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Disclaimer: All reasonable steps have been taken to ensure that the information contained in this booklet was accurate at the date of publication. NMMU reserves the right to make changes to the details (e.g. rules, admission requirements etc.) as published in this guide.

Prospective students are advised to consult the admissions department prior to applying and to consult the financial department to obtain the costs for their relevant programmes.

INTRODUCTION

Information Technology (IT) has become an indispensable, integral part of our everyday life. Behind almost all our financial, recreational, educational and communication activities is an integrated network of Information and Communication Technology.

If you are interested in studying towards a qualification in Information Technology, consider the School of Information and Communication Technology.

About us

We are a group of dedicated Information Technology (IT) experts who would like to assist you in realising your goal, whether it is to become a sought after IT Professional or starting your own business in the field of Information Technology.

The school is located at Summerstrand North Campus in Port Elizabeth. All our courses are offered at this campus, except for the Higher Certificate in User Support Services offered at Missionvale Campus.

The courses at the School of Information and Communication Technology are designed to give you a world class grounding in the fundamental principles underlying your chosen field of study. A significant part of your tuition time will be spent in our modern, well equipped laboratories, thus emphasising the practical and applied nature of the subject matter. At the School of ICT, you will be prepared for an interesting, challenging and rewarding career.

WHY SHOULD YOU STUDY IT @ THE SCHOOL OF ICT?

The IT Industry needs graduates with career-orientated knowledge

Our environment is driven by IT; traffic, television, telephones, and the medical world, almost everything we come into contact with. We wouldn't be able to live a 'normal' life without information technology playing an integral role in it.

In today's competitive market, graduates need various skills and specialised knowledge about their chosen field.

At the School of ICT, the focus throughout the three streams (Software Development, Support Services and Communication Networks) is career-oriented education.

Various career opportunities

A wide range of opportunities exist, which is continuously expanding. Employers include: government departments, computer manufacturers, network organisations, research and development organisations, insurance companies, commerce and industry, educational institutions, professional firms, mining companies and libraries. If you don't want to work in the formal sector, how about starting your own IT consulting business?

Positive aspects of a career in Information Technology include:

- Good salaries
- Always interesting
- Keeps you up-to-date
- Can be flexible
- Work anywhere in the world
- Always learning new things

Interesting research areas

At the School of ICT, we believe that research should be of benefit to the community and therefore focus our research on improving lives through the following research areas:

- Information security and governance
- Health informatics
- Usability and user experience

- End-to-end service management
- Enterprise knowledge engineering

Our students enjoy their studies and achieve at competitions

Our third-year and post graduate student projects often achieve top awards at national competitions such as the Microsoft Imagine Cup.

Some of our awards include:

2010

- Software Design: 3rd place
- Development: 1st & 2nd place
- Women in IT Award
- Community Award
- Game, Design and Development: 1st, 2nd & 3rd place

2011

- Imagine Cup , Windows Mobile Competition: 1st place

2012

- Nokia Lumia Hackathon: 1st, 2nd & 3rd place

Expertise

The School of ICT consists of dedicated staff members who are respected for their passion for education and the IT Industry, their research involvement and approach to new technology. The school liaises with industry through an Advisory Board to stay up to date with the latest developments and to ensure that we satisfy the needs of the current job market.

We welcome you to a school where every student is valued and trained to be an IT Professional.

World class facilities

- NMMU hosts the Sub-Saharan Africa Cisco Academy Training Centre (CATC), which is responsible for the training of instructors from Africa and the Middle East in Cisco Network Associate and Professional levels.

- Students studying Communication Networks become part of a global community, spanning 165 countries and 9000 academies.
- NMMU hosts the TETRA Academy, which is the first TETRA training facility in the world to be associated and integrated into a Higher Education Institution.
- TETRA is the radio communication technology that the South African Police used at the Nelson Mandela Bay Stadium for the FIFA Soccer World Cup.
- TETRA will be rolled out to the South African Police over the next 5 years.
- Through the Cisco and TETRA subjects, our students gain hands-on experience on over R20-million worth of network equipment.

OUR UNDERGRADUATE PROGRAMMES

The School of ICT offers the following undergraduate programmes:

HIGHER CERTIFICATE: INFORMATION TECHNOLOGY IN USER SUPPORT SERVICES

This qualification aims to produce graduates who are productive, competent, and able to work independently and can manage time effectively in entry-level technical user-support positions that span a wide range of computing environments requiring support personnel.

DURATION OF STUDY

The qualification extends over one year of full-time study.

ADMISSION REQUIREMENTS

- Provisional admission is based on levels obtained in your Grade 11 final and Grade 12 June/ September examinations; however, the final decision is based on your Grade 12 final exam results.
- A minimum Admission Point Score (APS) of 28 is required.
- Applicants, who do not meet the requirements for direct admission and have an APS of 22 to 27, will be referred for access assessment.
- Minimum statutory NSC requirements for higher certificate entry must be met.
- English, Afrikaans or isiXhosa (home language or first additional language) on at least level 3 (40-49%).
- NSC achievement rating of at least 2 (30-39%) for Mathematics or 3 (40-49%) for Mathematical Literacy.

CURRICULUM

Module	Presented	Module code	Estimated Cost (2012)
Information Technology Skills I	Semester 1	ITS 1011	R 2 280
Technical Support	Semester 2	TSS1012	R 2 280
User Support	Semester 2	USS1012	R 2 280
Information Systems I	Semester 1	WIH1011	R 2 280

ESTIMATION OF FEES

Fees are determined by NELSON MANDELA METROPOLITAN UNIVERSITY Council. Fees estimated in this booklet are subject to change as amendments to the structures and policies will affect estimated amounts. The fees in this estimation can only be confirmed after registration of the student. Any estimation in respect of future academic years will be subject to the annual increase in fees.

FURTHER STUDIES

The qualification can lead to further studies towards a National Diploma: Information Technology (Support Services). Take note that an average of 60% is required if an applicant wishes to proceed to the Diploma. Candidates must perform satisfactorily in the NMMU assessment test. Admission is subject to departmental selection.

NATIONAL DIPLOMA: INFORMATION TECHNOLOGY (SUPPORT SERVICES)

It is difficult to imagine a part of our modern lives untouched by computers in some way. There are the obvious cases when you e-mail a friend, send a text or Google for information. You might buy something online or book tickets to a movie or music concert. Even something as simple as buying bread and milk from a shop involves the purchase being recorded using cash registers.

Computers or even automated production systems are in our factories and the offices that provide services. If you look carefully, you will see the wireless network antennas at our traffic lights that link them to central control. Like the blood pumping through your veins carrying oxygen to where it is needed so that you can function, so ICT keeps our society and our businesses running. Most people do not want to worry about the computer systems that enable them to achieve their goals. Somebody needs to ensure that the ICT services run smoothly and if anything goes wrong, it is fixed as quickly as possible. This is what people who work in IT support services do.

Just as there are many different uses for IT, there are many aspects to IT support services and different areas of specialisation. The one thing that ties all of IT support services together is the focus on the needs and goals of those using IT. People working in IT support not only enjoy working with technology and solving problems, but care about people and their concerns.

IT support services could involve:

- Helping users directly with their computer problems either in person or via telephone or email.
- Providing guidance and training in the use of new computer systems.
- Researching information and providing advice to the users on what technologies would best serve their needs.
- Evaluating new technologies and determining their potential to improve how things get done.
- Administering the information systems or computer networks to ensure they keep working so the information keeps flowing.

IT Support Services can be a demanding career and can involve anything from being the single IT guru in a small business to a highly-skilled specialist (for example in computer networks) in a large support team for a major national or even international company. If you enjoy a challenge, solving problems and knowing that what you do has a direct impact on peoples' lives then a career in IT Support Services might be for you.

The learning programme aims to equip students with the necessary skills to provide first level technical support to end-users in either a telephonic helpdesk or on-site capacity. The programme also provides the foundation for career development into administrative and managerial contexts in the area of information technology support.

WHY STUDY SUPPORT SERVICES?

The field of IT support services appeals to those who like the challenge of solving problems and who want their actions to have a direct impact on the lives of others. While the work entails technical knowledge, the focus is very much on using your knowledge and skills to solve user problems and improve the productivity of computer use. With the prevalence of computer usage and the reliance people place on technology this field allows the IT support services worker to make a direct contribution to enabling the users to accomplish their goals.

CAREER OPPORTUNITIES

The computer industry is a fast changing field so the careers that exist to directly support the use of these technologies would also see rapid development and change. Careers can range from general user support to more specialised careers.

General user support involves responding directly to user requests and either solving many of these problems directly by providing technical assistance or by assisting the user in obtaining more specialised services or products. Such a position can go by many different names such as Help Desk Support Representative or IT Support Technician.

It is also possible to work in a more specialised role such as an Information Technology Specialist in a particular area. One common area of specialisation is that of computer networks. In these types of role the support worker will be faced with the more challenging technical difficulties of their area of specialisation which are typically beyond the more general skills of the general support technician.

Another common area of specialisation is that of IT trainer which involves the development of training materials and the subsequent training of users in the effective use of the technology.

PERSONALITY CHARACTERISTICS REQUIRED FOR SUPPORT SERVICES

In order to study in this field you need to have an interest in technology. In addition you need to accept that change is inevitable and you will not be able to just carry on year after year with the same knowledge and skills. By embarking on this route you are choosing to continue life-long learning. You also need to have a desire to help people as this is at the core of the field and you need to get satisfaction out of solving people's problems.

DURATION OF STUDY

The qualification extends over three years of full-time study.

ADMISSION REQUIREMENTS

- Provisional admission is based on levels obtained in your Grade 11 final and Grade 12 June/ September examinations; however, the final decision is based on your Grade 12 final exam results.
- A minimum Admission Point Score (APS) of 32 is required.
- Applicants who do not meet the requirements for direct admission and have an APS of 26 to 31, will be referred for access assessment.
- Minimum statutory NSC requirements for diploma entry must be met.
- English, Afrikaans or isiXhosa (home language or first additional language) on at least a level 3 (40-49%).
- NSC achievement rating of at least 2 (30-39%) for Mathematics or 4 (50-59%) for Mathematical Literacy.
- Computer Applications Technology and/or Information Technology are recommended.

OR

Higher Certificate: ICT (User Support Services) with an average of 60% or above, subject to the discretion of the School Management Committee. An applicant may be referred for assessment on the Access Assessment Battery and any other relevant assessment before an admission decision is reached.

CURRICULUM

FIRST YEAR			
Module	Presented	Module code	Estimated cost per module(2012)
Development Software I	Year	SDS1000	R 4 000
Information Technology Skills I	Year	SIS1000	R 4 030
Systems Software I:IT Essentials	Semester 1	WCI1601	R 2030
Systems Software I: Networks	Year	WCI1600	R 2030
Information Systems IA	Year	WIH1370	R 1 840
Information Systems IB	Year	WIH1380	R 1 840
SECOND YEAR			
Communication Networks II	Year	SCN2000	
Systems Software II	Year	SSI2000	
Support Services II	Year	SSO2000	
Information Systems II	Year	WIH2100	
THIRD YEAR			
Information Systems III	Year	SIH3000	
Installation Management III	Year	SIM3000	
Support Services III	Year	SSO3000	
Communication Networks III A + Communication Networks III B OR Graphical User Interfaces	Semester 1 Semester 2 Year	WCN3011 WCN3012 SGU1000	

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FURTHER STUDIES

The qualification can lead to further studies towards a BTech: IT, MTech: IT and PhD in Information Technology.

NATIONAL DIPLOMA: INFORMATION TECHNOLOGY (SOFTWARE DEVELOPMENT)

Information Technology is part of our everyday life. We use it at home, school, shops and almost everywhere we go. When we use the computer, cellphone, ATMs etc. we are presented with screens that require us to enter our information. This information is processed and we get other information back or some action could be taken.

If we take the example of using our cellphone, the cellphone has a program that allows us to interact with the cellphone and perform tasks relevant to that cellphone. Once we make a call, the call is recorded and we are billed for the call. All these tasks are programmed into the cellphone or on a server at the service provider. These programs are the software required for the tasks.

To provide users with useful programs, they need to be developed. This is called Software Development. A definition of Software Development is “the act of working to produce software.” Software Development includes everything that is involved from the initial idea to the final implementation of the system.

We can even link this to an artist. A piece of art needs an initial idea that is eventually created into a work of art. Another analogy is that of building a house. We need a design which is formulated from the initial requirements for the house. After the plan is drawn up the house can be built.

There are different approaches to software development. There is the structured approach to developing a solution or the incremental approach, where the software is developed piece by piece.

Let us look at the different aspects that need to be considered when developing software:

- *Systems Analysis and Design*
 - Checking for the need of the software
 - Gathering the requirements for the proposed software
 - Analysing the problem
 - Designing the software solution

- Implementation
 - Coding the solution
 - Testing the software
- Maintaining the software

To develop software, you need to understand systems analysis and design as well as the programming language/s used for the implementation of the software.

In the Systems Analysis and Design you need to consider where the information is coming from and where and how the information is stored. We will need to design the solution. This can be done using modelling tools e.g. UML, Unified Modelling Language. We will also need to consider which database management system is used by the user to store the information.

These days a key aspect to software development is the user interface design. What does the user see and use? If we look at gaming systems, the user interface is very important. The graphics need to be realistic and easy to follow. So in game software development, a big part of design is the graphics.

If you are writing the software for use on a cellphone, the size of the screen becomes a key aspect. Because the web has made it easy for companies to do business globally, software development for the web is becoming very important. Security is also becoming an important part of software development as the markets are now global and access is easy. In the implementation phase we need to consider the language/s and tools that will be used to code the solution. In the software development stream, the student will be taught to effectively solve business-related problems, and will be trained extensively in areas such as computer hardware, computer software, systems analysis and designs and implementation of software solutions.

A Software Developer needs to understand systems analysis and design, database systems, user interfaces and coding. As well as all of these, the programmer needs to use communication and documentation skills to gather the requirements from users and to communicate the progress on the development of the software. The understanding of the hardware and networking in which the software will operate is recommended so that the software developer can take them into consideration when developing a solution.

A Software Developer is an “artist” at work in the development of software. Often, software is developed by a team and therefore the software developer must be a good team player.

WHY STUDY SOFTWARE DEVELOPMENT

There is an enormous global demand for qualified software developers. It is an area of study that caters for both technical and artistic people.

CAREER OPPORTUNITIES

Possible careers include: programmers, business analysts, IT project managers, game developers and entrepreneurs.

PERSONALITY CHARACTERISTICS REQUIRED FOR SOFTWARE DEVELOPMENT

Apart from having the required problem-solving and technical skills, you need the ability to work in groups, handle deadlines, communicate effectively and work under pressure. In general, software development as a field is so wide there is room for virtually all personality types.

DURATION OF STUDY

The qualification extends over three years of full-time study.

ADMISSION REQUIREMENTS

- Provisional admission is based on levels obtained in your grade 11 final and Grade 12 June/ September examinations; however, the final decision is based on your Grade 12 final exam results.
- A minimum Admission Point Score (APS) of 32 is required.
- Applicants who do not meet the requirements for direct admission and have an APS of 26 to 31, will be referred for access assessment.
- Minimum statutory NSC requirements for diploma entry must be met.
- English, Afrikaans or isiXhosa (home language or first additional language) on at least a level 3 (40-49%).

- NSC achievement rating of at least 2 (30-39%) for Mathematics or 4 (50-59%) for Mathematical Literacy.
- Computer Applications Technology and/or Information Technology are recommended subjects.

CURRICULUM

FIRST YEAR			
Module	Presented	Module code	Estimated cost per module(2012)
Information Technology Skills I	Year	ITS1110	R 4 030
Development Software I	Year	ONT1000	R 3 999
System Software1: Networks	Year	WCI1600	R 2 030
System Software1: IT Essentials	Semester 1	WCI1601	R 2 030
Information Systems IA	Year	WIH1370	R 1 840
Information Systems IB	Year	WIH1380	R 1 840
SECOND YEAR			
Compulsory Modules:			
Internet Programming II	Year	ITP2000	
Development Software II	Year	ONT2000	
Technical Programming I	Year	PRT1000	
Information Systems II	Year	WIH2100	

THIRD YEAR		
Module	Presented	Module code
Compulsory Modules:		
Development Software III	Semester 1	ONT 3601
Development Software III: Project	Year	ONT 3660
Technical Programming II	Year	PRT2110
Graphical User Interface Design I	Year	SGU1000
Information Systems III: Systems Analysis & Design	Semester 1	WIH3601
Information Systems III: Advanced Design	Semester 2	WIH3602
Information Systems III: Project Management	Semester 1	WIH3661

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FURTHER STUDIES

The qualification can lead to further studies towards a BTech: IT, MTech: IT and PhD in Information Technology.

DID YOU KNOW?

Software development can be a very serious business and the School of ICT at NMMU excels at preparing students for this business. However, not all software is either serious or necessarily about business. The computer gaming industry has in recent years become the most profitable sector of the entire global entertainment industry. In the US alone, revenue generated by the computer gaming industry overtook both the movie industry (in 2005) and the music industry (in 2007). In 2008, revenue generated by the global computer gaming industry exceeded 54 billion US Dollars.

Many people are unaware of the fact that South Africa already has companies producing globally competitive games, especially in the online-gaming market. Game development has become a very viable career option for South African software developers. Students at the School of ICT are actively supported and encouraged should they choose to pursue this option. Our students are also exceptionally good at this kind of development and specifically excel at developing XNA based games for the Microsoft Windows platform and for the XBOX gaming console.

Since the inception of Microsoft's Imagine Cup competition, the School of ICT's students have completely dominated the game programming division of the South African leg of this competition. In 2009 and 2010, for example, students from the School of ICT were awarded the 1st, 2nd and 3rd place prizes in the gaming division of this competition. In 2008, our top gaming student ended in the top 50 Imagine Cup gaming entries in the world!

Game programming can be a lot of fun but, from a programming perspective, the basic skills needed to develop computer games are the exact same skills needed to develop serious business applications. A software development qualification from the School of ICT will prepare you for the "real" business world, but still leave you with the option of pursuing a career in game development.

NATIONAL DIPLOMA: INFORMATION TECHNOLOGY (COMMUNICATION NETWORKS)

Communication is a fundamental part of life. It is almost as important to us as air, water and food. The majority of today's communication occurs through technology and the ways in which we share ideas and information are constantly changing.

The 'human network' previously relied on face-to-face conversations – however, today, improved technologies continue to broaden the scope of communication. Of vital importance to the advancement of communication technology is the creation and interconnection of robust data networks.

Current networks have evolved to carry voice, video, data, and graphics between many different types of devices. An assortment of communication forms, which previously were separate, converted into a common platform. This platform provides access to many alternative communication methods that allow people to interact with each other efficiently and effectively.

Through the Communication Networks stream in the School of ICT, students will investigate, explore and learn about this networking platform. The Communication Network stream is designed to give students a world class grounding in the fundamental principles underlying their chosen field of study. The Communication Networks stream focuses on integrating many technologies varying from network security, wireless networks, Voice over IP, electronics, robotic components, information security, networking and programming.

This course is primarily a course for networking professionals with a solid grounding in supporting subject areas such as programming and fundamentals of electronics.

A significant portion of the tuition time is spent in modern, well equipped laboratories, emphasising the practical and applied nature of the subject matter. Through the Communication Networks stream, the students are well prepared for an interesting and rewarding career in designing, building, maintaining and managing secure computer networks.

If you enjoy challenging situations and innovative thinking, then Communication Networks could be an exciting and stimulating career path for you

WHY STUDY COMMUNICATION NETWORKS

The Communication Networks stream focuses on integrating many technologies varying from network security, wireless networks, Voice over IP, electronics, robotic components, information security, networking and programming. This course is primarily a course for networking professionals with a solid grounding in supporting subject areas such as programming and fundamentals of electronics.

Through the Communication Networks stream, you are well prepared for an interesting and rewarding career in designing, building, maintaining and managing secure computer networks.

CAREER OPPORTUNITIES

Possible careers include:

- PC/Desktop Technician : troubleshooting and maintaining PC hardware and software
- Network Engineer: design, implementation and maintenance of computer networks
- Network Administrator: maintenance of computer networks; administration of firewalls, routers, switches and network servers
- Voice Engineer: design , implementation and maintenance of Voice Over IP solutions
- LAN Engineer: design, implementation and maintenance of Local Area Networks
- WAN Engineer: design, implementation and maintenance of Wide Area Networks of large organizations
- Security Analyst: carry out and evaluate investigative work regarding potential threats; coordinate the implementation of security solutions
- Security Engineer: design, implementation and maintenance of security aspect of computer networks

PERSONALITY CHARACTERISTICS

Anyone who would like to study Communication Networks should be hard-working, enjoy working in groups, have an inquisitive mind, be prepared to go beyond the curriculum and be an independent thinker.

DURATION OF STUDY

The qualification extends over three years of full-time study.

ADMISSION REQUIREMENTS

- Provisional admission is based on levels obtained in your Grade 11 final and Grade 12 June/ September examinations; however, the final decision is based on your Grade 12 final exam results.
- A minimum Admission Point Score (APS) of 32 is required.
- Applicants who do not meet the requirements for direct admission and have an APS of 26 to 31, will be referred for access assessment.
- Minimum statutory NSC requirements for diploma entry must be met.
- English, Afrikaans or isiXhosa (home language or first additional language) on at least a level 3 (40-49%).
- NSC achievement rating of at least 3 (40-49%) for Mathematics.
- Computer Applications Technology and/or Information Technology are recommended subjects.

CURRICULUM

FIRST YEAR			
Module	Presented	Module code	Estimated cost per module(2012)
Information Technology Skills I	Year	ITS1110	R 4 030
Development Software I	Year	ONT1000	R 3 999
System Software I:Networks	Year	WCI1600	R 2 030
System Software I: IT Essentials	Semester 1	WCI1601	R 2 030
Information Systems IA	Year	WIH1370	R 1 840
Information Systems IB	Year	WIH1380	R 1 840

SECOND YEAR		
Digital Systems I	Semester 2	CII2012
Mathematics	Semester 1	CII2021
Distributed Systems II	Year	CNW2110
Development Software II	Year	ONT2000
Communication Networks II	Year	WCN2110

THIRD YEAR		
Digital Systems II	Semester 1	CII3011
Digital Systems III	Semester 2	CII3012
Distributed Systems III A: Network Operating Systems	Semester 1	CNW3011
Distributed Systems III B: Project	Semester 2	CNW3012
Support Services II	Year	SSO2000
Communication Networks III A	Semester 1	WCN3011
Communication Networks III B	Semester 2	WCN3012

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FURTHER STUDIES

The qualification can lead to further studies towards a BTech: IT, MTech: IT and PhD in Information Technology.

RESEARCH AREAS

The Institute for ICT Advancement (IICTA) is formal research institute that resides in the School of Information and Communication Technology.

Currently, we focus on the following research areas:

Information security and governance

Information is one of the most important assets in any organisation today. For this reason, it is important that information and its related information technologies are properly protected and secured.

The protection of these assets is a multi-dimensional discipline today involving, among others, the following: technical, managerial, legal, best practices, auditing, certification, compliance and many more.

We specifically focus on:

- Information Security Management
- Information Security Governance
- Information Security Standards
- Information Security Education and Awareness
- Risk Management

Health Informatics

Health informatics is a vibrant and topical area, which addresses the resources and methods that are used to optimise the acquisition, processing and application of health-related information and the systems that help one achieve this.

There are many areas of interest that can be researched, such as public health informatics, health informatics law, security and privacy in health informatics, health informatics standards and consumer health informatics.

We specifically focus on:

- eHealth services for people-centered healthcare
- Secure eHealth services
- ICT solutions to improve continuity of care across services
- Delivery of healthcare interventions using mobile computing platforms

- eHealth solutions for chronic diseases, home- and home-community based care and preventative programs
- Participatory approaches for Health Information Systems development

Usability and User Experience

The goal of the user experience work is to ensure that the products are easy and logical to use and that they provide a positive emotional experience to the user.

Usability combined with user experience refers to the product's ability to fulfil target users' goals and needs with effectiveness and efficiency in a specified context of use. Usability is a characteristic of the entire system, which includes the product, the user, the user's goals and the context of use.

The combination of all equates to human computer interaction. Architecture is used as a strategic instrument in this environment to broaden the audience for software adoption, customer satisfaction and, as a desired consequence, company revenue in different ICT communities.

We specifically focus on:

- User Experience (UX)
- Human Computer Interaction
- ICT for Development

End-to-end service management

IT exists to serve the business. This group adopts a services view on Information Technology provision. As such we question the value of IT services and seek to understand the value proposition of IT services. This allows us to design better IT services that provides not only the required utility, but does so with a predefined level of warranty. The group's interest includes technology, tactical and strategic interventions in the IT Service Design.

We specifically focus on:

- Demand Management strategies
- Infrastructure Security, including Information Security Management
- Access control
- Scalability in design

- Business process support
- Service Interface design
- Service Support

Enterprise Knowledge Engineering

The focus of this Group is on enterprise knowledge management and engineering, with a special focus on the human factors issues (societal, indigenous knowledge, human-technology interaction, technology acceptance, knowledge sharing, organisational issues, advanced skills development) over and above the technological issues.

The Group employs the principles of systems thinking to analyse enterprise knowledge domains and to propose appropriate technologies for supporting knowledge capturing, preservation and dissemination. An enterprise is defined in its wider context, referring to any grouping of people with a common goal using technology to support them in reaching that goal.

We specifically focus on:

- Enterprise engineering
- Enterprise architecture
- Enterprise knowledge modelling
- Indigenous knowledge modelling and systems
- Skills development for enterprise engineering
- Human factors in enterprise engineering

FREQUENTLY ASKED QUESTIONS

What is meant by the minimum admissions requirements?

The minimum admission requirements are those requirements which a prospective applicant must meet in order to be considered for a specific programme at NMMU. The table below explains what you need to achieve. Please note that the table refers to minimum entry requirements and the university may set additional requirements for specific programmes.

Qualification	Minimum Entry Requirement
Higher Certificate	Pass NSC, with a minimum of 30% in the language of learning and teaching of the higher education institution, together with any other university requirements.
Diploma	Pass NSC with a minimum of 30% in the language of learning and teaching of the higher education institution, coupled with an achievement rating of 3 (40–49%) or better in four recognized NSC 20-credit subjects, together with any other university requirements.

What is an Admissions Point Score (APS)?

APS stands for Admission Point Score. Each NMMU undergraduate programme requires a specific APS as a basis for admission to the programme. Applicants will need to meet the APS directly or fall within the testing band in order to be considered for a specific programme.

What is the APS testing band?

In order to apply for an undergraduate programme, your Admission Point Score (APS) must either meet the direct entry requirement or fall within the testing band indicated. If your APS score falls within the testing band you will be referred to write the Access Assessment Test before a decision is made whether to admit you to that programme.

However, if your APS falls below the testing band you need to consider applying for an alternative programme.

Is there a deadline for applications?

Yes, applications for undergraduate courses close on the first working day of August each year. Applications will still be accepted after this date but at a higher application fee. There is no guarantee that you will be accepted after this date as preference is given to applicants who submit their applications before the official closing date.

I want to study towards my Diploma in Information Technology, but I am not sure whether I would like to specialise in Support Services, Software Development or Communication Networks.

The modules for the three streams (specialisation areas) are exactly the same in the first year. If a student applies for one stream e.g. Communication Networks and would like to move over to another stream in the second year e.g. Software Development, the student can do so, if the admission requirements are met and the student passed all first year modules. The change is however subject to approval from the School Management Committee.

What type of salary will I earn with an IT qualification?

Locally the salaries typically range from R15 000 – R60 000 and more monthly. This is affected by one's experience, qualifications and career choices.

MONEY MATTERS

Which different types of fees are payable?

- **Application fees**

All prospective students are required to pay a non-refundable application fee which covers administrative costs.

- **Enrolment fees**

Enrolment fees are debited to a student's account and are payable annually.

- **Down-payments / Registration fees**

The down-payment is the first advance payment towards tuition fees. The amount will be credited towards your student fees account.

- **Tuition fees**

Tuition fees are calculated according to the number of modules elected or the study programme the applicant has applied for. These fees vary. A detailed account can only be provided once an applicant has registered at NMMU for a particular programme.

- **Residence fees**

Students who have been accepted into one of NMMU's residences will be required to pay a down-payment payable before registration, a residence breakage deposit as well as payment towards meals provided by the university.

What bursaries/funds are available at NMMU? And how do you apply for these?

- **Scholar Merit Awards**

The Scholar Merit Award scheme rewards top performing students for the marks achieved in the final Grade 12 exams. A greater discount on fees is awarded to students with higher marks. No application is necessary – the bursary is awarded automatically. Points are awarded for the symbols obtained in each of your seven NSC subjects and the amount is linked to the total merit points achieved.

- N M M U V i c e - C h a n c e l l o r ' s S c h o l a r s h i p s

The Vice-Chancellor recently introduced a premier scholarship to top achievers in the country. The scholarship, valued at R60 000 a year, is renewable annually for the first undergraduate degree or diploma, provided academic performance remains of the highest standard. Up to 25 Vice-Chancellor's Scholarships are granted each year. For more information phone: Marketing & Corporate Relations on (041) 504 3084.

- S t u d e n t M e r i t B u r s a r i e s

Returning students automatically qualify for merit bursaries based on the final results in their previous year of study. Students who pass all their modules with a weighted average mark of 70% (subject to change) or higher, receive a student merit bursary, the rand value of which is determined on a sliding scale. The minimum value is R3000. This award is only made to SA citizens.

- S p o r t B u r s a r i e s

The NMMU Sport Bureau offers sport bursaries of varying amounts to those who have demonstrated the ability to play sport at a high level of competition. Application forms are available from their office. E-mail: Charmaine.button@nmmu.ac.za or phone (041) 504 2496. Closing date: Before the end of October each year.

- N a t i o n a l S t u d e n t F i n a n c i a l A i d S c h e m e (N S F A S)

NSFAS is a government loan scheme, with the added incentive of a maximum of 40% being converted into a non-repayable bursary depending on academic performance. The purpose of these loans is to assist financially-needy students who have the academic potential to succeed. As loans do not necessarily cover all costs, students are encouraged to seek additional funding from other sources. Only students whose GROSS combined family income (mother and father) does not exceed R140 000 per annum need apply. Application must be made on the prescribed application form BEFORE 30 October each year. Application forms are available from all financial aid offices from May each year. Incomplete application forms will not be considered.

- B u r s a r i e s a d m i n i s t e r e d b y N M M U

Bursaries are also available to full-time students using funds provided by private donors or trustees. Applications for financial assistance from funds administered by NMMU must

be made on a financial aid application form. Application forms can be obtained from the Financial Aid Office on South Campus.

What is the difference between a loan, bursary and scholarship?

- **L o a n s**

Loans are awarded to applicants based on their need and family income. Loans are also always linked to interest rates. If you receive a loan you would be required to repay the loan in full as well as the accumulated interest.

- **B u r s a r i e s**

Bursaries vary in amounts and professions and are given to students in order to further their studies. In return for funding your studies, the company may require you to repay them by signing a work contract with them. Another type of bursary is a donor bursary (a bursary awarded to a deserving candidate in a specific field of study or in recognition for his/her work in a specific field of study).

- **S c h o l a r s h i p**

A scholarship is a financial award usually given to students based on their outstanding academic achievements. Recipients are not always expected to repay or work back the money they receive.

Who should I contact for information regarding finances?

For any financial queries, please contact:

South Campus:

+27 41 504 2550

North Campus:

+27 41 504 9960

Missionvale Campus:

+27 41 504 1242

THE ADMISSIONS PROCESS

The admission requirements are mainly based on symbols obtained in the Grade 11 or Grade 12 June/September examinations.

How to calculate your Admission Point Score (APS)

The APS system allocates point values to the levels of achievement obtained for your grade 12 subjects. Fill in your subjects in Table B (NSC subject) and enter the rating you obtained in the most recent examination (NSC Achievement Rating). Check the points you earn for each rating as shown in Table A and enter it in the last column (Points for APS). Calculate your APS as the sum of the entries in the points for the APS column.

Table A

NSC	NSC %	APS	APS Percentage
		8	90 – 100%
7	80 – 100%	7	80 – 89%
6	70 – 79%	6	70 – 79%
5	60 – 69%	5	60 – 69%
4	50 – 59%	4	50 – 59%
3	40 – 49%	3	40 – 49%
2	30 – 39%	2	30 – 39%
1	0 – 29%	0	0 – 29%

Table B

NSC Subject	NSC Achievement Rating	Points for APS
Total:		

Once you have calculated your APS, you can check whether you qualify for entry to the programme of your choice. The admission requirements for each undergraduate programme are listed in the section “Our Undergraduate Programmes”.

HOW TO APPLY

Collect an application form from any of our campuses or download an application form from our website: www.nmmu.ac.za

A correctly completed application form, with certified copies of your identity document and academic reports, must reach the Admissions Office before the closing date (in order to ensure adequate time for processing and placement testing, if required). Include the appropriate admission fee (non-refundable) when submitting your application form.

Once you have submitted your form you may be required to write a placement test (CAAR Testing). Admission or acceptance is subject to the minimum admission requirements and outcomes of the placement test.

Submission of a completed admission form does not imply that you have been accepted as a student, or that you may register. All applicants will be notified, in writing, of the outcome of their application.

For more information on this process contact:

South Campus:	+27 41 504 2593
North Campus:	+27 41 504 3911
Missionvale Campus:	+27 41 408 3252
E-mail:	admissions@nmmu.ac.za

STAY CONNECTED:

Visit our website:

www.nmmu.ac.za/sict

Join our Facebook page:

www.facebook.com/NMMU.IT

SCHOOL OF ICT CONTACT INFORMATION

Please do not hesitate to contact us if you need any further information or assistance.

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Karen Church

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Fax: (041) 504 9433

E-Mail: Karen.Church@nmmu.ac.za

Head of Department : Applied Informatics

Mark Thomson

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Faculty Officer

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Admissions Officer

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