation through participation in research activities and tasks to acquire understanding under the supervision of experienced supervisor.

The programme builds on previously acquired theoretical and practical knowledge at NQF level 8 and other scientific and industrial experience of the students to investigate and develop novel innovative ideas and products to solve problems in the field of Informatics.

The degree is designed for the candidates with Informatics background who seek to deepen and enhance competencies in their specialised areas. The programme will create a critical mass of skilled individuals in the field of Informatics that are of great need in the country and the world.

The end product of a Master of informatics study is the thesis, a research task completed under the guidance of supervisor that improves student's understanding to the field and prepares the graduate to embrace scientific approach in solving problem. The Master's degree programme in Informatics will provide guidance, training and mentorship for students from various Informatics-related fields, with the aim of preparing the next generation of Informatics experts and researchers.

Criteria for Admission

Applicants who hold a Bachelor Honours, NQF level 8 from recognised institutions, or equivalent qualifications, in disciplines related to Informatics may be considered for admission into this programme. Applicants need to provide evidence of having conducted supervised research and may be required to make-up specific deficiencies in coursework at the discretion of the Higher Degrees Committee. In addition, applicants may be required to attend a pre-selection interview and or a test at the discretion of the department, particularly when applicant's coursework are considered to be at variance to the admission requirement of the programme. The Higher Degree Committee (HDC) will approve the final selection and admission of the candidates in accordance with the regulations as specified by the Rules for Postgraduate Studies of NUST. Registration prior to the approval of a research proposal is provisional and will be made official only when the Higher Degrees Committee approves the proposal. These procedures will be fully explained to each prospective student during his or her personal interview.

Applicants from other institutions must submit detailed information on all courses in their previous qualifications, as well as contact details of three referees. The latter also applies to applicants who have been working in the field after obtaining their previous qualifications. Exceptions may be approved by the Higher Degrees Committee, and all admissions are at the discretion of the Faculty Postgraduate Committee.

Articulation Arrangements:

The Master of Informatics will ordinarily provide access to further studies in Informatics, or a related cognate area, at Doctoral degree level, i.e. NQF Level 10.

Mode of Delivery:

This programme will be offered by research on a full-time and part-time delivery modes of study and in accordance with Namibia University of Science and Technology rules.

Assessment Strategies

Students are expected to submit and present a research proposal and research plan for approval after six months for full-time and (by the end of the first year in case of part-time students) to the Higher Degrees Committee. It is compulsory that students attend regular research methodology seminars until successful defense and approval of their research proposal. In addition, 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 HDC, 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 Namibia University of Science and Technology. The thesis will be returned to students for correction, similarity checks and language editing before final binding and archiving. Final marks will only be released after correction of the thesis.

Any other special arrangements on assessments will be done in accordance with the university's rules and procedures for postgraduate studies.

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 Namibia University of Science and Technology's requirements as detailed in the rules for postgraduate studies.

Students are *encouraged* to *submit* at least one manuscript for publication in refereed journal or book chapter or peer-reviewed proceedings of conference, symposium, and workshop and provide a proof of the submitted manuscript. The submitted work in peer-reviewed sources should be in the area of the student thesis. In addition, students should meet the administrative and financial requirements spelt out in Part (1) of the Namibia University of Science and Technology Yearbook.

The minimum study period for the degree of Master shall be as determined by the notional learning hours required for each degree and the learning path provided by the different departments to provide for the attainment of the curricular requirements. The minimum period of registration for a master's degree for full-time studies shall be two years and a maximum three years and for part-time studies shall be a minimum of four years and a maximum of six years.

The maximum study period for the degree of Master shall not exceed twice the recommended study period for such degree and may only be extended at the discretion of Senate. Students who fail to complete the degree within the maximum study period must re-apply for admission to the degree.

Transition Arrangements
The revised Master of Informatics (revised curriculum) will be phased-in 2021 with minimal disruption to existing students' learning progression. The current programme (old curriculum) will be completely phased out by the end of 2020 after which students must automatically switch to the revised programme (new curriculum) and fulfil all requirements based on the new curriculum.

DOCTOR OF PHILOSOPHY IN INFORMATICS (Revised -Phased in 2021) 10DPIN

NQF Level: 10 **NQF Credits: 360** **NQF Identification ID:Q0507**

Description

The PhD in Informatics was conceptualised against the backdrop of the above imperatives in order to train scientific researchers in various fields of study related to Informatics (e.g. Business Informatics and Web Informatics). Students will develop a thorough understanding of relevant methodological approaches, and develop competence in the application of qualitative, design, mixed-mode and quantitative research methodologies through participation in research projects under the supervision of experienced staff members. The precise focus of the research will be determined through dialogue between the candidate and supervising staff and will fall within the scope of the approved research clusters of the Faculty of Computing and Informatics.

The development of research competence has prime priority in the context of this PhD programme. Students are required to investigate, design, and conduct independent research, where Informatics is the research focus, apply advanced methods and techniques and/or deal with a sophisticated application problem connected with the topic of interest. The research output, in the form of a thesis, must contribute meaningfully and substantially to the existing body of knowledge in the field/area of specialisation through comprehension, application, analysis, synthesis and evaluation of existing knowledge.

Admission Requirements

Applicants who hold qualifications from recognised institutions at NQF level 9, or equivalent, in Informatics or related cognate areas, may be considered for admission to this programme. Applicants need to provide evidence of having conducted supervised research at this level. In addition, applicants may be required to attend a pre-selection interview at the discretion of the department. The Higher Degrees Committee will approve the final selection and admission of candidates.

Registration prior to the approval of a research proposal is provisional and will be made official only when the Higher Degrees Committee approves the proposal. These procedures will be fully explained to each prospective student during his or her personal interview.

Articulation Arrangements

The PhD in Informatics is a terminal qualification hence articulation arrangements are not applicable.

Assessment Strategies

Students are required to submit a research proposal six months after registration for approval by the Higher Degrees 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 a work-in-progress report 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 appropriately constituted committee in accordance with the rules for postgraduate studies at the University of Science and Technology. The thesis will be returned to students for correction before final binding and archiving. Final marks will only be released after correction of the thesis.

Any other special arrangements on assessments will be done in accordance with the University's rules and procedures for postgraduate, namely PhD studies.

Mode of Delivery

By Research Only

Requirements for Qualification Award

The Doctoral degree shall be awarded to candidates credited with a minimum of 360 credits at NQF Level 10 and who have complied with all the requirements laid down in the University's rules and procedures for postgraduate studies leading to the award of research degrees. 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.

Students will be required to satisfy the following additional condition: At least two manuscripts published/accepted for publication in refereed journals and/or book chapters and/or peer-reviewed proceedings of conferences, symposiums, and workshops. Full bibliographical details must be provided for each publication. For each publication indicated as being "accepted for publication" (not published yet), a copy of the letter of acceptance from the relative authority must be submitted. The submitted work in peer-reviewed sources should be in the area of the student thesis. In addition, students should meet the administrative and financial requirements as spelt out in part one (1) of the NUST Yearbook. A minimum of three (3) years and a maximum period of five (5) years are required to complete the programme, if registered on the full-time mode. A minimum of six (6) years and a maximum of eight (8) years is required if registered on a part-time mode. The study period may be extended with the express approval of Senate.

Teaching and Learning
By Research Only

Transition Arrangements
The old PhD in Informatics will phase out in 2020; the Revised PhD in Informatics will take effect from 2021.

Quality Assurance Arrangements
Qualified academics and practitioners with Doctoral Degrees will do the final assessment of the thesis. The examiners must be knowledgeable and respected individuals in the field with experience in assessment of postgraduate scientific reports or theses and will be appointed by Senate upon the recommendation of the Higher Degrees Committee.

DEPARTMENT OF JOURNALISM AND MEDIA TECHNOLOGY **Code**

BACHELOR OF JOURNALISM AND MEDIA TECHNOLOGY HONOURS **08BJOH**
(Revised - Phased in 2021)

NQF Level: 8 **NQF Credits: 150** **NQF Identification: Q0678**

Description
The Bachelor of Journalism and Media Technology Honours is an initial postgraduate Degree, registered at National Qualifications Framework (NQF) level 8. This programme builds on the outcomes of the Bachelor of Journalism and Media Technology Degree and aims at consolidating and deepen the knowledge and skills of students in the main cognate area of learning, as well as developing their capacity to conduct supervised research of an applied nature. This will enable students to analyse theoretical material and demonstrate independent and critical analytical skills. The programme requires an advanced level of conceptual and analytical ability as well as intellectual autonomy. The Bachelor of Journalism and Media Technology Honours Degree is structured to enable students to practice in the field of Journalism and Media Technology while interacting with people and organisation through the media.

Bachelor of Journalism and Media Technology Honours has been revised to ensure its continued relevance, as well as compliance with the NUST Curriculum Framework and the NQF requirements. This revised programme addresses the ongoing need for qualified Journalism and Media Technology experts in both the public and private sectors, as confirmed by members of the PAC during consultations.

Admission Requirements
Candidates will be considered for admission to the Bachelor of Journalism and Media Technology Honours Degree if they have a Bachelor of Journalism and Communication Technology or a Bachelor of Journalism and Media Technology Degree from NUST.

Alternatively, applicants with an equivalent qualification at NQF level 7 or a relevant three-year Bachelor Degree (pre-NQF) from a recognised institution, of at least 360 credits, may be considered for admission into this Programme. Such applicants, however, may be required to make up specific shortcomings as deemed necessary, on a case-by-case basis by the department selection panel.

Applicants who are holders of a National Diploma in Journalism and Communication Technology (pre- NQF) shall be considered for admission on a case-by-case basis.

In keeping with departmental requirements, all applicants who qualify shall be required to write a General Knowledge Test and be interviewed.

Articulation Arrangements
Transfer of credits will be dealt with according to the University's regulations. 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 per qualification.

CURRICULUM

Year 1
Semester 1

Course Title	Course Title	Prerequisite(s)	NQF Level	NQF Credits
REM811S	Research Methods	None	8	15
MAG811S	Media and Globalisation	None	8	15
DJM811S	Development Journalism and Media	None	8	15
AAW811S	Advanced Academic Writing	None	8	15
Semester 2				
ICJ821S	Intercultural Journalism	None	8	15
SPR821S	Strategic Public Relations	None	8	15
Plus one of the following elective courses:				
MJM821S	Mini-Thesis	Media Research Methodologies	8	30
MRP821S	Media Research Production	Media Research Methodologies	8	30

Assessment Strategies
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- and group assignments and presentations, case studies, report-writing,

Table 17: Corresponding courses to be done, if courses on the old curriculum are failed (Please note this is not a credit table)

Course Code	Bachelor of Journalism and Media Technology Honours Degree (Old Courses)	Course Code	Bachelor of Journalism and Media Technology Honours Degree (New/Revised Equivalent Courses)
SEMESTER 1			
MRD811S	Media Research Methodologies	REM811S	Research Methods
MAG411S	Media and Globalisation	MAG811S	Media and Globalisation
DJM811S	Development Journalism and Media	DJM811S	Development Journalism and Media
AAW811S	Advance Academic Writing	AAW811S	Advance Academic Writing
SEMESTER 2			
ICJ821S	Intercultural Journalism	ICJ821S	Intercultural Journalism
SPR821S	Strategic Public Relations	SPR821S	Strategic Public Relations
MJM821S	Mini-Thesis	MJM821S	Mini-Thesis
MRP821S	Media Research Production	MRP821S	Media Production Project

Assessment Strategies
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- and group assignments and presentations, case studies, report-writing, practical application of skills and competencies, tutorials, projects and questioning (tests). In accordance with the University's policy on diversified continuous assessment, each course will have a minimum of six assessments.

The final Honours research project proposal (see appendix 1), the Mini-Thesis and Media Research Production (please refer to appendix 1) will be supervised throughout the semester. This assessment entails a supervisory meeting form (please refer to appendix1) in which the student's progress is recorded and signed by both the student and supervisor. A copy of this form will be filed and submitted to the Examinations Department together with the Mini- Thesis or Media Research Production. In the case of a student progress report indicating poor or no progress with the final research project, an intervention form (please refer to appendix 4) will be completed in the student's presence and submitted to the Head of Department.

The Mini-Thesis or the Media Research Production Project will be assessed in accordance with the University's rules for studies at postgraduate level.

Transition Arrangements
The Bachelor of Journalism and Media Technology Honours (old curriculum) will be phased out completely by the end of the 2020 academic year. The Bachelor of Journalism and Media Technology Honours (revised curriculum) will be offered in the 2021 academic year. There are no significant changes made to the revised curriculum, therefore, courses will only be offered based on the revised syllabi in 2021. Students however, will be granted credits on a course-by-course basis in accordance with Table 1 below.

Students who fail any of the courses in 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 detailed information on the new/revised corresponding courses.

The deadline for complete phasing out of the Bachelor of Journalism and Media Technology Honours (old curriculum) was end of 2020, after which students must automatically switch to the revised/new programme and fulfil the requirements based on the revised/new curriculum.

Table 18: Courses to be credited

Course Code	Bachelor of Journalism and Media Technology Honours Degree (Old Courses)	Course Code	Bachelor of Journalism and Media Technology Honours Degree (New/Revised Equivalent Courses)
SEMESTER 1			
MRD811S	Media Research Methodologies	REM811S	Research Methods
MAG411S	Media and Globalisation	MAG811S	Media and Globalisation
DJM811S	Development Journalism and Medi	DJM811S	Development Journalism and Medi

AAW811S	Advance Academic Writing	AAW811S	Advance Academic Writing
SEMESTER 2			
ICJ821S	Intercultural Journalism	ICJ821S	Intercultural Journalism
SPR821S	Strategic Public Relations	SPR821S	Strategic Public Relations
MJM821S	Mini-Thesis	MJM821S	Mini-Thesis
MRP821S	Media Research Production	MRP821S	Media Production Project

Table 19: Corresponding courses to be done, if courses on the old curriculum are failed (Please note this is not a credit table)

Course Code	Bachelor of Journalism and Media Technology Honours Degree (Old Courses)	Course Code	Bachelor of Journalism and Media Technology Honours Degree (New/Revised Equivalent Courses)
SEMESTER 1			
MRD811S	Media Research Methodologies	REM811S	Research Methods
MAG411S	Media and Globalisation	MAG811S	Media and Globalisation
DJM811S	Development Journalism and Media	DJM811S	Development Journalism and Media
AAW811S	Advanced Academic Writing	AAW811S	Advanced Academic Writing
SEMESTER 2			
ICJ821S	Intercultural Journalism	ICJ821S	Intercultural Journalism
SPR821S	Strategic Public Relations	SPR821S	Strategic Public Relations
MJM821S	Mini-Thesis	MJM821S	Mini-Thesis
MRP821S	Media Research Production	MRP821S	Media Production Project

MASTER OF JOURNALISM AND MEDIA TECHNOLOGY (Phased in 2019) 09MJMT

NQF Level: 9 **NQF Credits: 240** **NQF Registration ID: Q1111**

Description

The Master of Journalism and Media Technology is aimed at equipping students with highly specialised knowledge, skills and competencies in journalism practice, media technology and problem solving. This programme further provides students with an opportunity to conduct in-depth research, independently, using the scientific method and synthesis knowledge at the forefront of journalism and media technology, while adhering to the applied nature of the journalism profession. The degree allows students to interrogate and implement approaches that serve to influence the media house as an entity that interacts with academic institutions.

Admission Criteria

Candidates will be considered for admission into the Master of Journalism and Media Technology if they have a minimum of a Bachelor of Journalism and Media Technology Honours at NQF Level 8, or a 4-year pre-NQF qualification with a research component in the aforesaid fields, or equivalent qualification in a related discipline from any other recognised institutions. In either case, candidates should have proven evidence of having conducted supervised research.

Candidates may be required to attend a pre-selection interview and/or test at the discretion of the Postgraduate Studies Committee, to ascertain their competencies in respect of research.

Applicants from other universities should submit detailed information regarding courses successfully completed in previous qualifications, especially the research project or thesis. It is the responsibility of the student to ensure that they have at their disposal detailed information about the courses in qualifications conferred on them previously. The contact details of three referees should also be provided. This applies also to applicants who had been working in the journalism or media profession since obtaining the aforesaid qualifications. Admissions are done at the discretion of the Postgraduate Committee, who would also decide on exemptions to be approved.

Articulation Arrangements

The transfer of credits would be done in accordance with NUST's regulations regarding the Recognition of Prior Learning (RPL). Such an approach considers course-by-course credits, as well as credit transfer by volume, under certain conditions. The maximum credit that can be granted is 50 % of credits per qualification. No articulation is provided for the research component of this degree.

The Master of Journalism and Media Technology would ordinarily provide access to further studies at NQF Level 10 in the same or similar cognate area of learning.

Mode of Delivery

This qualification will be offered via the full-time block-release sessions in accordance with NUST rules and regulations.

Requirements for Award Qualification

The Master of Journalism and Media Technology will be awarded to candidates credited with a minimum of 240 NQF credits (all at Level 9). Students are required to complete four compulsory courses amounting to 80 credits, three elective courses amounting to 160 credits, which includes 120 credits in respect of either the Thesis or the Research Production. In addition, students must meet the administrative and financial requirements of NUST as set out in the Year Book, Part 1.

The programme will be offered in a flexible mode. However, the courses will be listed per semester in order to fit the regular curriculum structure.

CURRICULUM

Year1
Semester 1

Course Code	Course Title	Prerequisites	NQF Levels	NQF Credit
MED911S	Media Ethics in the Digital Age	None	9	20
CPR911S	Corporate Public Relations	None	9	20
Plus one of the following elective courses				
JFD922S	Journalism for Development	None	9	20
BER911S	Business and Economics Reporting	None	9	20

Semester 2

ACJ921S	Advocacy Journalism	None	9	20
CRP921S	Critical Research Paradigms	None	9	20

Plus one of the following elective courses

SJB921S	Science Journalism and Bioethics	None	8	20
DMP921S	Digital Media Production	None	8	20

Year 2

Semester 3 and 4 (Year courses)

Students are required to select ONE of the following elective courses

JMT911S/ JMT912S	Thesis	Critical Research Paradigms	9	120
MRP911S/ MRP912S	Media Research Production	Critical Research Paradigms	9	120

Assessment Strategies

The courses will be assessed by means of diversified continuous assessment. For the purpose of ensuring the authenticity of assessment evidence, at least 50% of the assessment events that make up the final mark will be conducted under controlled conditions similar to those under which institutional examinations are conducted. In the event of the assessment conditions not being appropriate for the nature of the assessment, the lecturer and the department must take appropriate and rigorous steps to ensure such authenticity. In accordance with NUST's policy on diversified continuous assessment, each course will have a minimum of four assessment events. The Thesis and the Media Research Production Project will be assessed in accordance with the university's rules concerning post-graduate studies.

Quality Assurance Arrangements

Each course (please refer to the Detailed Qualification Requirements) offered in this programme will have one or more examiner (s) and one moderator. Only external moderators will be identified and contracted, and their minimum qualification would be a Master's degree with relevant industry experience. The moderators shall be respected experts in the field of Journalism, media technology and public relations, appointed by Senate. The academic staff will set and mark tests, assignments and/or examinations. Thereafter, the graded assessments, memoranda and course material, together with the course outline stipulating the desired learning outcomes, are to be forwarded to the Moderator. The system of moderation is in place to heighten the quality of assessment and the qualification as a whole.

As for the Thesis or Media Research Production Project, this will be moderated in accordance with NUST Rules and Regulations for post- graduate studies.

Transition Arrangements

This is a new programme – it does not replace any existing programmes (s). Therefore, transition arrangements are not applicable.

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OF SCIENCE AND TECHNOLOGY

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