2019

Faculty of
Military Science

Academic Programmes and Faculty Information

CALENDAR PART 13

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Accuracy, liability and changes

- Stellenbosch University has taken reasonable care to ensure that the information provided in the Calendar parts is as accurate and complete as possible.
- Take note, however, that the University's Council and Senate accept no liability for any incorrect information in the Calendar parts.
- The University reserves the right to change the Calendar parts at any time when necessary.

The division of the Calendar

- The Calendar is divided into 13 parts.
- Part 1, 2 and 3 of the Calendar contain general information applicable to all students. Make sure that you understand all provisions in Part 1 (General) of the Calendar that are applicable to you.
- Part 4 to 13 of the Calendar are the faculty Calendar parts.

Part	Calendar
Part 1	General
Part 2	Bursaries and Loans
Part 3	Student Fees
Part 4	Arts and Social Sciences
Part 5	Science
Part 6	Education
Part 7	AgriSciences
Part 8	Law
Part 9	Theology
Part 10	Economic and Management Sciences
Part 11	Engineering
Part 12	Medicine and Health Sciences
Part 13	Military Science

Availability of the Calendar parts

- The printed versions of the Calendar parts are available at the University's Information Desk in the Admin A Building, on the Stellenbosch Campus.
- The electronic versions of the Calendar parts are available at www.sun.ac.za/Calendar.
- There are English and Afrikaans (Part 1 to 12) copies available.

Table of Contents

How to use this Calendar Part

This section gives you guidelines for finding particular information in the different chapters in this Calendar part. Consult the table of contents for the page numbers of the chapters referred to below.

1. How to locate information

1.1 Prospective undergraduate students

- The General Information chapter contains information about:
  - Communication with the Faculty and University, which includes an explanation of the concept “student number” as well as relevant contact details where you can refer important enquiries to;
  - The University’s Language Policy and Plan and how it is applied by the Faculty; and
  - The degree programmes that you can enrol for and the qualifications that you can obtain, as well as important provisions that are applicable to programmes and modules.
- The Undergraduate Programmes chapter contains information about:
  - The minimum admission requirements for the various study programmes;
  - The Faculty’s undergraduate study programmes; and
  - The subjects and modules that must be taken per academic year for the different study programmes, with choices where applicable.
- The Subjects, Modules and Module Contents chapter contains:
  - An explanation of subjects as opposed to modules;
  - An explanation of the different digits used for the numbering of modules in the Undergraduate Programmes chapter;
  - Definitions of the language specifications of modules; and
  - Definitions of prerequisite pass, prerequisite and corequisite modules.
- Alphabetical list of undergraduate subjects is available in the back of this Calendar part.

1.2 Prospective postgraduate students

- The General Information chapter contains information about:
  - Communication with the Faculty and the University, which includes an explanation of the concept “student number” as well as relevant contact details where you can refer important enquiries to; and
  - The University’s Language Policy and Plan and how it is applied by the Faculty.
- The Postgraduate Programmes chapter contains information about:
  - The Faculty’s postgraduate study programmes;
  - The minimum admission requirements for the various study programmes;
  - Specific closing dates for applications, and other relevant information, for example selection for admission; and

- The subjects and modules that must be taken per academic year for the different study programmes, with choices where applicable.

1.3 Registered undergraduate students

- The General Information chapter contains information about:
  - Communication with the Faculty and the University with relevant contact details where you can refer important enquiries to; and
  - The University's Language Policy and Plan and how it is applied by the Faculty;
- The Undergraduate Programmes chapter contains information about:
  - The Faculty's undergraduate study programmes; and
  - The subjects and modules that must be taken per academic year for the different study programmes, with choices where applicable.
- The Subjects, Modules and Module Contents chapter contains information about:
  - An explanation of subjects as opposed to modules;
  - An explanation of the different digits used for the numbering of modules in the Undergraduate Programmes chapter;
  - The abbreviations and definitions used for the teaching loads of individual modules;
  - An indication at each module of what its teaching load is;
  - Definitions of the language specifications of modules, as well as an indication at each module of what its language specification is;
  - Definitions of prerequisite pass, prerequisite and corequisite modules, as well as an indication at each module of which of the requisites apply to it, if any; and
  - The aims, content and outcomes of each individual module.
- An alphabetical list of undergraduate subjects is available in the back of this Calendar part.

1.4 Registered postgraduate students

- Postgraduate Programmes chapter contains information about:
  - The Faculty's postgraduate study programmes; and
  - The subjects and modules that must be taken per academic year for the different study programmes, with choices where applicable.

1.5 Prospective students for the PhD in Military Science degree

- Postgraduate Programmes chapter contains information about:
  - The doctoral programme of study that is offered; and
  - The minimum admission requirements for the doctoral programme of study.

General information

1. History and functions of the Faculty

1.1. History

The Military Academy was established on 1 April 1950 under the auspices of the University of Pretoria, as a branch of the SA Military College (now the SA Army College) at Voortrekkerhoogte (now Thaba Tshwane). In 1953, the Military Academy would move to Saldanha, under the trusteeship of Stellenbosch University, from which successful candidates would receive a BMil degree. In January 1961, the Academy became a faculty in its own right – the Faculty of Military Science of Stellenbosch University.

1.2. Functions

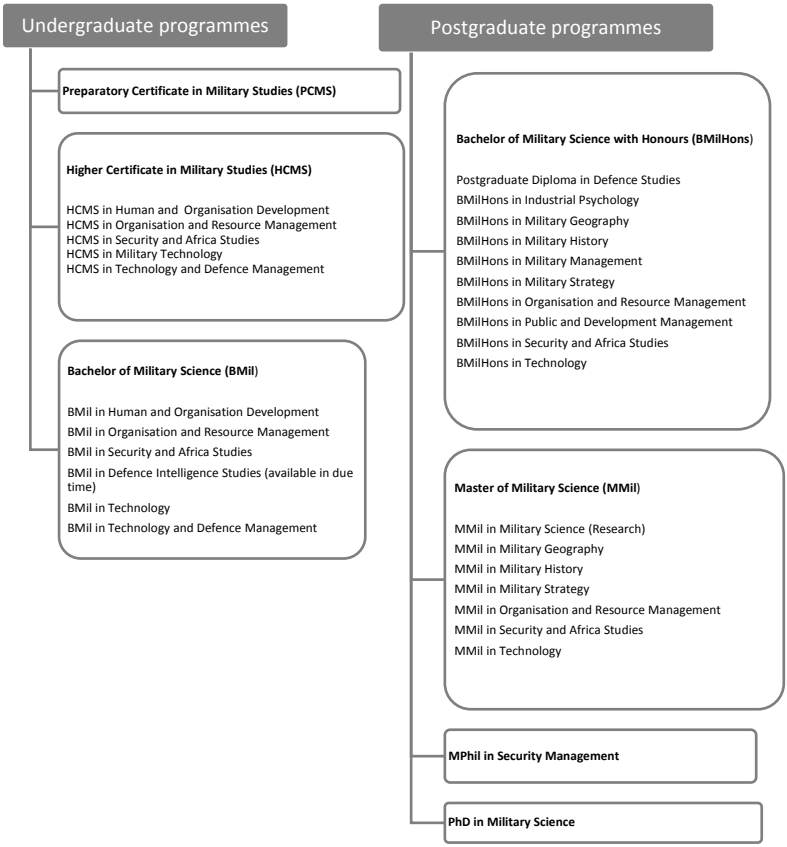
Stellenbosch University is the custodian of the Faculty of Military Science through a contractual agreement with the South African Department of Defence (DoD). The Faculty is located within the SA Military Academy in Saldanha Bay on the West Coast of South Africa. On our Campus, civilian and uniform members work together and learners are members of SA Army, SA Navy, SA Air Force, SA Military Health Services and members of the broader DoD. We develop the future military leaders of South Africa and our international partners such as Botswana, France, Mozambique and Namibia.

We are the only Faculty of Military Science in South Africa and our Faculty members have the opportunity to develop expert knowledge in their respective academic disciplines. Our academic programmes are fully accredited by the Council for Higher Education and we own an accredited research journal (Scientia Militaria). Our Faculty members are engaged in teaching, conducting security-related research and being involved in community interaction with the DoD, academic institutions and civil society.

The Faculty of Military Science has five academic schools. These schools are

- the School for Security and Africa Studies;
- the School for Defence Organisation and Resource Management;
- the School for Human Resource Development;
- the School of Science and Technology; and
- the School for Geo-spatial Studies and Information Systems.

2. Qualifications offered in the Faculty



3. Other services offered by Faculty

3.1. Academic development

- study and career guidance;
- life skills development;
- psychotherapeutic services; and
- academic support services.

3.2. Language service

Informal isiXhosa, isiZulu, SeSotho, French and German courses are available on request to staff and students.

4. How to communicate with the Faculty

4.1. Postal and physical address of the Faculty

Postal address

Direct specific enquiries related to the Faculty to the following address:
Faculty of Military Science
Private Bag X2
Saldanha
7395

Physical address

The Faculty of Military Science resides in the Military Academy, which is located on Frans Erasmus Drive in Saldanha on the West Coast.

4.2. Contact details of the Faculty

Faculty of Military Science	Telephone number	Fax number	E-mail address
The Dean Prof MS Tshehla	022 702 3003	022 702 3050	samuel@ma2.sun.ac.za
Faculty Administrator Ms MC Basson	022 702 3085	022 702 3050	basson71@sun.co.za
Faculty Admin Clerk Ms J Mac Lachlan	022 702 3017	022 702 3050	jeannie@ma2.sun.ac.za
Secretary of the Dean Mrs T Clarke	022 702 3019	022 702 3050	theresa@ma2.sun.ac.za
Centre of Military Studies Prof JCR Liebenberg	022 702 3095	022 702 3060	jcrl@ma2.sun.ac.za
Telematic Services Coordinator, Saldanha Dr R van Diemel	022 702 3128	022 702 3049	raymond@ma2.sun.ac.za
Stellenbosch University Library	021 808 4385/ 021 808 4883	021 808 4336	jsgbestel@exchange.sun.ac.za

5. How to communicate with the University

5.1. Using your student number

- The University allocates a student number to you when you apply to study at the University.
- The student number is your unique identification to simplify future communication with the University.
- Use your student number every time you communicate with the University.

5.2. Contact details of the University

You can send enquiries regarding your studies, bursaries and loans, and residence placements to the following address:

The Registrar
Stellenbosch University
Private Bag X1
MATIELAND
7602

You can send enquiries regarding finances and services, including services at University residences, to the following address:

The Chief Operating Officer
Stellenbosch University
Private Bag X1
MATIELAND
7602

Also visit the University's website at http://www.sun.ac.za.

5.3. Useful telephone numbers

Divisions on campus	Telephone number
Bursaries (Postgraduate candidates)	021 808 4208
Bursaries and Loans (Undergraduate candidates)	021 808 9111
Campus Health Services	021 808 3496 / 3494
Centre for Student Counselling and Development	021 808 3894
Examinations	021 808 9111
Stellenbosch University Library	021 808 4385 / 4883
Postgraduate Office	021 808 9436
Stellenbosch University International	021 808 4628 / 2565
Student Fees	021 808 4519
SU Campus Security (emergencies)	021 808 2333

For divisions not listed above, contact the Stellenbosch University Contact Centre at 021 808 9111, send a fax to 021 808 3822 or e-mail info@sun.ac.za.

6. Language at the University

Stellenbosch University (SU) is committed to engagement with knowledge in a diverse society and through the Language Policy aims to increase equitable access to SU for all students and staff. Multilingualism is promoted as an important differentiating characteristic of SU. Afrikaans, English and isiXhosa are used in academic, administrative, professional and social contexts. Pedagogically sound teaching and learning are facilitated by means of Afrikaans and English.
More information concerning language at SU is available on the website www.sun.ac.za/language.

7. The Faculty's implementation of the Language Policy

In terms of the contractual agreement between the Department of Defence and Stellenbosch University, the teaching and evaluation of all programmes in the Faculty of Military Science are conducted in English.

Undergraduate programmes

1. Bachelors of Military Science offered

The Faculty of Military Science offers the following three-year BMil degree programmes:

- BMil in Human and Organisation Development
- BMil in Organisation and Resource Management
- BMil in Security and Africa Studies
- BMil in Technology
- BMil in Technology and Defence Management

2. Admission to the BMil programmes

2.1. Application and selection

- Please direct your application for admission to the BMil programme to your specific service (Army, Navy, South African Military Health Services (SAMHS) or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.
- You will be admitted to the BMil degree programme only if you are selected to complete undergraduate studies by the Faculty of Military Science Selection Board.

2.2. Admission requirements with Senior Certificate (up to 2008)

Admission requirements applicable to all BMil programmes

After being selected for undergraduate studies by the Faculty of Military Science Selection Board, to be admitted to the BMil degree programmes requires that you must be in possession of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support such as academic literacy development, academic writing and reading and study skills.

Additional admission requirements applicable to specific BMil programmes

- For the BMil in Technology, you must have:
    - a D symbol (Higher Grade) in both Mathematics and Physical Science for the final matriculation examination; or
    - a B symbol (Standard Grade) in both Mathematics and Physical Science for the final matriculation examination.
- For the BMil in Technology and Defence Management, you must have:
    - an E symbol (Higher Grade) in both Mathematics and Physical Science for the final matriculation examination; or
    - a D symbol (Standard Grade) in both Mathematics and Physical Science for the final matriculation examination.
- For the BMil in Organisation and Resource Management, you must have:
    - an E symbol (Higher Grade) in Mathematics for the final matriculation examination; or
    - a C symbol (Standard Grade) in Mathematics for the final matriculation examination or
    - Passed Mathematics from any institution of higher learning at an appropriate level.

2.3. Admission requirements with National Senior Certificate as from 2009

Admission requirements applicable to all BMil programmes

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted to the BMil degree programmes, after being selected for undergraduate studies by the Faculty of Military Science Selection Board, you must be in possession of one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with
    - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
    - A mark of at least 4 (50% - 59%) in each of the four school subjects from the list of designated university admission subjects.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support such as academic literacy development, academic writing and reading and study skills.

Additional admission requirements applicable to specific BMil programmes

- For the BMil in Technology, you must have Mathematics 4 (50% - 59%) and Physical Science 4 (50% - 59%).
- For the BMil in Technology and Defence Management, you must have Mathematics 3 (40% - 49%) and Physical Science 3 (40% - 49%).
- For the BMil in Organisation and Resource Management, you must have Mathematics 3 (40% - 49%) or Mathematical Literacy 4 (50% - 59%) or passed Mathematics from any institution of higher learning at an appropriate level.

2.4. Admission to BMil by way of the Preparatory Certificate in Military Studies

- If you do not fully meet the admission requirements for BMil degree studies, but you have the necessary study potential, you may gain admission to the BMil degree programmes through the successful completion of this certificate programme.
- You can obtain detailed information regarding application procedures for the Preparatory Certificate from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085 or basson71@sun.ac.za.

3. General provisions

- You must follow all three years of your specific BMil degree programme at the Faculty of Military Science in Saldanha.
- The bracketed abbreviation (Mil) after a subject name indicates that the content of the subject, as presented at the Faculty of Military Science at Saldanha, may differ from that of the subject with the same name in Stellenbosch-based faculties.
- For degree purposes, Stellenbosch University recognises all first- and second-year modules successfully completed at the Faculty of Military Science in place of the corresponding first- or second-year modules presented in BA, BSc or BCom programmes of the University.
- All third-year academic subjects presented for the BMil degree may lead to one of the following degrees (in the relevant subjects) at Stellenbosch University, and also at other universities, but additional study may be required by the department concerned:
    - BAHons;
    - BScHons; or
    - BComHons programmes

4. Examination and promotion regulations

4.1. Reassessment

- The Faculty makes provision for only two examinations of equal value.
- You will undergo an oral or a written reassessment immediately after the first examinations (at the same time as the deferred examinations) to determine whether you pass or fail only if:
    - you have been unsuccessful in a module in any of the final examinations (May/June or November); and
    - you have qualified for reassessment by obtaining a final mark (calculated from the class mark and the examination mark in the ratio 40:60) of at least 40% after the first examination, in addition to obtaining an examination mark of at least between 30% and 39% in the first examination.

4.2. Determination of final mark

Except in the case of flexible assessment, where only a final mark applies, the determination of your final mark (0 – 100) for a module will take the following into account:

- your class mark (0 – 100), which is based on the assessments that you have done during the presentation of the module, and
- your examination mark (0 – 100), which includes your achievement in the final examination (and in the reassessment, if any), provided that:
    - A final mark of not less than 50 will be awarded to you if, in the final examination, you have obtained an examination mark of 50 or higher.
    - A final mark of less than 50 will be awarded to you if, in the final examination, you have obtained an examination mark of less than 40.
    - A final mark of less than 40 will be awarded to you if, in the final examination, you have obtained an examination mark of less than 30.
- In the calculation of your final mark, your class mark and examination mark will be combined in the ratio of 40 to 60 in the case of semester modules, and 50 to 50 in the case of year modules.

4.3. Admission to final examinations

You will not be admitted to the final examinations in a module unless you have obtained a class mark of at least 40 in the module, excluding:

- Where no class mark is required; or
- Where the class mark has been based on only one assessment.

4.4. Proceeding to a module

You can take a module in a specific year of study if you are only half of the credits of a single preceding year of the subject in arrears. This rule is subject to the relevant corequisite, prerequisite and prerequisite pass requirements and dependent on the class, test and examination timetables concerned.

4.5. Dean's Concession Examination

According to the University and the Faculty's requirements, the Dean could request the department(s) concerned to grant you a special examination(s) (Dean's Concession Examination).

5. Certificates

5.1. Preparatory Certificate in Military Studies (PCMS)

The Faculty of Military Science, in collaboration with the SANDF, provides an entry-level tertiary qualification (the Preparatory Certificate in Military Studies) to selected officers and candidate officers of the SANDF, as well as other defence forces. You can register for the Preparatory Certificate in Military Studies if you:

- do not comply with the minimum admission requirements for degree studies at the University or the Faculty, and/or
- did not achieve matriculation exemption, with an entry-level tertiary qualification.

Programme duration

The programme is presented twice a year, once each semester.

Programme outcomes

- This programme will equip you with the generic technological, managerial, interpersonal and communication skills that will contribute to your personal and professional growth and empower you to perform your professional duty to the fullest.
- You may gain access to the BMil programmes of the Faculty of Military Science through the successful completion of this programme.
    - However, final admission to a BMil programme is still subject to selection and the specific admission requirements for the BMil programme.
    - You may gain admission to a specific BMil programme by achieving the prescribed performance level in one or both of the Introduction to Technology modules (where applicable), as well as the prescribed aggregate performance level for the programme as a whole. Your admission depends on the career managers from the different services and the Selection Board decision.

Programme contents

The programme consists of:

- Three compulsory modules, namely Study and Life Skills, Introduction to Computers, English Writing and Communication; and
- Four optional modules, namely Introduction to Technology A, Introduction to Technology B, Introduction to Management, and Introduction to Human Behaviour and Cultural Studies.
    - Note that, as a prerequisite for selecting either or both of the optional modules Introduction to Technology A and Introduction to Technology B, you should have at least written the Mathematics paper in the final school examination.

5.2. Higher Certificate in Military Studies (HCMS)

General Provisions

The General Provisions that you can find in section 1.2 in this chapter apply to this Higher Certificate.

Examination and Promotion Regulations

The Examination and Promotion Regulations that you can find in section 1.3 in this chapter apply to this Higher Certificate.

Gaining access to BMil from Higher Certificate in Military Studies

The Department of Defence annually nominates a number of students to be considered by the University for admission to the BMil programme. These students are taken from the group of Higher Certificate students who have successfully completed the Certificate. You can be nominated for the BMil programme if you:

- Have achieved an average mark of at least 60% for the Certificate programme; and
- Comply with the full requirements of the first year of the BMil programme to continue with the second year of the BMil programme.

If you do not complete the BMil degree but have successfully completed the Higher Certificate in Military Studies, you will be awarded the Higher Certificate in Military Studies only.

5.2.1. HCMS in Human and Organisation Development

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Admission requirements with National Senior Certificate (NSC) as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the four school subjects from the list of designated university admission subjects.

- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Selection

- You can be admitted to the HCMS only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your application to your Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the HCMS programme.

Semester Credits

Semester Credits	Semester 1	Semester 2
Compulsory	56	44
Elective	12	36
Total Available Credits	68	80
Credits required for programme: 136 from 148		

Semester One (68 credits)

Compulsory modules

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Industrial Psychology (Mil)	114(12), 124(12)
Military Ethics	114(8)

Optional module

Criminal and Military Law	114(12)

Semester Two (80 credits)

Compulsory modules

Industrial Psychology (Mil)	144(12)
Military Leadership	144(8) P
Public and Development Management (Mil)	144(12)

Elective modules

Choose at least two of the modules in the table below. However if you did not select Criminal and Military Law in the first semester, then you select to do all the elective modules below.

Criminal and Military Law	144(12)
English Studies (Mil)	144(12)
Military Management	144(12)

Note regarding requisite modules

You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.

5.2.2. HCMS in Organisation and Resource Management

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination and an E symbol (Higher Grade) or a C symbol (Standard Grade) in Mathematics for the final matriculation examination.
- Passed Mathematics from any institution of higher learning at an appropriate level.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate (NSC) as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and

- A mark of at least 4 (50% - 59%) in each of the four school subjects (excluding Mathematics or Mathematical Literacy – see next bullet) from the list of designated university admission subjects; or
- A mark of at least 3 (40% - 49%) in Mathematics or a mark of at least 4 (50% - 59%) in Mathematical Literacy from any institution of higher learning at an appropriate level.

- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Selection

- You can be admitted to the HCMS only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your application to your Service (Army, Navy, SAMHS or Air Force).
  You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the HCMS programme.

Semester Credits

Semester Credits	Semester 1	Semester 2
Compulsory	48	24
Elective	36	60
Total Available Credits	84	84
Credits required for programme: 120 from 168		

Semester One (84 credits)

Compulsory modules

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Military Management	114(12)

Elective modules

Choose at least two of the modules in the table below.

Criminal and Military Law	114(12)
Economics (Mil)	114(12)
Financial Accounting (Mil)	114(12)

Semester Two (84 credits)

Compulsory module

Military Management	144(12)

Elective modules

Choose five modules from the table below.

Criminal and Military Law	144(12)
Economics (Mil)	144(12)
Financial Accounting (Mil)	144(12) P or
Statistics (Mil)	144(12)
Public and Development Management (Mil)	144(12)
Computer Inf. Systems (Mil)	154(12) or
English Studies (Mil)	144(12)

Note regarding requisite modules

You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.

5.2.3. HCMS in Security and Africa Studies

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate (NSC) as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and

  - A mark of at least 4 (50% - 59%) in each of the four school subjects from the list of designated university admission subjects.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Selection

- You can be admitted to the HCMS only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your application to your Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.

Notes

1. Military Geography is compulsory for Defence Intelligence students.
2. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the HCMS programme.

Semester Credits

Semester Credits	Semester 1	Semester 2
Compulsory	48	36
Elective	12	36
Total Available Credits	60	72
Credits required for programme: 120 from 132		

Semester One (60 credits)

Compulsory modules

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Military History	114(12)
Political Science (Mil)	114(12)

Elective modules

Choose one of the modules in the table below.

Economics (Mil)	114(12)
Military Geography	114(12)

Semester Two (72 credits)

Compulsory modules

Military History	144(12)
Political Science (Mil)	144(12)

Elective modules

Choose three of the modules in the table below.

Economics (Mil)	144(12)
English Studies (Mil)	144(12)
Military Geography	144(12)
Security Law (Mil)	144(12)

5.2.4. HCMS in Military Technology

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination and with a D symbol (Higher Grade) or a B symbol (Standard Grade) in both Mathematics and Physical Science for the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate (NSC) as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the four school subjects (excluding Mathematics and Physical Science – see next bullet) from the list of designated university admission subjects; and
  - A mark of at least 4 (50% - 59%) in Mathematics and a mark of at least 4 (50% - 59%) in Physical Science.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Selection

- You can be admitted to the HCMS only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your application to your Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085 or basson71@sun.ac.za.

Notes

1. Aeronautical Science (Mil) is compulsory for SAAF Pilot/Navigator students.
2. Military Geography is compulsory for Army students.
3. Nautical Science is compulsory for Navy Combat Officer students.
4. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
5. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the HCMS programme.

Semester Credits

Semester Credits	Semester 1	Semester 2
Compulsory	60 48	48 36
Elective	12	36
Total Available Credits	72 60	84 72
Credits required for programme:	Aircrew 120 from 156 Rest 120 from 132	

Semester One (72/60 credits)

Compulsory modules

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Physics (Mil)	114(12) C

Choose one of the options in the table below. The Aeronautical Science modules are seen as one.

Aeronautical Science (Mil)	114(12) and 124(12)
Military Geography	114(12)
Nautical Science	112(6) and 122(6)

Elective module

Mathematics (Mil)	112(8), 122(6)

Semester Two (84/72 credits)

Compulsory modules

Physics (Mil)	144(12) C P

Choose one of the options in the table below. The two Aeronautical Science modules are seen as one.

Aeronautical Science (Mil)	144(12) and 154(12)
Military Geography	144(12)
Nautical Science	144(12)

Elective modules

Choose any three modules from the table below.

Mathematics (Mil)	142(8) P; 152(6) P
Computer Inf. Systems (Mil)	144(12) PP
Statistics (Mil)	144(12)

5.2.5. HCMS in Technology and Defence Management

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination with an E symbol (Higher Grade) or a D symbol (Standard Grade) in both Mathematics and Physical Science for the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate (NSC) as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for HCMS studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the four school subjects (excluding Mathematics and Physical Science – see next bullet) from the list of designated university admission subjects; and
  - A mark of at least 3 (40% - 49%) in Mathematics and a mark of at least 3 (40% - 49%) in Physical Science.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Selection Process

- You can be admitted to the HCMS only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your application to your Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085 or basson71@sun.ac.za.

Notes

1. Aeronautical Science (Mil) is compulsory for SAAF Pilot/Navigator students.
2. Military Geography is compulsory for Army students.
3. Nautical Science is compulsory for Navy Combat Officer students.
4. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
5. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the HCMS programme.

Semester Credits

Semester Credits		Semester 1	Semester 2
Compulsory:	Aircrew	60	48
	Rest	48	36
Elective: Aircrew		12	36
Rest		24	48
Total Available Credits:		72	84
Credits required for programme: 120 from 156			

Semester One (72 credits)

Compulsory modules

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Physics (Mil)	124(12) C

Choose one of the options in the table below. The two Aeronautical Science modules are seen as one.

Aeronautical Science (Mil)	114(12) and 124(12) or
Military Geography	114(12) or
Nautical Science	112(6) and 122(6)

Elective modules

Choose one or both of the modules in the table below.

Mathematics (Mil)	124(12)
Military History	114(12) (Not available to Aeronautical Science students)

Semester Two (84 credits)

Compulsory modules

Physics (Mil)	154(12) C

Choose one of the following options. See the notes above for additional remarks.

Aeronautical Science (Mil)	144(12) and 154(12)
Military Geography	144(12)
Nautical Science	144(12)

Elective modules

Choose three or four options from the table below.

Statistics (Mil)	144(12)
Military History	144(12) (Not available to Aeronautical Science students)
Military Management	144(12)
Computer Inf. Systems (Mil)	144(12) PP
Economics (Mil)	144(12)
Security Law (Mil)	144(12)

6. Bachelor of Military Science (BMil)

6.1. BMil in Human and Organisation Development

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with a D aggregate in the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - a mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - a mark of at least 4 (50% - 59%) in each of the four school subjects from the list of designated university admission subjects.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission by way of the Preparatory Certificate in Military Studies

If you do not fully meet the abovementioned minimum requirements for degree studies, but you have the necessary study potential, the Preparatory Certificate in Military Studies (PCMS) provides you an opportunity as a prospective student to be admitted to the BMil degree programmes through the successful completion of this certificate programme.

Selection

- You will be admitted to the BMil degree programme only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your applications for admission to the BMil to your specific Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085 or basson71@sun.ac.za.

Notes

1. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
2. You can take a module of a specific subject in a specific year only if you have passed at least half the credit units of a single preceding year of that specific subject.
3. You can take a specific module in a specific year only if the class and examination timetables allow it.

4. Military Ethics is a prerequisite for Military Leadership.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the BMil degree programme.

Year One (136 credits)

Compulsory modules

Semester One

Computer Inf. Systems (Mil)	114(12)
Criminal and Military Law	114(12)
English Studies (Mil)	114(12)
Industrial Psychology (Mil)	114(12), 124(12)
Military Ethics	114(8)

Semester Two

Criminal and Military Law	144(12)
English Studies (Mil)	144(12)
Industrial Psychology (Mil)	144(12)
Military Leadership	144(8) P
Military Management	144(12)
Public and Development Management (Mil)	144(12)

Year Two (128 credits)

Compulsory modules

Semester One

Contract Law (Mil)	214(16)
Industrial Psychology (Mil)	214(16)
Interpretation of statutes (Mil)	214(16)
Public and Development Management (Mil)	214(16)

Semester Two

Applied Commercial Law	244(16) C
Industrial Psychology (Mil)	244(16), 254(16)
Public and Development Management (Mil)	244(16)

Year Three (144 credits)

Compulsory modules

Semester One

Applied Commercial Law	314(24)
Industrial Psychology (Mil)	314(24)
Public and Development Management (Mil)	324(24)

Semester Two

Industrial Psychology (Mil)	344(24)
Military Management	344(24)
Public and Development Management (Mil)	344(24)

Programme Credits 408

6.2. BMil in Organisation and Resource Management

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with:
  - A D aggregate in the final matriculation examination; and
  - An E symbol (Higher Grade) or a C symbol (Standard Grade) in Mathematics for the final matriculation examination; or
  - Mathematics from any institution of higher learning at an appropriate level.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support.

Admission requirements with National Senior Certificate as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with:
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at 3 (40% - 49%) in Mathematics or 4 (50% - 59%) Mathematical Literacy from the list of designated university admission subjects for the final matriculation exemption; or
  - A mark of at least 3 (40% - 49%) in Mathematics or a mark of at least 4 (50% - 59%) in Mathematical Literacy from any institution of higher teaching at an appropriate level

  A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support such as academic literacy development, academic writing and reading and study skills.

Admission by way of the Preparatory Certificate in Military Studies

If you do not fully meet the abovementioned minimum requirements for degree studies, but you have the necessary study potential, the Preparatory Certificate in Military Studies (PCMS) provides you an opportunity as a prospective student to be admitted to the BMil degree programmes through the successful completion of this certificate programme.

Selection

- You will be admitted to the BMil degree programme only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your applications for admission to the BMil to your specific Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.

Notes

1. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
2. You can take a module of a specific subject in a specific year only if you have passed at least half the credit units of a single preceding year of that specific subject.

3. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the BMil degree programme and is applicable to residential students only.

Year One (144 credits)

Compulsory modules

Semester One

Computer Inf. Systems (Mil)	114(12)
Criminal and Military Law	114(12)
Economics (Mil)	114(12)
English Studies (Mil)	114(12)
Financial Accounting (Mil)	114(12)
Military Management	114(12)

Semester Two

Criminal and Military Law	144(12)
Economics (Mil)	144(12)
English Studies (Mil)	144(12) or
Computer Inf. Systems (Mil)	154(12)
Financial Accounting (Mil)	144(12) P or
Statistics (Mil)	144(12)
Military Management	144(12)
Public and Development Management (Mil)	144(12)

Year Two (128 credits)

Elective modules

Choose any three from the following modules: Economics (Mil), Auditing (Mil), Military Management and Public and Development Management (Mil). Contract Law must be taken in semester one and Industrial Psychology or Applied Commercial Law in semester two. Please note that the chosen subjects in the first semester must also be taken in the second semester.

Semester One

Auditing (Mil)	214(16)
Contract Law (Mil)	214(16)
Economics (Mil)	214(16) PP
Military Management	214(16)
Public and Development Management (Mil)	214(16)

Semester Two

Applied Commercial Law	244(16)
Auditing (Mil)	244(16)
Economics (Mil)	244(16)
Industrial Psychology (Mil)	244(16)
Military Management	244(16)
Public and Development Management (Mil)	244(16)

Year Three (144 credits)

Elective modules

Continue with any three subjects taken in the 2nd year of the Organisation and Resource Management programme.

Semester One

Economics (Mil)	314(24)
Management Accounting (Mil)	314(24)
Military Management	314(24)
Public and Development Management (Mil)	314(24)

Semester Two

Economics (Mil)	344(24)
Management Accounting (Mil)	344(24) P
Military Management	344(24)
Public and Development Management (Mil)	344(24)

Programme Credits 416

6.3. BMil in Security and Africa Studies

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with:
  - A D aggregate in the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the school subjects from the list of designated university admission subjects.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission by way of the Preparatory Certificate in Military Studies

If you do not fully meet the abovementioned minimum requirements for degree studies, but you have the necessary study potential, the Preparatory Certificate in Military Studies (PCMS) provides you an opportunity as a prospective student to be admitted to the BMil degree programmes through the successful completion of this certificate programme.

Selection

- You will be admitted to the BMil degree programme only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your applications for admission to the BMil to your specific Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.

Notes

1. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
2. You can take a module of a specific subject in a specific year only if you have passed at least half the credit units of a single preceding year of that specific subject.

3. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the BMil degree programme.

Year One (120 credits)

Compulsory modules

Semester One

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Military History	114(12)
Political Science (Mil)	114(12)

Semester Two

English Studies (Mil)	144(12)
Military History	144(12)
Political Science (Mil)	144(12)
Security Law (Mil)	144(12)

Elective modules

Choose one module per semester from the tables below.

Semester One

Economics (Mil)	114(12)
Military Geography	114(12)

Semester Two

Economics (Mil)	144(12)
Military Geography	144(12)

Year Two (128 credits)

Compulsory modules

Semester One

Military History	214(16) P
Military Management	114(12)
Military Strategy	214(16)
Political Science (Mil)	214(16) P

Semester Two

Military Geography	244(20)
Military History	244(16)
Military Strategy	244(16)
Political Science (Mil)	244(16) P

Year Three (128 credits)

Compulsory modules

Semester One

Industrial Psychology (Mil)	214(16)

Semester Two

Industrial Psychology (Mil)	254(16)

Elective modules

Choose two modules per semester from the table below.

Semester One

Military History	314(24) P
Military Strategy	314(24)
Political Science (Mil)	314(24) P

Semester Two

Military History	344(24)
Military Strategy	344(24)
Political Science (Mil)	344(24) P

Programme Credits 376

6.4. BMil in Defence Intelligence Studies (This programme will be available in due time)

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with:
  - A D aggregate in the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. After the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the school subjects from the list of designated university admission subjects.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission by way of the Preparatory Certificate in Military Studies

If you do not fully meet the abovementioned minimum requirements for degree studies, but you have the necessary study potential, the Preparatory Certificate in Military Studies (PCMS) provides you an opportunity as a prospective student to be admitted to the BMil degree programmes through the successful completion of this certificate programme.

Selection

- You will be admitted to the BMil degree programme only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your applications for admission to the BMil to your specific Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or bassomn71@sun.ac.za.

Notes

1. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
2. You can take a module of a specific subject in a specific year only if you have passed at least half the credit units of a single preceding year of that specific subject.

3. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the BMil degree programme.

Year One (120 credits)

Compulsory modules

Semester One

Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Introduction to Intelligence Analysis	114(12)
Introduction to Intelligence and Collection	114(12)

Semester Two

Computer Inf. Systems (Mil)	144(12)
English Studies (Mil)	144(12)
Factors Influencing Intelligence Analysis	144(12)
Introduction to Counter-Intelligence and Covert Action	144(12)

Elective modules

Choose one module per semester from the tables below.

Semester One

Political Science (Mil)	114(12)
Military Geography	114(12)
Military History	114(12)

Semester Two

Political Science (Mil)	144(12)
Military Geography	144(12)
Military History	144(12)

Year Two (120 or 128 credits)

Compulsory modules

Semester One

General Intelligence History	224(16)
Counter-Intelligence Threads	214(16)
Criminal and Military Law (Mil)	114(12)

Semester Two

SA Intelligence History	254(16)
Intelligence Mandate and Regulatory Framework	254(16)
Intelligence Analysis	154(12)

Elective modules

Choose one module per semester from the tables below.

Semester One

Political Science (Mil)	214(16)
Military History	214(16)
Military Strategy	214(16)
Industrial Psychology (Mil)	214(16)
Military Geography	214(20)

Semester Two

Political Science (Mil)	244(16)
Military History	244(16)
Military Strategy	244(16)
Industrial Psychology (Mil)	254(16)
Military Geography	244(20)

Year Three (128 credits)

Compulsory modules

Semester One

Strategic Intelligence and Intelligence Management	314(24)
Structured Intelligence Analysis Techniques	214(16)

Semester Two

Contemporary and Comparative Intelligence Studies	344(24)
Producing Intelligence Products	244(16)

Elective modules

Choose one module per semester from the tables below.

Semester One

Political Science (Mil)	314(24)
Military History	314(24)
Military Strategy	314(24)
Intelligence Psychology)	324(24)
Military Geography	314(24)

Semester Two

Political Science (Mil)	344(24)
Military History	344(24)
Military Strategy	344(24)
Psychological Warfare	354(24)
Military Geography	344(24)

Programme Credits 368 or 376

6.5. BMil in Technology

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with:
  - A D aggregate in the final matriculation examination; and
  - A D symbol (Higher Grade) or a B symbol (Standard Grade) in both Mathematics and Physical Science for the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate as from 2009

Please note that the first final examination for the NSC was written at the end of 2008. To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the school subjects (excluding Mathematics and Physical Science – see next bullet) from the list of designated university admission subjects; and
  - A mark of at least 4 (50% - 59%) in Mathematics and a mark of at least 4 (50% - 59%) in Physical Science.
- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support such as academic literacy development, academic writing and reading and study skills.

Admission by way of the Preparatory Certificate in Military Studies

If you do not fully meet the abovementioned minimum requirements for degree studies, but you have the necessary study potential, the Preparatory Certificate in Military Studies (PCMS) provides you an opportunity as a prospective student to be admitted to the BMil degree programmes through the successful completion of this certificate programme.

Selection

- You will be admitted to the BMil degree programme only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your applications for admission to the BMil to your specific Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085 or basson71@sun.ac.za.

Notes

1. Aeronautical Science (Mil) is compulsory in Year One and Military Technology is compulsory in Year Two and Three for SAAF Pilot/Navigator students.
2. Military Geography is compulsory for Army students.
3. Nautical Science is compulsory for Navy Combat Officer students.
4. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that

particular module.

5. You can take a module of a specific subject in a specific year only if you have passed at least half the credit units of a single preceding year of that specific subject.
6. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the BMil degree programme.

Year One (120 or 144 credits)

Elective modules

One of the following: Aeronautical Science (Mil), Military Geography or Nautical Science; as well as all the other subjects.

Semester One

Aeronautical Science (Mil)	114(12) and 124(12) or
Military Geography	114(12) or
Nautical Science	112(6) and 122(6)
Computer Inf. Systems (Mil)	114(12)
English Studies (Mil)	114(12)
Mathematics (Mil)	112(8) and 122(6)
Physics (Mil)	114(12) C

Semester Two

Aeronautical Science (Mil)	144(12) and 154(12) or
Military Geography	144(12) or
Nautical Science	144(12)
Computer Inf. Systems (Mil)	144(12) PP
Mathematics (Mil)	142(8) P and 152(6) P
Physics (Mil)	144(12) C, P
Statistics (Mil)	144(12)

Year Two (120 credits)

Elective modules

One of the following: Military Technology, Military Geography or Nautical Science; and two other subjects.

Semester One

Aeronautical Science (Mil)	212(10) P and 222(10) P
Computer Inf. Systems (Mil)	214(20) PP
Mathematics (Mil)	212(10) PP and 222(10) PP
Military Technology	212(10) P and 222(10) P or
Military Geography	214(20) or
Nautical Science	214(20)
Physics (Mil)	212(10) C and 222(10) PP, PP

Semester Two

Aeronautical Science (Mil)	244(20) P
Computer Inf. Systems (Mil)	244(20) PP
Mathematics (Mil)	242(10) PP and 252(10) PP
Military Technology	242(10) P, P and 252(10) P, P or
Military Geography	244(20) or
Nautical Science	244(20)
Physics (Mil)	242(10) P, P and 252(10) PP

Year Three (120 credits)

Elective modules

One of the following: Military Technology, Military Geography or Nautical Science; and one other subject and Military Management 314.

Semester One

Aeronautical Science (Mil)	314(24) P, P
Computer Inf. Systems (Mil)	314(24) P
Mathematics (Mil)	312(12) PP and 322(12) PP
Military Technology	312(12) P and 322(12) P or
Military Geography	314(24) or
Nautical Science	314(24)

Physics (Mil)	312(12) P and 372(12) PP, PP or 322(12) PP and or 332(12) C, PP
Military Management	314(24)

Semester Two

Aeronautical Science (Mil)	344(24) P
Computer Inf. Systems (Mil)	344(24) PP
Mathematics (Mil)	342(12) PP and 352(12) PP or 362(12) PP and 363(12) PP
Military Geography	344(24)
Military Technology	342(12) P and 352(12) P
Nautical Science	344(24)
Physics (Mil)	342(12) P and 352(12) PP, PP or 362(12) PP and 382(12) PP

Programme Credits 360 or 372

6.6. BMil in Technology and Defence Management

Admission Requirements

Admission requirements with Senior Certificate (up to 2008)

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A matriculation certificate or exemption certificate from the Matriculation Board with:
  - A D aggregate in the final matriculation examination; and
  - A E symbol (Higher Grade) or a D symbol (Standard Grade) in both Mathematics and Physical Science for the final matriculation examination.
- A provisional exemption certificate, based on age (23 years and older).
- A provisional exemption certificate from the matriculation examination, issued by the Matriculation Board to foreign students.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission requirements with National Senior Certificate as from 2009

To be admitted, after the Faculty of Military Science Selection Board has selected you for undergraduate studies, you must have one of the following:

- A National Senior Certificate (NSC) as certified by Umalusi, with
  - A mark of at least 4 (50% - 59%) in Afrikaans or English; and
  - A mark of at least 4 (50% - 59%) in each of the school subjects (excluding Mathematics and Physical Science – see next bullet) from the list of designated university admission subjects; and
  - A mark of at least 3 (40% - 49%) in Mathematics and a mark of at least 3 (40% - 49%) in Physical Science.

- A certificate of full or provisional exemption from the matriculation examination, issued by the Matriculation Board to students from foreign countries or with foreign school qualifications.

Please Note:

- If you have achieved a minimum average of 50% to 55% for the National Senior Certificate, you may be subjected to special forms of academic support, such as academic literacy development, academic writing and reading and study skills.

Admission by way of the Preparatory Certificate in Military Studies

If you do not fully meet the abovementioned minimum requirements for degree studies, but you have the necessary study potential, the Preparatory Certificate in Military Studies (PCMS) provides you an opportunity as a prospective student to be admitted to the BMil degree programmes through the successful completion of this certificate programme.

Selection

- You will be admitted to the BMil degree programme only if the Faculty of Military Science Selection Board has selected you for undergraduate studies.
- Please direct your applications for admission to the BMil to your specific Service (Army, Navy, SAMHS or Air Force).
- You can obtain detailed information regarding application procedures from the Faculty Administrator, using the following contact details: Faculty Administrator, Faculty of Military Science, Private Bag X2, Saldanha, 7395, or 022 702 3085, or basson71@sun.ac.za.

Notes

1. Aeronautical Science (Mil) is compulsory for SAAF Pilot/Navigator students.
2. Aeronautical Science (Mil) 124, 154 are compulsory for SAAF Pilot/Navigator students in the place of Military History 114 and 144.
3. Military Geography is compulsory for Army students.
4. Nautical Science is compulsory for Navy Combat Officer students.
5. You can only take a module of a specific subject in a specific year if you have met the corequisite (C), prerequisite (P) and/or prerequisite pass (PP) requirements of that particular module.
6. You can take a module of a specific subject in a specific year only if you have passed at least half the credit units of a single preceding year of that specific subject.
7. You can take a specific module in a specific year only if the class and examination timetables allow it.

Military Professional Development

Military Professional Development (12 credits), presented over two semesters, is a compulsory DoD activity accredited as a core part of the BMil degree programme.

Year One (144 credits)

Elective modules

Semester One

One of the following: Aeronautical Science (Mil), Military Geography or Nautical Science; as well as all the other subjects.

Aeronautical Science (Mil)	114(12) or
Military Geography	114(12) or
Nautical Science	112(6) and 122(6)
Military History	114(12) or
Aeronautical Science (Mil)	124(12)
Computer Inf. Systems (Mil)	114(12)
Physics (Mil)	124(12) C
English Studies (Mil)	114(12)
Mathematics (Mil)	124(12)

Semester Two

One of the following: Aeronautical Science (Mil), Military Geography or Nautical Science; and one of the following: Computer Information Systems (Mil) or Economics (Mil) or Security Law (Mil); and the rest

Aeronautical Science (Mil)	144(12) or
Military Geography	144(12) or
Nautical Science	144(12)
Military History	144(12) or
Aeronautical Science (Mil)	154(12)
Computer Inf. Systems (Mil)	144(12) PP or
Economics (Mil)	144(12) or
Security Law (Mil)	144(12)
Physics (Mil)	154(12) C
Military Management	144(12)
Statistics (Mil)	144(12)

Year Two (120 or 128 credits)

Elective modules

One of the following: Aeronautical Science (Mil), Military Geography or Nautical Science. Military Technology 254 and two of the following: Computer Information Systems (Mil), Military Management, and Military History/Military Strategy.

Semester One

Aeronautical Science (Mil)	212(10) P and 222(10) P, or
Military Geography	214(20) or
Nautical Science	214(20)
Military Management	214(16)
Military History	214(16) P, or
Military Strategy	214(16)
Computer Inf. Systems (Mil)	214(20) PP

Semester Two

Aeronautical Science (Mil)	244(20) P, or
Military Geography	244(20) or
Nautical Science	244(20)
Military Management	244(16)
Military History	244(16) or
Military Strategy	244(16)
Computer Inf. Systems (Mil)	244(20) PP
Military Technology	254(16)

Year Three (136 or 144 credits)

Elective modules

One of the following: Aeronautical Science (Mil), Military Geography or Nautical Science; and two of the rest, where Industrial Psychology (Mil) 214 and Military Technology 344 together can be offered as one choice

Semester One

Aeronautical Science (Mil)	314(24) P, or
Military Geography	314(24) or
Nautical Science	314(24)
Military Management	314(24)
Military History	314(24) P or
Military Strategy	314(24)
Computer Inf. Systems (Mil)	314(24) P
Industrial Psychology (Mil)	214(16)

Semester Two

Aeronautical Science (Mil)	344(24) P, or
Military Geography	344(24) or
Nautical Science	344(24)
Military Management	344(24)

Military History	344(24) or
Military Strategy	344(24)
Computer Inf. Systems (Mil)	344(24) PP
Military Technology	344(24)

Programme Credits 400 or 408 or 416

Postgraduate programmes

1. Postgraduate Diploma in Defence Studies (PGDip)

Admission Requirements

Subject to consultation with the lecturers in the School for Security and Africa Studies, the following is required:

- A BMil degree (or equivalent qualification), for which a final mark of 60% was achieved in the final year of study.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules.

Programme Content

Compulsory Modules

Strategic Theory	744(20)
The Evolution of Warfare	744(20)
Geopolitics and African Security	744(20)
Research Methodology	744(20)
Project Management	744(20)
Human Resource Management	744(20)

Electives (there are no electives)

2. Honours Degrees

2.1. Bachelor of Military Science with Honours (BMilHons)

This degree is conferred upon you, if:

- You have obtained a BMil degree from this University, or any other bachelor's degree approved by the Senate for this purpose;
- On written request, you are allowed by Senate, or the Executive Committee acting on its behalf, to register for the BMilHons programme; and
- You have followed the prescribed honours programme for a minimum of one year (after obtaining the abovementioned bachelor's degree) at the University and have successfully completed the relevant examination.

2.1.1. BMilHons in Industrial Psychology

Admission Requirements

Subject to consultation with the lecturers in the Department of Industrial Psychology (Mil), the following is required:

- A BMil degree in Human and Organisation Development with
  - a minimum final mark of 60% in Research Methodology and Psychometrics; and
  - a minimum final mark of 60% in Organisational Psychology.

Duration of Programme

The programme is presented over two years on a modular basis (by means of lectures) in collaboration with the Department of Industrial Psychology of the Faculty of Economic and Management Sciences.

Programme Content

Compulsory modules

Military Career Psychology	711(15)
Military Psychology	712(15)
Human Resource Management	713(15)
Management of Operational Psychopathology	714(15)
Organisational Psychology	715(15)
Research Methodology and Psychometry	742(15)
Research Assignment	742(30)

2.1.2. BMilHons in Military Geography

Admission Requirements

Subject to consultation with the lecturers in the Department of Military Geography, the following is required:

- A BMil degree (or equivalent qualification) with Military Geography as major subject, with a minimum final mark of 60% in Military Geography in the final year of study.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules.

Programme Content

Compulsory modules

Geographical Thought	741(15)
Geographical Methodology	742(15)
Geographical Information Systems	743(15)
Political Geography	744(15)
Environmental Studies and Military Action	745(15)

Environmental Skills and Techniques	746(15)
Research Assignment (Mil Geography) – a theme from the South African military geography environment	747(30)

2.1.3. BMilHons in Military History

Admission Requirements

Subject to consultation with the lecturers in the Department of Military History, the following is required:

- A BMil degree with Military History as major subject, with a minimum final mark of 60% in Military History in the final year of study.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules.

Programme Content

Compulsory modules

Theoretical History I: Research Methodology	741(30)
Theoretical History II: Philosophy and Historiography	742(30)
Theory and Practice of Military History	743(10)

Elective modules

Choose one option from Military Strategy and one option from Military History of Africa.

Military Strategy	744(20) A theme from General Military History OR
	744(20) An optional module from the BMilHons in Military Strategy
Military History of Africa	745(30) Research assignment – a theme from South African Military History OR
	745(30) Research assignment – a theme from the Military History of Africa

2.1.4. BMilHons in Military Management

Admission Requirements

Subject to consultation with the lecturers in the School of Defence Organisation and Resource Management, one of the following degrees is required:

- A BMil degree in Organisation and Resource Management or Technology and Defence Management with Military Management and/or Public and Development Management and/or any other major subject, with
  - a final mark of 60% in Military Management in the final year; and
  - a final mark of 60% in another major subject in the final year.
- Any other relevant degree that has been approved for this purpose by the Executive with an average of 60% in any of the two majors.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over a period of two years.

Programme Structure

The programme consists of six compulsory modules. You must obtain a minimum of 120 credits.

Programme Content

Compulsory modules

Financial Management	744(20)
Logistics Management	741(20)
Research Assignment (ORM)	742(30)
Research Methodology (Organisation and Resource Management)	744(10)
Strategic Management	743(20)
Project Management	744(20)

2.1.5. BMilHons in Military Strategy

Admission Requirements

Subject to consultation with the lecturers in the Department of Military Strategy, one of the following degrees is required:

- A BMil degree, for which a final mark of 65% was achieved in the final year of study of Military Strategy as major.
- Another B degree in an approved related field of study, for which a final mark of 65% was achieved in the final year of study.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules.

Programme Content

Compulsory modules

Research Methodology (Military Strategy)	744(30)
Research Assignment: National Security of Southern African States	744(30)

Elective modules

Choose three from the modules (60) from the table below or two of the modules (40) and an approved module (20) from the field of Military History or Political Science.

Future and Cyber Warfare	744(20)
Contemporary Warfare in Africa	744(20)
SA Defence Policy since 1994	744(20)
Contemporary Military Theory	744(20)
Contemporary Peace Operations	744(20)
The Evolution of Operational Art	744(20)

2.1.6. BMilHons in Organisation and Resource Management

Admission Requirements

Subject to consultation with the lecturers in the School of Defence Organisation and Resource Management, one of the following degrees is required:

- A BMil degree in Organisation and Resource Management, with a minimum final mark of 60% in the final year in two of the following majors: Military Management, Economics, Management Accounting or Public and Development Management.
- Any other relevant B degree that has been approved for this purpose by the programme coordinator with a minimum final mark of 60% in the final year in two majors.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over a period of two years.

Programme Structure

The programme consists of Research Methodology and a Research Assignment as compulsory modules; a choice from the undermentioned elective modules, selected in consultation with the programme coordinator; and a research assignment. You must obtain a minimum of 120 credits.

Programme Content

Compulsory modules

Research Methodology (Organisation and Resource Management)	744(15)
Research Assignment	742(30)

Elective modules

Defence Economics	744(15)
Development Management	744(15)
Financial Management	744(20)
International Finance	741(15)
International Trade	742(15)
Labour Relations	743(15)
Logistics Management	741(20)
Macroeconomics	744(15)
Management Accounting Control Systems	744(20)
Microeconomics	744(15)
Public Management	744(15)
Strategic Management	743(20)
Strategic Management Accounting	742(20)
Project Management	744(20)

2.1.7. BMilHons in Public and Development Management

Admission Requirements

Subject to consultation with the lecturers in the Faculty of Military Science's Department of Public and Development Management, one of the following is required:

- BMil in Organisation and Resource Management with a final mark of 60% in two of the final-year majors.
- BMil in Human and Organisation Development with a final mark of 60% in two of the final year majors.
- Any applicable bachelor's degree with a minimum final mark of 60% in each of the two major subjects during the final year.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules.

Programme Content

Compulsory modules

Development Management	745(15)
Labour Relations	743(15)
Public Management	744(15)
Public Policy Analysis	745(15)
Civil Military Relations	745(15)
Research Methodology (PDM)	745(15)
Research Assignment	745(30)

2.1.8. BMilHons in Security and Africa Studies

Admission Requirements

Subject to consultation with the lecturers in the School for Security and Africa Studies, the following is required:

- Any BMil degree with Political Science (Mil), Military History or Military Strategy as major subject, with a minimum final mark of 60% in the major subject in the final year.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules.

Programme Content

Compulsory modules

Research Methodology	741(30)
International Relations Theory	742(15)
South African Political-Military Profile in Africa	743(15)
Conflict in Africa	744(15)
Africa and the Changed Security Agenda	745(15)
Research Assignment: National Security of African States	746(30)

2.1.9. BMilHons in Technology

Admission Requirements

Subject to consultation with the lecturers in the School of Science and Technology, one of the following degrees is required:

- A BMil degree in Technology with a minimum final mark of 60% in each of the two major subjects in the final year.
- A BMil degree in Technology and Defence Management with a minimum final mark of 60% in Computer Information Systems, as well as in one of Aeronautical Science (Mil), Military Geography or Nautical Science in the final year.

Duration of Programme

The programme runs over two years (on a modular basis).

Programme Structure

The programme consists of the compulsory Research Assignment (code 66753) of 30 credits and a selection of modules applicable to the focus of the study of which the total credits should be at least 90. You must obtain a minimum of 50% of the total credits at the Faculty of Military Science.

Programme Content

You select relevant modules from one of the specialisation fields listed below. In the specialisation field of Physics you are required to follow relevant modules at other departments or faculties. If

you follow modules at other departments or faculties, you must meet the stipulated requirements. You can specialise in the following fields:

2.9.1. Physics

General Relativity and Cosmology	771(16)
Applied Computer Physics	771(8)
Applied Wave Theory	771(8)
Computational Physics	772(16)
Nuclear Physics	771(16)
Radiation Detection and Measurement	774(16)
Electromagnetism	776(8)
Digital Signal Processing	775(8)
Radiation Safety (Mil)	773(8)

2.9.2. Military Technology

Aircraft Mechanics	771(10)
Aerodynamics	771(10)
Aircraft Design	771(10)

2.9.3. Computer Information Systems

Advanced Programming Applications	771(12)
Network Protocols	771(12)
Computer Centre Management	771(12)
Network Security	771(12)
ICT Management	771(12)
Digital Economy and Electronic Commerce	771(12)
ICT Project Management	771(12)
ICT Research Methodologies	771(12)
Computer Graphics	771(12)
Cyber Forensics	752(12)

2.9.4. Mathematics

Compulsory modules

Computational Mathematics	771(16)
Dynamical Systems	772(16)
Theoretical Fluid Mechanics	773(16)

Elective modules

Partial Differential Equations	719(16)
Probability Theory	771(16)
Statistical Inference	771(16)

2.9.5. Nautical Science

Military Oceanography	771(20)
Operational Oceanography	771(20)

3. Master's degrees

3.1. Master of Military Science (MMil)

This degree is conferred upon you, if:

- You have obtained a BMilHons degree from this University, or any other honours degree approved by Senate for this purpose;
- On written request, you are allowed by Senate, or the Executive Committee acting on its behalf, to register for the MMil programme;
- You have completed an approved research curriculum and/or advanced study of at least one year (after obtaining the abovementioned honours degree) at this University or at any other institution approved by Senate; and
- You have submitted a satisfactory thesis.

3.1.1. MMil in Military Science (Research)

This degree is interdisciplinary, with a broad focus on military and defence-related topics.

Admission Requirements

A BMilHons degree, or a degree in a cognate discipline, with a final average mark of 65%. Students without a BMilHons may be requested *to undertake guided reading prior to acceptance in the programme*.

Duration of Programme

This MMil programme runs over two years on a part-time basis.

Programme Structure

- The degree comprises two phases. The first phase entails the successful completion of the module 'Interdisciplinary research methodology" and the successful defence of a research proposal.
- The second phase entails the completion of a thesis on a military-related topic as well as the submission of a journal article on the same topic.

Programme Contents

Compulsory for all candidates:

- Interdisciplinary research methodology (30)
- Thesis (150)

3.1.2. MMil in Military Geography

The programme allows for one of two modes of study, both under the guidance of a supervisor.

- Option A: the completion of a thesis with prescribed reading in preparation of the research proposal.
- Option B: the completion of a structured self-study programme rounded off with a thesis.

3.1.2.1. MMil in Military Geography (Option A)

Admission Requirements

- A BMilHons in Military Geography with an average final mark of at least 60%.

Duration of programme

The programme is presented over one year full time or two years with regular contact sessions between supervisor and student.

Programme Contents

You select an approved research topic with prescribed reading in preparation of a research proposal in consultation with your supervisor. The prescribed reading must lead to a thesis (180) in which you must exhibit the ability to do independent research on a military-related geographical problem.

3.1.2.2. MMil in Military Geography (Option B)

Admission Requirements

- A BMilHons in Military Geography with an average final mark of at least 60%.

Duration of Programme

The programme is presented on a modular basis (by means of lectures) over two years. You must attend all scheduled block modules. Offering of this option is subject to the availability of staff.

Programme Contents

Advanced study in the form of a structured taught programme in military environmental management, which consists of the following modules, amounting to 180 credits:

- Military Integrated Environmental Management (30);
- Environmental Considerations in Military Operations (30);
- Sustainable Military Training Area Management (30); and
- A thesis (90), in which you must exhibit the ability to do independent research on a military-related geographical problem.

3.1.3. MMil in Military History

The programme allows for one of two modes of study, both under the guidance of a supervisor.

- Option A:
    - the completion of a thesis with prescribed reading in preparation of a research proposal; and
    - an oral examination and submission of an article for publication in an accredited journal; or

- the presentation of a paper at a subject conference or a graduate seminar.

- Option B:
  - The completion of a structured self-study programme rounded off by a thesis.

3.1.3.1. MMil in Military History (Option A)

Admission Requirements

Subject to consultation with the lecturers of the Department of Military History, one of the following degrees is required:

- A BMilHons degree in Military History with a minimum final mark of 60% in each module.
- Another applicable honours degree in which you have duly performed.

Duration of Programme

If you have already obtained a BMilHons degree, you may complete the programme after one year of full-time or two years of part-time study. If, however, you have another applicable honours degree, you may complete the programme after two years of full-time study.

Programme Structure

You select a research theme in consultation with your supervisor, who also consults with the subject group. The research proposal should have a definite focus on the military history of South Africa or Africa and must be based on primary (i.e. archival) work.

Programme Contents

- You must write a thesis (180 credits) in which you show an ability to undertake independent, scientifically responsible research.
- You must draft the thesis in accordance with the guidelines of the University. Furthermore, you must also sit for an oral examination.
- Your thesis must be preceded by a literature study leading to a research proposal, which you presented at a Faculty of Military Science Graduate Research Colloquium.
- You must publish, or submit for publication, an article on the study theme in a DOE-accredited journal or present a paper at a subject conference or graduate seminar.

3.1.3.2. MMil in Military History (Option B)

Admission Requirements

Subject to consultation with the lecturers of the Department of Military History, one of the following degrees is required:

- A BMilHons degree in Military History with a minimum final mark of 60% in each module.
- Another applicable honours degree in which you have duly performed.

Duration of Programme

If you have already obtained a BMilHons degree, you may complete the programme after one year of full-time or two years of part-time study. If, however, you have another applicable honours

degree, you may complete the programme after two years of full-time study.

Programme Structure

You must complete a *capita Selecta* of three study themes (for 90 credits) and submit a thesis of 90 credits on a theme from the military history of Africa.

Programme Contents

Study themes:

- A theme from General Military History (30)
- A theme from South African Military History (30)
- A theme from General Military History of Africa (30)
- A theme from War and Society (30)

3.1.3. MMil in Military Strategy

The programme allows for one of two modes of study, both under the guidance of a supervisor.

- Option A:
    - The completion of a thesis with prescribed reading in preparation of a research proposal; and
    - an oral examination and submission of an article for publication in an accredited journal; or
    - the presentation of a paper at a subject conference or a graduate seminar.
- Option B:
    - The completion of a structured self-study programme rounded off by a thesis.

3.1.3.1. MMil in Military Strategy (Option A)

Admission Requirements

Subject to consultation with the lecturers in the Department of Military Strategy, one of the following degrees is required:

- A BMilHons degree in Military Strategy with a minimum final mark of 60% in each subject.
- Another honours degree in an approved related field of study with a minimum final mark of 60% in each subject.

Duration of Programme

If you are in possession of a BMilHons degree, you may obtain the MMil degree after one year of full-time or two years of part-time study. If, however, you have another applicable honours degree, you may complete the programme after two years of full-time study.

Programme Structure

You select a research theme in consultation with your supervisor, who also consults with the subject group. The research proposal should have a definite focus on strategic or security-related matters and, if possible, on Africa.

Programme Contents

- You must write a thesis (180 credits) in which you show an ability to undertake independent, scientifically responsible research.
- You must draft the thesis in accordance with the guidelines of the University.
- Furthermore, you must also sit for an oral examination.
- Your thesis must be preceded by a literature study leading to a research proposal, which is presented at a Faculty of Military Science Graduate Research Colloquium.
- You must publish, or submit for publication, an article on the study theme in a DOE-accredited journal or present a paper at a subject conference or graduate seminar.

3.1.3.2. MMil in Military Strategy (Option B)

Admission Requirements

Subject to consultation with the lecturers in the Department of Military Strategy, one of the following degrees is required:

- An honours degree in Military Strategy with a minimum final mark of 60% in each subject.
- Another honours degree in an approved related field of study with a minimum final mark of 60% in each subject.

Duration of Programme

If you are in possession of a BMilHons degree, you may obtain the MMil degree after one year of full-time or two years of part-time study. If, however, you have another applicable honours degree, you may complete the programme after two years of full-time study.

Programme Structure

If you are in possession of an honours degree, you must complete a *capita Selecta* of three study themes and submit a thesis on the security milieu of Africa.

Please Note:

Depending on your academic background, the programme coordinator may allow you to follow postgraduate modules in related fields of study instead of the *capita Selecta* stated below. If you follow these modules in another faculty or institution, you must meet the stipulated requirements.

Programme Contents

Compulsory for all candidates:

- Thesis: A theme that focuses on the African security milieu (90)

Capita Selecta of study themes (for 90 credits):

- Strategy in the Contemporary World (30)
- Military Strategy in Africa (30)
- Contemporary Land, Sea, Aerospace, and Cyber Power (30)

3.1.4. MMil in Organisation and Resource Management

Admission Requirements

One of the following degrees:

- A BMilHons in Organisation and Resource Management.
- A BMilHons in Military Management.
- A BMilHons in Public and Development Management
- Any other related honours qualification as approved by the programme coordinator.

Duration of Programme

This MMil programme runs over two years.

Programme Structure

The programme allows for a thesis option.

Programme Contents

You must submit a thesis (with a credit value of 180) as a result of independent research in Organisation and Resource Management that you choose after consultation with the programme coordinator and the Chair of the School for Defence Organisation and Resource Management.

3.1.5. MMil in Security and Africa Studies

The programme allows for one of two modes of study, both under the guidance of a supervisor.

- Option A:
    - the completion of a thesis with prescribed reading in preparation of a research proposal; and
    - an oral examination and submission of an article for publication in an accredited journal; or
    - the presentation of a paper at a subject conference or a graduate seminar.
- Option B:
    - The completion of a structured self-study programme culminating in a thesis.

3.1.5.1. MMil in Security and Africa Studies (Option A)

Admission Requirements

Subject to consultation with the lecturers of the School for Security and Africa Studies, one of the following degrees is required:

- A BMilHons degree in Security and Africa Studies with a minimum final mark of 60% in each subject.
- Any other honours degree with Military History, Military Strategy, Political Science or another appropriate subject as major, with a final mark of 60% in each subject.

Duration of Programme

You must complete the programme after one year of full-time or two years of part-time study.

Programme Structure

Depending on your academic background, you select a research theme in consultation with your supervisor, who also consults with the subject group.

This research theme leads to a research proposal, which must have a definite focus on Security and Africa Studies, and which in turn leads to the writing of a thesis.

Programme Content

- A thesis (180 credits) in which you show an ability to undertake independent, scientifically responsible research.
- You must draft the thesis in accordance with the guidelines of the University. Furthermore, you must also sit for an oral examination.
- Your thesis must be preceded by a literature study leading to a research proposal, which is presented at a Faculty of Military Science Graduate Research Colloquium.
- You must publish, or submit for publication, an article on the study theme in a DOE-accredited journal or present a paper at a subject conference or graduate seminar.

3.1.5.2. MMil in Security and Africa Studies (Option B)

Admission Requirements

Subject to consultation with the lecturers of the School for Security and Africa Studies, one of the following degrees is required:

- A BMilHons degree in Security and Africa Studies with a minimum final mark of 60% in each subject.
- Any other honours degree with Military History, Military Strategy, Political Science or another appropriate subject as major, with a final mark of 60% in each subject.

Duration of Programme

You must complete the programme after one year of full-time or two years of part-time study.

Programme Structure

The programme consists of three compulsory modules, as determined by the supervisor, as well as a thesis based on an approved research proposal.

- You select your research theme in consultation with your supervisor.
- The research theme for your thesis should be based on the prescribed modules.
- The research proposal must have a definite focus on Security and Africa Studies.

Programme Content

- Module 1: Strategy in the Contemporary World (Military Strategy) (30)
- Module 2: Conflict in Africa in the Twentieth Century (Military History) (30)
- Module 3: International Conflict Resolution and Peacekeeping (Political Science (Mil)) (30)
- You must write a thesis (90 credits) in which you show an ability to undertake independent, scientifically responsible research. The thesis must be drafted in accordance with the guidelines of the University.

3.1.6. MMil in Technology

Admission Requirements

- An applicable BMilHons degree in Technology.

Duration of Programme

The programme is presented over at least one year for full-time and two years for part-time students.

Programme Structure

You must submit a thesis with a credit value of 180. You are also expected to write an applicable research article for publication or for presentation at a conference.

3.2. MPhil in Security Management

Offering of this degree programme is subject to the availability of staff and the number of students.

4. Doctoral degrees

4.1. PhD in Military Science

For admission to the Doctorate in Military Science (PhD), you must:

- Hold a Master's Degree in Military Science (final mark 60%) or in any other similar field of study (final mark 60%) deemed appropriate by the PhD committee and Senate; and
- Successfully prepare a PhD research proposal for selection by the PhD committee, with a period of twelve months to prepare the proposal.

Subjects, modules and module content

1. Definitions and explanations of important terms

It is important that you take note of the definitions of a few terms in order to understand and use this chapter fully. The example below shows how these terms will appear in this chapter.

Example:

22969 Military Geography

114 (12) Concepts and Techniques in Geography (4L, 3P)

1.1 Explanation of the abovementioned terms:

- *Five-digit subject number*

  Each subject is identified by this five-digit subject number.

  22969 Military Geography

- *Subject name*

  The name of the specific subject after the five-digit subject number, before the various modules of the subject.

  22969 Military Geography

- *Module code*

  114 (12) Concepts and Techniques in Geography (4L, 3P)

  The module code consists of a three-digit number that is unique to the specific module. The abovementioned module code "114" has the following meaning:

  - The first digit refers to the year of study in which the module is presented, for example:

    Year 1: **1**14

    Year 2: **2**14

    Year 3: **3**14

  - The second digit "1" refers to the semester that the module will be presented in and also serves as a number to distinguish between various modules of the same subject offered in a specific year of study. The University uses different numbers to indicate the particular semester of a module, either the first or the second semester or modules that are presented in both semesters (which are year modules). The numbers that indicate semesters are as follows:
    - **1**, **2** of **3** – modules are presented in the first semester.

      *Semester 1: 1**1**4, 4**2**2, 2**3**4*
    - **4**, **5** of **6** – modules are presented in the second semester.

      *Semester 2: 1**4**3, 2**5**2, 2**6**2*

- **7**, **8** of **9** – modules are presented in both semesters, which are year modules.
  *Year module (both semesters): 4**7**8, 2**8**8, 3**9**1*

  - The third digit of the module code serves as a distinguishing digit between various modules of the same subject in a particular year of study.

- *Credit value*

  114 (12) Concepts and Techniques in Geography (4L, 3P)

- *Module subject*

  114 (12) Concepts and Techniques in Geography (4L, 3P)

- *Teaching load*

  (4L, 3P)

  The teaching load of a module is indicated following the module subject. It gives you both the teaching load and the type of teaching per week that you can expect. In the example above the teaching load of Military Geography 114 consists of four lectures plus three practicals per week for the duration of the module, i.e. one semester.

  The following abbreviations are used:

  L – lectures lasting 40 minutes each (e.g. 1L, 4L)

  P – practical periods lasting 40 minutes each (e.g. 1P, 2P, 3P)

  S – seminar lasting 40 minutes (e.g. 1S)

  T – tutorials lasting 40 minutes each (e.g. 1T, 2T)

2. Prerequisite pass, prerequisite and corequisite modules

After the description of the content of the module, the prerequisite pass, prerequisite and corequisite modules, where applicable, are given for that module.

- Prerequisite pass module
  - A prerequisite pass module is a module, which you must pass before you can take the module(s) for which it is a prerequisite pass module.
- Prerequisite module
  - A prerequisite module is a module in which you must achieve a class mark of at least 40, or a final mark of at least 40 in the case of a module subject to flexible assessment, before you can take the module for which it is a prerequisite module.
- Corequisite module
  - A corequisite module is a module that you must take in the same academic year as the module for which it is a corequisite, or in an earlier academic year.

2.1 Condition for the granting of a qualification

The Faculty will only award a qualification if you have passed all the relevant prerequisite and corequisite modules of the specific programme.

15822 Aeronautical Science (Mil)

Please Note

- Qualified SAAF pilots/navigators receive credit for Aeronautical Science (Mil) 114, 124, 144, 154, 212, and 222.
- Only SAAF pilots/navigators and pupil pilots/navigators are allowed to take Aeronautical Science (Mil) 114, 124, 144, 154, 212 and 222

114 (12) Basic Aviation Theory (4L, 1T)

Basic aerodynamics: history of flight; basic mathematical concepts; mechanics revision; kinematics revision; symbols and definitions; flow types; pressure distribution; boundary layer theory; lift; drag; wing plan forms; lift augmentation; primary and secondary flight controls.

Meteorology: composition of atmosphere; atmospheric characteristics (pressure, temperature, density, humidity, adiabatic process, lapse rate and stability); wind; air masses; clouds; fog and mist; visibility; precipitation; fronts; thunderstorms; turbulence; ice accretion; pressure systems; climatology; aircraft with observations (airport, radar and weather satellites); synoptic charts; codes/documentation; meteorological organisations. Flight Simulator: knowledge, skills and attitude integration; cockpit integration; VFR procedures; IFR procedures.

Home department: Aeronautical Science (Mil)

124 (12) Basic Aviation Theory (5L, 4T)

Airmanship: ICAO; Convention of Civil Aviation; South African Civil Aviation Regulations; Part 139; Part 172; CATS; basic flight rules; aircrew utilisation; grading; efficiency maintenance; air traffic control.

Advanced aerodynamics I: stability; spinning theory; propeller theory; aircraft performance theory, turning theory; manoeuvre envelope.

Human performance: basic human physiology for aircrew; effects of pressure changes on the human body; effects of aerobatic manoeuvres on the human body; secondary effects of medicine usage on aircrew; basic aviation psychology for aircrew; effects of cockpit dynamics on aircrew.

Flight Simulator: knowledge, skills and attitude integration; cockpit integration; VFR procedures; IFR procedures.

Home department: Aeronautical Science (Mil)

144 (12) Basic Aviation Theory (4L, 1T)

Instrument and magnetism: gyroscopes; atmospheric pressure – instruments; basic magnetic theory; electronic instruments.
Avionics I and II: basic radio theory; navigation systems; basic radar theory; primary and secondary radar systems; flight directors.
Flight Simulator: knowledge, skills and attitude integration; cockpit integration; VFR procedures; IFR procedures.

Home department: Aeronautical Science (Mil)

154 (12) Basic Aviation Theory (5L, 4T)

Navigation: basic concepts; distance measurement; scale; map projection principles; Mercator and Lamberts projections; measurement of time; relative velocity.

Engines: internal combustion engines; ignition; lubrication; cooling; fuels; engine performance; mixtures; engine handling; turbine engines; mechanics; ignition; fuel transfer.

Aircraft technical: airframe and aircraft systems; air driven systems; air conditioning; fuel systems; electrical systems; emergency equipment.

Flight Simulator: knowledge, skills and attitude integration; cockpit integration; VFR procedures; IFR procedures.

Home department: Aeronautical Science (Mil)

212 (10) Basic Aviation Theory (Telematic Services) (5L, 1P)

Advanced aerodynamics II: stalling; spinning; aircraft performance; manoeuvres.

Flight operations and procedures: aerodromes and landing areas; ground visual aids and aerodrome lighting; air information publication (AIP); air information circular (AIC); Notams and SAAF flight information manual (FIM); aerodrome facilities and associated chart legends; holding patterns I and II; approach procedures I – IV; radio communication failure; SIDs and STARs; air traffic control; planning for all weather operations; flight plans.

Navigation plotting: navigation on climb and descent; en route navigation; search patterns; PNR and PET.

Flight planning and performance: definitions and terms; airspeed terminology and symbols; meteorology terminology; aerodrome symbols and terminology; take-off flight path; aircraft manuals; mass and balance.

Avionics III: Doppler navigation; satellite navigation; microwave landing system.
Prerequisite modules: Aeronautical Science (Mil) 114, 124, 144, 154

Home department: Aeronautical Science (Mil)

222 (10) Basic Aviation Theory (Telematic Services) (5L, 1P)

Helicopter aerodynamics: introduction to helicopter aerodynamics; definitions; helicopter control; helicopter flight part I and II: hovering; forward flight; power requirements; autorotation; hazardous conditions and recovery actions; helicopter stability.

High speed aerodynamics: compressibility – part I and II; lift in high speed flight – part I and II; drag in high speed flight; high speed stability and control – part I and II; high-speed wing designs – part I, II and III.

Multi-engine aerodynamics: asymmetric forces and couples; control in asymmetric powered flight; minimum control and safety speeds; single-engine performance; asymmetric procedures and manoeuvres.

Electronic warfare: electronic warfare (general); air defence deployment; EW response to the radar threat; introduction to infra-red; SIGINT and ESM – part I and II; ECM and ECCM – part I and II.

Aviation Safety: basic concepts; domino effect; man/machine interaction; human factors in aviation safety.
Prerequisite modules: Aeronautical Science (Mil) 114, 124, 144, 154

Home department: Aeronautical Science (Mil)

244 (20) Advanced Avionic Systems I (Telematic Services) (5L, 1T)

Advanced avionics: ARINC 429 and 1553 databus architecture; IRS/GPS navigation system; EFIS – electronic flight instruments; head up display (HUD); FLIR; ICNI –integrated comms ident; FADEC – full authority digital engine control; HUMS – health usage monitoring system.
Prerequisite Module: Aeronautical Science (Mil) 222

Home department: Aeronautical Science (Mil)

314 (24) Advanced Avionic Systems II (Telematic Services) (6L, 1T)

Advanced avionics: night vision goggles (NVG); speech recognition and synthesis; flight management systems; synthetic vision; enhanced situational awareness; TCAS; modelling and simulation; certification.

Flight Controls: Fly-by-wire (FBW); design studies.
Prerequisite modules:

- Aeronautical Science (Mil) 244
- Physics (Mil) 124, 154 or 114, 144

Home department: Aeronautical Science (Mil)

344 (24) Human Factors in Aviation and further advanced avionics systems (Telematic Services) (6L, 1T)

Emotional stress; decision-making; CRM. Requirements, design analysis, validation and certification: setting requirements; digital avionics modelling and simulation; formal methods; electronic hardware reliability; certification of civil avionics; processes for engineering a system; electromagnetic environment (EME). Software: Ada; RTCA DO-178B/EUROCAE ED-12B. Implementation: fault-tolerant avionics; Boeing B-777; new avionics systems – Airbus A330/A340; McDonnell Douglas MB-11 avionics system; Lockheed F-22 Raptor; advanced distributed architectures. Other Applications: HUMS; FADEC. CRM assignment.
Prerequisite modules: Aeronautical Science (Mil) 222, 314

Home department: Aeronautical Science (Mil)

63606 Applied Commercial Law

244 (16) Applied Commercial Law (5L)

Specific contracts: contracts of sale, contracts of lease, credit agreements, agency, vicarious liability.

Entrepreneurial Law: companies, close corporations, partnerships, business trusts.
Corequisite module: Contract Law (Mil) 214

Home department: Mercantile and Public Law (Mil)

314 (24) Applied Labour Law (5L)

Individual Labour Law: introduction, discipline in the workplace, introduction to unfair dismissals, the concepts employee, dismissal and unfair dismissal, automatic unfair dismissals, dismissal for misconduct, dismissal for incapacity, unfair labour practices, employment equity, dispute resolution.

Collective Labour Law: introduction, Labour Relations Act, freedom of association, organisational rights, collective bargaining, statutory bargaining forums, workplace forums, dispute resolution.
Home department: Mercantile and Public Law (Mil)

13779 Applied Mathematics (Mil)

112 (6) Basic Probability Theory (2L, 2T)

Sample spaces and events; random selection; the probability of an event; permutations and combinations; axioms of probability; probability rules; conditional probability; stochastic independence; Bayes' Theorem.
Corequisite modules: Mathematics (Mil) 112, 122

Home department: Mathematics (Mil)

122 (6) Modelling in Mechanics I (2L, 2T)

Use of vector, differential and integral calculus in the modelling of dynamics of simple physical systems as found in the study of basic engineering mathematics of mechanics. Fundamental concepts; coordinate systems in E2 and E3; scalars and vectors; the kinematics of linear and angular motion.
C Mathematics (Mil) 112, 122

Home department: Mathematics (Mil)

142 (6) Probability Theory with Univariate Distributions (2L, 2T)

Discrete and continuous stochastic variables; expected value and variance of stochastic variables; important discrete distributions: binomial, geometric, negative binomial, hyper-geometric and Poisson; important continuous distributions: uniform, normal, exponential, gamma and beta.
Corequisite modules: Mathematics (Mil) 142, 152
Prerequisite modules: Applied Mathematics (Mil) 112

Home department: Mathematics (Mil)

152 (6) Modelling in Mechanics II (2L, 2T)

Use of vector, differential and integral calculus in the modelling of dynamics of simple physical systems, including the analysis of force fields, motion and modelling assumptions. Equilibrium of force systems; Newton's second law; impulse and momentum; work, energy and power.
Corequisite modules: Mathematics (Mil) 142, 152
Prerequisite module: Applied Mathematics (Mil) 122

Home department: Mathematics (Mil)

36420 Auditing (Mil)

214 (16) Auditing (5L, 1P)

The auditing profession: introduction to auditing and the auditing profession; audit reports and professional ethics.

The auditing process: audit responsibilities and objectives; audit evidence; audit planning; analytical procedures and documentation; materiality and risk; the study of internal control and assessment of control risk; the impact of information technology on the audit process; overall audit planning and audit program.

Home department: Accounting (Mil) and Auditing (Mil)

244 (16) Auditing (5L, 1P)

Application of the auditing process to the sales and collection cycle: audit of sales and collection cycle.

Application of the audit process to other cycles: audit of the acquisition and payment cycle; audit of payroll and personnel cycle; audit of inventory and warehousing cycle; audit of capital acquisition and repayment cycle; audit of cash balances. Completing the audit.

Home department: Accounting (Mil) and Auditing (Mil)

45756 Computer Inf. Systems (Mil.)

114 (12) Information Systems Theory and Practice (5L, 3P)

Overview of computer concepts: software and utilities; system unit components; input; output; storage; communications and networks; internet; operating systems and systems software; knowledge of work productivity concepts; advanced software functionality to support personal and group productivity using email, word processing, spreadsheets, presentation software and database tools; tool use for personalisation and optimisation; professional document design.
Method of Assessment: Flexible assessment

Home department: Computer Information Systems (Mil)

144 (12) Software Engineering and Object-oriented Programming (5L, 3P)

Software engineering by means of a program-development process: modelling the process and life cycle; requirements analysis and specification; system design; program design, implementation, testing, delivery and maintenance.

Object-oriented programming: object-oriented programming; graphical user interfaces; file handling; strings; arrays; sorting algorithms.
Method of Assessment: Flexible assessment

Prerequisite pass module: Computer Inf. Systems (Mil) 114

Home department: Computer Information Systems (Mil)

154 (12) Management Information Systems (5L, 3P)

Concept of systems and organisations; strategic uses of information technology; introduction to BPR (Business Process Re-engineering) and Critical Success Factor analysis; various categories of management information systems; ethics of information systems; management of information systems.

Home department: Computer Information Systems (Mil)

214 (20) Information Systems Design (5L, 3P)

Systems analysis and design: requirements determination, logical design, physical design and implementation; interpersonal skills; interviewing; presentation skills; group dynamics; risk and feasibility analysis; group-based approaches: project management, joint application development

(JAD), and structured walkthroughs; structures versus object-orientated methodologies; rapid application development (RAD), prototyping.

ICT project management: managing the systems lifecycle; project tracking; metrics and systems performance evaluation; managing expectations of managers, clients, team members, and others; determining skills requirements and staffing; cost-effectiveness analysis; reporting and presentation techniques; management of behavioural and technical aspects of the project; change management; software tools for change management and monitoring; team collaboration techniques and tools.
Prerequisite pass module: Computer Inf. Systems (Mil) 144

Home department: Computer Information Systems (Mil)

244 (20) Information Technology Hardware and Systems Software (5L, 3P)

Hardware: CPU architecture, memory, registers, addressing, modes, busses, instruction sets, multi-processors versus single processors; peripheral devices: hard disks and other storage devices, video display monitors, device controllers, input/output; circuits and gates. Application on the micro-architecture level.

Operating system modules: processes; process management; memory and file system management; examples and contrasts of hardware architectures and operating systems.
Method of Assessment: Flexible assessment

Prerequisite pass module: Computer Inf. Systems (Mil) 144

Home department: Computer Information Systems (Mil)

314 (24) Cyber Warfare and Data Communication Networks (6L, 3P)

Introduction to cyber warfare and security: elementary principles of computer and network security; introduction to encryption, public key certificates and protocols.

Data communication and networks: telecommunication configurations; network and web applications; distributed systems; wired and wireless architectures, topologies and protocols; installation, configuration and operation of bridges, routers, switches and gateways; network performance tuning; privacy, security, firewalls, reliability; installation and configuration of networks; monitoring and management of networks; communication standards.
Method of Assessment: Flexible assessment

Prerequisite module: Computer Inf. Systems (Mil) 244

Home department: Computer Information Systems (Mil)

344 (24) Databases and Information Systems Management (6L, 3P)

Databases: introduction to databases; database theory and design; database users; database system concepts and architecture; data modelling using the entity-relationship model, relational

constraints and relational algebra; SQL; practical database management; functional dependencies and normalisation for relational databases; practical database design and tuning; emerging database technologies and applications. Information systems management: role of information systems in the digital economy; ethics in information technology management; achieving competitive advantage through strategic use of information systems; implications of the Web revolution; introduction to information and knowledge management; impacts of information systems on organisations, individuals and society.
Method of Assessment: Flexible assessment

Prerequisite pass module: Computer Inf. Systems (Mil) 144

Home department: Computer Information Systems (Mil)

13778 Computer Science (Mil.)

114 (12) Introduction to Computer Science and Programming I (5L, 3T)

Formulate simple solutions to problems from a broad range of application areas, using a useful set of algorithmic and problem reduction techniques. Systematically organise, write, and debug medium-sized programs in Python, covering topics such as core elements of a program; simple algorithms; functions; recursion; objects; debugging; assertions and exceptions.

Home department: Computer Information Systems (Mil)

144 (12) Introduction to Computer Science and Programming II (5L, 3T)

Formulate solutions to complex problems from domains of data visualisation, probabilistic and statistical thinking, simulation models as well as using computation to understand data. Formulate solutions to advanced problems from domains such as optimisation problems, dynamic programming and machine learning. Implement simple algorithms and data structures in an efficient manner that reduces computational complexity. Write and debug medium-sized programs in Python using object-oriented programming techniques, covering topics such as efficiency and orders of growth; memory and search; classes, OOP and inheritance; and search trees.

Home department: Computer Information Systems (Mil)

13972 Contemporary and Comparative Intelligence Studies

344 (24) Contemporary and Comparative Intelligence Studies (6L)

Contemporary Intelligence Studies: The concept Contemporary Intelligence Studies; Contemporary threats to national security e.g. International terrorism, espionage, sabotage, subversion, proliferation of weapons of mass destruction, economic and industrial espionage, aggression, etc. Contemporary Intelligence legislation, policies and processes; The role that the intelligence community plays in contemporary national security; The reasons for and causes of intelligence failures; The interaction between diplomacy and contemporary intelligence; The

impact of Contemporary Science and Technology on the conduct of Intelligence; The RSA of the Intelligence Systems of NATO and Comparative Research Theory and Practise.

Home department: Military Strategy

56987 Contract Law (Mil)

214 (16) Contract Law (5L)

Introduction and basis of contracts: validity requirements, contents and operation of contracts; principles of representation; breach of contract and remedies; termination of obligations.

Home department: Mercantile and Public Law (Mil)

13970 Counter-Intelligence Threats

214 (16) Counter-Intelligence Threats (5L, 1T)

The elements of the Counter-Intelligence Threat, Espionage, Sabotage, Subversion, Acts Endangering Security; Foreign Intelligence Services; Potential Adversaries, International Terrorism and Extremism; Information Technology and Cyber Threat; The implications of the Counter Intelligence Threat to National Security and specifically the battle readiness of the SANDF; The relationship between the CI Threat and the conduct of Counter-Intelligence; The CI Threat as a key element in the conduct of the CI Cycle, CI appreciation and CI Plan.

Home Department: Military Strategy

46701 Criminal and Military Law

114 (12) Criminal and Military Law (5L)

General introduction to the study of law: the nature and essence of the law; classification of the South African law; sources of the law; jurisprudence in South Africa.

General principles of criminal law: punishment theories and criminal liability; conduct and prohibition; causation, unlawfulness, culpability.

Home department: Mercantile and Public Law (Mil)

144 (12) Criminal and Military Law (5L)

Law of evidence: introduction to law of evidence; admissibility of evidence; privilege; means of proof; sufficiency of proof and burden of proof.

Military law: introduction and application, military offences; procedure of the disciplinary hearing, procedure of the court of the military judge, boards of inquiry; redress of wrongs, law of armed conflict.

Home department: Mercantile and Public Law (Mil)

12092 Economics (Mil)

114 (12) Micro-economics (4L, 1T)

Introduction and background to economic issues and theory; overview of economic systems; theory of demand, supply and interaction in markets; government intervention in markets – price control and taxes; theory of demand; theory of production and supply; theory of alternative market structures; introduction to markets for factors of production; inequality and poverty; the case for and against government intervention.

Home department: Economics (Mil)

144 (12) Introduction to Macro-economics and Monetary Economics (4L, 1T)

Macro-economics issues: economic growth, unemployment and inflation; the open economy; macro-economic thought; the simple Keynesian analysis of national income, employment and inflation; fiscal policy; money and interest rates; monetary policy; Keynesian and monetarist controversies: the control of aggregate demand, aggregate supply, unemployment and inflation; supply-side economics; international trade, the balance of payments, exchange rates and international economic relationships; economic development.

Home department: Economics (Mil)

214 (16) Advanced Principles of Economics (5L, 1T)

Micro-economics: market failure; welfare economics; market for factors of production. Macro-economics: the four-sector model; the IS/LM model; the AD/AS model.
Prerequisite pass modules: Economics (Mil) 114, 144

Home department: Economics (Mil)

244 (16) International Economics (5L, 1T)

International trade: theory of international trade, tariffs and subsidies.

International finance: foreign exchange markets; the balance of payments; alternative exchange rate regimes; international finance and the international monetary system; international finance and the debts crisis.

Public finance: introduction to fiscal theory; the role of government allocation and the redistribution function; tax structure theory; public finance in the micro-economic context; the defence budget and economic warfare.

Home department: Economics (Mil)

314 (24) Applied Economics (5L)

Labour economics: the government in the labour market; wage theory; wages and inflation; interaction between supply and labour markets; theory of unemployment; theory of unions and strikes; theory of labour productivity and human capital; South African labour market.

Economic systems and thought: pre-classical thought; neo-classical thought; capitalism; socialism; communism and social democracy; mixed economy.

Defence economics: the functioning of the defence industry; economic warfare; national budget and defence aspects; labour economics from a defence perspective.

Home department: Economics (Mil)

344 (24) Quantitative Economics (5L)

Industrial economics: the structure, conduct and performance of the South African economy.

Quantitative and econometric analysis: index formulation and manipulation of data; real and nominal inflation; purchase-price equilibrium; international trade and exchange rate interaction; introduction to statistics and overview of terminology, methodology and interpretation; application of hypothesis testing; regression analysis and interpretation; use of E-View software; data manipulation and interpretation; research methods and data collection.

Monetary economics: money and interest rates; monetary policy; Keynesian and monetarist differences.

Home department: Economics (Mil)

56286 English Studies (Mil)

114 (12) Academic Writing and Communication in English (3L, 2S)

This semester module is presented to students in all programmes offered by the Faculty of Military Science. The purpose of this module is to provide you with the argumentation, critical thinking and general linguistic tools. Students will investigate the daily act of good and fallacious reasoning through a diversity of contemporary texts.

Too often, bad use of grammar reflects badly on the user of the language and leads to unfair labelling of the speaker/writer as being uneducated. You will be guided in communicating successfully in any discipline by selecting and using language “carefully, purposefully, artfully and based on shared, logical understanding”.
Method of Assessment: Flexible assessment

Home department: Industrial Psychology (Mil)

144 (12) English Language, Literature and Culture in Context (3L, 2S)

In this semester module there is a greater emphasis on critical reading, appreciation and analysis of literary text, with special reference of English in a South African context. A variety of text,

fiction and non-fiction (contemporary news articles, short stories, poetry, films and other genres) will be studied to explore concepts of culture and more general issues of cultural and national identity. Cultural bias in and through literature will, inter alia, be addressed. The fact that "people in various positions of power often use (abuse) language to remain in power" will be critically analysed, challenged and evaluated.

In order to build on the principles of good language usage taught during the first semester, students are introduced to the diverse ways South Africans speak and write, and their reasons for doing so. The focus on language and culture alerts them about their own, and others' deviations from South African Standard English. It also guides them towards writing in a style and register that suits the tertiary academic environment beyond the familiar military environment.
Method of Assessment: Flexible assessment

Home department: Industrial Psychology (Mil)

13974 Factors Influencing Intelligence Analysis

144 (12) Factors Influencing Intelligence Analysis (5L, 1T)

The influence of mind-sets, paradigms and perceptions in analysis; Analytical and cognitive bias; The different analytical pitfalls; How to recognise the different analytical pitfalls; Steps that can be taken to avoid analytical pitfalls; Introduction to concepts associated with denial and deception; Historic examples of denial and deception; WWII application of denial and deception; Cold War application of denial and deception; Detecting denial and deception; Techniques to overcome analytical pitfalls; Steps to improve the quality of analysis.

Home Department: Political Science (Mil)

56324 Financial Accounting (Mil)

114 (12) Introduction to Financial Accounting (5L, 1P)

The basic principles and spheres of accounting: the nature and function of accounting, the nature of accounting theory, financial position, financial result, the double-entry system and the accounting process.

Collecting and processing the accounting data of organisations.

Accountability for current and non-current assets: cash and cash equivalents, trade and other debtors, inventory, property, plant and equipment and other non-current assets.

Accountability for current and non-current liabilities: current liabilities and non-current liabilities.

Accounting reporting: financial statements of a sole trader.

Home department: Accounting (Mil) and Auditing (Mil)

144 (12) Advanced Financial Accounting (5L, 1P)

Collecting and processing the accounting data unique to a non-profit organisation, a close corporation, a partnership and a company. Preparing the financial statements of a non-profit organisation, a close corporation, a partnership and a company.

Analysis and interpretation of financial statements.

Ethics in financial accounting.
Prerequisite module: Financial Accounting (Mil) 114

Home department: Accounting (Mil) and Auditing (Mil)

13979 General Intelligence History

224 (16) General Intelligence History (5L, 1T)

Introduction to the study of intelligence history; introduction to intelligence historiography; the nature, approach and function of intelligence history; basic concepts in intelligence history; introduction to early intelligence systems; intelligence in the Age of the Industrial Revolution; intelligence agencies: MI5/MI6, the CIA, the KGB; intelligence in the Two World Wars; intelligence in the Cold War and Post-Cold War eras.

Home department: Military History

43826 Industrial Psychology (Mil)

114 (12) Introduction to Human and Organisational Development (5L)

Introduction: history of psychology; definitions, schools of thought and areas within industrial psychology. Physical dimension: central nervous system and brain, senses, perception, attention, memory, information processing, heredity, development. Psychological dimension: intellectual and volitional processes, emotions. Man as a social being in interaction with his environment. Theoretical perspectives on personality; stress and unhealthy habits; human reactions to stress, mental health problems; identification, classification and treatment of psychopathological behaviour.

Home department: Industrial Psychology (Mil)

124 (12) Ergonomics (5L)

Ergonomics: introduction to ergonomics. Approaches and models in ergonomics. Basic principles and business perspectives in ergonomics; the man-machine interface; information and operation incorporating information processing, controls, displays and control panels. Applied ergonomics, human factors in systems, posture, movement, applied anthropometry, physical space and arrangements, and workspace guidelines for design. The workplace: vision and lighting, climate factors and temperature, chemical substances and toxicology, noise and vibration, cumulative trauma and the built environment. Legislation, human error and safety, inspection and

maintenance, quality and productivity; ergonomic approach to workplace programmes. Practical component: students complete a practical project and make presentations (part of assessment).

Home department: Industrial Psychology (Mil)

144 (12) Career Psychology (5L)

Introduction: outlining the area of study and key concepts; fundamentals of career psychology. Sustaining a career and the course of a career: the employee in interaction with the work environment, career dynamics within a career developmental framework; entry into the world of work; the psychological contract; career anchors; early career stage, establishment, middle career, pre-retirement and preparation for retirement. Theory of organisational choice, organisational entry; organisational change and implications for careers; dual career families; job loss. Industrial mental health: promoting industrial mental health on an individual as well as organisational level.

Home department: Industrial Psychology (Mil)

214 (16) Military Psychology (5L, 1P)

An introduction to military psychology. Personality theory and war: the role of personality in the declaration of war, explained in terms of the personality theory of Jung. Adjustment psychology: a definition of maladjustment; the transition from adolescence to adulthood during military training; the conflict between a military identity and a youth identity. Operational psychology: the psychological preparation of soldiers for operations; the psychological effects of combat on the soldier; combat motivation; factors involved in combat stress; the identification of post-traumatic stress disorder; the psychological debriefing of trauma. Peacekeeping psychology: the psychological model to support soldiers and their dependants during deployment on peacekeeping operations; the various stressors experienced by soldiers during the different phases of peacekeeping operations; the psychological effects of being held as a prisoner of war during peacekeeping operations. Psychological Warfare: the content focuses on the model for and ethical use of Psychological War Operation.

Home department: Industrial Psychology (Mil)

244 (16) Human Resources Management (4L, 1P)

Human resources management in perspective: introduction, role and environment of human resources management, an overview of human resources management in South Africa, research methods, problem statement, the design of the research study, major research methods, measurement of variables, analysis of data. Human resource management pre-selection practices: planning for human resources, analysing jobs, determine criteria and standards for decision-making, conceptual versus actual criteria, criterion deficiency, relevance and contamination, objective criteria versus subjective criteria, the relationship among job performance criteria. Human resource management selection practices: assessing the quality of predictors, reliability

and validity, psychological tests and inventories, ethical standards in testing, sources of information about testing, test content, interviews, assessment centre evaluations, work samples and situational exercises, biographical information, letters of recommendation, newer and controversial methods. Models of personnel decisions, recruitment, selection, placement and classification. Human resources management post-selection practices: the strategic value of training and development, assessing training needs, methods of training and development, management development issues, equal employment opportunity and training, evaluation of training programmes quality of work life, appraising job performance, sources of job performance appraisal, performance appraisal methods, rater training, self- and peer appraisals, feedback of appraisal information to employees, job evaluation, compensation, factors influencing compensation, employee benefits and services, motivation and compensation. Human resources (HR) planning: the need for HR planning, strategic business planning, the HR planning process, evaluation of the HR planning process. Factors that influence human resource management practices: safety and health, technology and international trends. People challenges in the new economy, managing a virtual workplace, implications of globalised markets, mergers and downsizing. Changes in the world population and demography.

Home department: Industrial Psychology (Mil)

254 (16) The Management of Cultural Diversity (4L, 1P)

Culture and psychology: introduction to cross-cultural psychology; culture and the self; culture and basic psychological processes; cultural perspectives of the developmental theories of Piaget, Kohlberg and Erikson; culture and behaviour in organisations; approaches to the classification and analysis of culture; cross-cultural issues; stereotypes, biases and prejudices; cross-cultural conflict; cross-cultural abnormal psychology; cross-cultural counselling; cross-cultural training; culture and communication; cross-cultural management and leadership. The management of diversity: introduction to diversity and concepts; diversity in South African society; diversity issues in the military; diversity initiatives in organisations; a model for the management of diversity in the South African National Defence Force; cross-cultural psychology in operations; co-operation with multinational forces; culture and deployment in foreign countries.

Home department: Industrial Psychology (Mil)

314 (24) Research Methodology and Psychometrics (5L, 1P)

Research methodology: introduction to research methods; introduction; using scientific methods in psychology. Introduction to psychometrics and its history.

The research process: definitions; formulating the research problem, setting up hypotheses, concepts, constructs, variables, levels of measurement; research design and strategy; significance, purpose and principles; design criteria.

Types of research: ex post facto, laboratory and field experiments, quasi-experimental designs, surveys. Control, reliability and validity testing.

Basic statistics: introduction to statistics in psychology. Basic statistical concepts; grouping and graphic representation of data; central tendency, variability, normal distribution, standard scores; correlation statistics, product correlation, rank correlation and regression; probability and the normal sampling distribution; testing of hypotheses, errors of decision; distribution: t-test, chi-square, F-test; using test statistics; non-parametric statistics.

Basic psychological testing: measurement theory, principles, validity and reliability; test construction and norms; scales of measurements, types of measurement procedures, and criteria. Measuring aptitude, interest and personality; setting up a measurement programme and the procedure for its application; interpreting, systematising and describing the sets of measurements; ethical aspects of psychological measurement. Report writing and decision-making based on measurements.

Home department: Industrial Psychology (Mil)

344 (24) Organisational Psychology (5L, 4P)

Introduction and historical perspective, micro processes: differences in individual behaviour, nature and formation of groups, intergroup behaviour and group dynamics. Basic motivational processes: job motivation, theories of motivation, behaviour modification, coping with conflict. Power politics and organisation politics. Management: theories of leadership, management development, managerial decision-making and control, processes of communication. Macro processes: organisational design, structuring and development; organisational change and resistance to it. Organisation research: action research; consultant/client relations; contingency approach and expectations theory. The military organisation: the development of an “us/them” culture. Reactions to the military environment. Work-related attitudes of military personnel.

Home department: Industrial Psychology (Mil)

13975 Intelligence Analysis

154 (12) Intelligence Analysis (5L, 1T)

Effective reading for the intelligence officer; the implications of the non-comprehension or incorrect comprehension of text; different active reading strategies; paraphrasing; effective summarizing; definition of critical thinking; the features of critical thinking; the need for critical thinking skills; learning to think critically; critical analytical writing; introduction to logic and reasoning; premises and conclusions; introduction to deductive reasoning; features and examples of deductive reasoning; introduction to inductive reasoning; features and examples of inductive reasoning; the fallacies of logic; contrasting deductive and inductive reasoning; inductive and deductive inferences; combinatorial reasoning; syllogistic reasoning; different types of reasoning fallacies; the identification of fallacies in reasoning; the elements of a sound argument; guidelines for writing a sound argument; evaluating own products and arguments; the constructs of an argument; evaluating the strength of an argument; common errors in arguments; metacognition (thinking about thinking).

Home Department: Political Science (Mil)

13983 Intelligence Mandate and Regulatory Framework

254 (16) Intelligence Mandate and Regulatory Framework (5L, 1T)

The stipulations and definitions of the statutory intelligence legislation; the role and functions of the constitutional oversight mechanisms such as the Inspector General on Intelligence (IGI) and the Joint Standing Committee on Intelligence (JCSI); legal administrative procedures; different sections of legislation such as: Electronic Communications Act 68 of 2002, The Regulation of Interception of Communication and Provisions of Communications Related Information Act (RICA), Criminal Procedure Act 51 of 1977, Financial Intelligence Centre Act, The Constitution of South Africa, Defence Act 42 of 2002 as amended, National Strategic Intelligence Act 39 of 1994, General Intelligence Act as read with General Intelligence Amendment Act 2013, Protection of Information Act 82 of 1982 as read with the Protection of State Information Bill (POSIB), Promotion to Access to Information Act 2 of 2000, National Archives of South Africa Act 43 of 1996; international laws, treaties and agreements; the legal mandate of specific services and agencies; the differences between the various mandates; the implications of non-compliance to legal prescripts and procedures; restrictions and limitations on co-operative intelligence practices and products; legal status of organisational directives, policies and procedures; identification of Non-compliance; organisational protocols and procedures; legal requirements i.t.o. audit trail; relevant Criminal and Military Law; the nature and role of ethics in intelligence; the norms, values and principles relating to ethics relevant to intelligence; democratic values; human rights; transparency; and the ethical decision process.

Home department: Mercantile and Public Law (Mil)

13981 Intelligence Psychology

324 (24) Intelligence Psychology (6L)

Application of intelligence psychology; principles of psychology; understanding of human behaviour; understanding of the self; manipulation of human behaviour to achieve operational goals; psychological assessment method; motivation; lie detecting; procedures and techniques in communication; interviewing principles; interviewing techniques; verbal and non-verbal communication; exploitation and elicitation; establishing rapport; effective listening; memory retention and recall; elicitation and counter interrogation skills; managing an effective interview; statement analysis; psychology theories; the basic principles of psychology; the formation of personality; the psychology of motivation and its application in the intelligence environment; profiling (human target analysis); analysis of behaviour; integration of information and situation-specific application of deductions.

Home department: Industrial Psychology (Mil)

13969 Introduction to Counter-Intelligence and Covert Action

144 (12) Introduction to Counter-Intelligence and Covert Action (5L, 1T)

Counter Intelligence: Introduction to Counter-Intelligence Theory; Counter-Intelligence principles; the elements of the Counter-Intelligence Threat; the application and integration of Counter Intelligence within the Department of Defence; the role of Counter-Intelligence and Counter-Intelligence Functionaries during the different types and phases of warfare and the conduct of a CI Threat Risk Assessment and the compilation of a CI Plan.

Covert Action: Introduction to Covert Action Theory; the principles, requirements, methods, advantages and disadvantages of Covert Action; the Regulatory Framework requirements regarding Covert Action and the South African History regarding Covert Action pre-1994.

Home Department: Military Strategy

13973 Introduction to Intelligence Analysis

114 (12) Introduction to Intelligence Analysis (5L, 1T)

The meaning of the concept analysis; terminology associated with the analysis process (such as synthesis, facts, opinions, conclusions, assumptions, intelligence advice, description, explanation, estimation/prediction, etc.); the role and importance of analysis in the conduct of intelligence; the different levels of analysis; the purpose and features of analysis; the thought processes required for effective analysis; the process of analysis; the roles and functions of the intelligence analyst; features of the environment the intelligence analyst is working in; the attributes of the intelligence analyst; analysis within the intelligence cycle; intelligence requirements formulation; the role of the analyst in the management of the collection process; the different steps of the intelligence process and the interrelation thereof, i.e. evaluation, collation and analysis; the need and importance of analytical frameworks; the role of technology in analysis; the intelligence cycle and the scientific research process; the intelligence problem, the research problem and hypothesis; the importance of the intelligence problem for analysis; why does intelligence fail?; historical and contemporary examples of the impact/effect of incorrect analysis/intelligence; historical and contemporary examples of the impact/effect of correct analysis/intelligence; steps to improve the quality of analysis; the concept of intelligence advice; inference development; the analysis of military capabilities; how does the process of analysis work?; the importance of the intelligence problem; and the relationship between analysis and collection management.

Home department: Political Science (Mil)

13968 Introduction to Intelligence and Collection

114 (12) Introduction to Intelligence and Collection (5L, 1T)

Intelligence: what is intelligence; intelligence philosophy; purpose of intelligence; the RSA intelligence community; military intelligence within the national defense structure; challenge in intelligence; the concepts of democracy, transparency and secrecy are defined in terms of departmental application; the differences between information and intelligence; types of

intelligence; the intelligence cycle; the process of information to intelligence; functions of roles of the different intelligence agencies; role of policymakers, oversight mechanisms and decision-makers in intelligence; limitations of intelligence; the uses of intelligence are explained in accordance with the theory of intelligence; influence of culture on intelligence (anthropology); purpose of military intelligence; types of military intelligence; military intelligence assets; and the intelligence plan.

Collection: Collection as an element of intelligence; Collection Philosophy; guiding principles of collection; the relationship between Collection and intelligence; the Collection resources and the characteristics of collection resources and agencies; Collection and interviewing techniques; question formulation; the different types of questions; the advantages and disadvantages of the different collection methods, sources, resources and agencies; the evaluation of sources w.r.t. relevancy, accuracy and timeliness; security principles applicable to collection; manage a collection plan; and present a case study.

Home department: Military Strategy

56960 Interpretation of Statutes (Mil)

214 (16) Interpretation of Statutes (5L)

Basic introduction, hierarchy and structure of legislation, commencement and demise of legislation, re-enactment and amendment of legislation, traditional approaches towards interpretation of statutes, the presumptions, methods of interpretation and the impact of Constitutional interpretation on statutory interpretation.

Home department: Mercantile and Public Law (Mil)

56979 Management Accounting (Mil)

314 (24) Management Accounting (5L, 1P)

Cost accounting fundamentals: the accountant’s role in the organisation; an introduction to cost terms and purposes; cost-volume-profit analysis; costing systems; activity-based costing and management.

Cost allocation: general cost allocation; cost allocation: joint products and by-products; allocation of support department costs, common costs and revenues; process costing. Cost information for decisions and control: flexible budgets; standard costs; variances and management control; inventory costing and capacity analysis.

Cost information for decisions: determining how costs behave; decision-making and relevant information; pricing decisions and cost management.

Home department: Accounting (Mil) and Auditing (Mil)

344 (24) Management Accounting (5L, 1P)

Tools for planning and control: income effects of alternative inventory costing methods, the master budget, responsibility accounting and relevance, cost and the decision process.

Cost information for decisions: determining how costs behave; decision-making and relevant information; pricing decisions and cost management; strategy, balanced scorecard and strategic profitability analysis.

Quantitative decision-making: quantitative methods and the decision-making process, regression analysis and learning curves.

Quality and just-in-time: quality, time, and theory of constraints; inventory management, just-in-time, and backflush costing; spoilage, reprocessing and scrap.

Investment decisions and management control systems: capital budgeting and cost analysis; management control systems, transfer pricing, and multinational considerations; performance measurements, compensation, and multinational considerations.
Prerequisite module: Management Accounting (Mil) 314

Home department: Accounting (Mil) and Auditing (Mil)

21563 Mathematics (Mil)

112 (8) Calculus I (3L, 2T)

Limits; continuity; differentiation; definite and indefinite integration.

Home department: Mathematics (Mil)

122 (6) Linear Algebra I (3L, 1T)

Vectors; straight lines and planes; circles and spheres; transformation of coordinates; solving of systems of linear equations.

Home department: Mathematics (Mil)

124 (12) Service Course in Mathematics (6L, 2T)

Fundamental concepts: products; factorisation; simplifying algebraic expressions; solving equations and inequalities; functions and graphs. Radian measure. Trigonometry. Vectors. Limits and derivative: algebraic techniques for finding limits; continuous functions; tangent lines; instantaneous velocity; differentiation rules; rates of change; derivative of exponential, logarithmic and trigonometric functions; higher order derivatives; partial derivatives. Applications of derivative: optimisation problems; Newton-Raphson algorithm; applications to economics. Integrals: basic rules of integration; definite integral; properties of definite integral; applications. Matrix algebra: introductory matrix concepts; matrix addition and subtraction; transpose of a matrix; scalar multiplication; determinant and inverse of a matrix; solving systems of linear

equations. Linear programming: geometric approach to linear programming problems; simplex tableau; simplex method.

Home department: Mathematics (Mil)

142 (8) Calculus II (3L, 2T)

Applications of differentiation; techniques of integration; applications of the definite integral; numerical integration, partial differentiation.
Prerequisite module: Mathematics (Mil) 112

Home department: Mathematics (Mil)

152 (6) Linear Algebra II (3L, 1T)

Complex numbers; determinants; real vector spaces; conic sections.
Prerequisite module: Mathematics (Mil) 122

Home department: Mathematics (Mil)

212 (10) Analysis I (3L, 2T)

Multiple integration; line integrals; Green's theorem; surface integrals; divergence theorem; Stokes' theorem; first-order differential equations; higher-order linear differential equations.
Prerequisite pass modules: Mathematics (Mil) 112, 142

Home department: Mathematics (Mil)

222 (10) Linear Algebra I (3L, 1T)

Real vector spaces; linear transformations and matrix representations; eigenvalues and eigenvectors.
Prerequisite pass modules: Mathematics (Mil) 122, 152

Home department: Mathematics (Mil)

242 (10) Analysis II (3L, 2T)

Convergence of sequences; convergence or divergence of series; alternating series; power series; Taylor and Maclaurin series.
Corequisite module: Mathematics (Mil) 212
Prerequisite pass modules: Mathematics (Mil) 112, 142

Home department: Mathematics (Mil)

252 (10) Linear Algebra II (3L, 1T)

Introduction to linear programming and network analysis.
Corequisite module: Mathematics (Mil) 222
Prerequisite pass modules: Mathematics (Mil) 122, 152

Home department: Mathematics (Mil)

312 (12) Set-theoretical Foundations (3L, 1T)

The aim of this module is to prepare students for abstract algebra and general topology, as well as other subjects in mathematics, which extensively use set-theoretic constructions and formal language. Topics covered in the module include logical connectives and quantifiers; the algebra of sets; power sets; relations and functions.
Corequisite module: Mathematics (Mil) 322
Prerequisite pass modules: Mathematics (Mil) 212, 222, 242, 252

Home department: Mathematics (Mil)

322 (12) Complex Analyses (3L, 1T)

The differentiability of complex functions; conformal mappings; integration along a path; power series; classification of singularities; residues; applications of contour integration.
Corequisite module: Mathematics (Mil) 312
Prerequisite pass modules: Mathematics (Mil) 212, 222, 242, 252

Home department: Mathematics (Mil)

342 (12) Numerical Analyses (3L, 1T)

Mathematical preliminaries and error analysis; solutions of equations in one variable; interpolation and polynomial approximation; numerical differentiation and integration; initial value problems for ordinary differential equations; direct methods for solving linear systems.
Corequisite modules: Mathematics (Mil) 312, 322
Prerequisite pass modules: Mathematics (Mil) 212, 222, 242, 252

Home department: Mathematics (Mil)

352 (12) Non-linear Programming (3L, 1T)

Classical optimisation techniques; convex sets and convex functions; one-dimensional minimisation methods; multivariable unconstrained optimisation techniques; constrained optimisation.
Corequisite modules: Mathematics (Mil) 312, 322
Prerequisite pass modules: Mathematics (Mil) 212, 222, 242, 252

Home department: Mathematics (Mil)

362 (12) Introductory Topology (3L, 1T)

Metric and topological spaces; basic concepts; sequences; continuous mappings; uniform continuity; compact spaces and sets; connected spaces and sets.
Corequisite modules: Mathematics (Mil) 312, 322
Prerequisite pass modules: Mathematics (Mil) 212, 222, 242, 252

Home department: Mathematics (Mil)

363 (12) Abstract Algebra (3L, 1T)

Groups; rings; residue classes modulo n; quotient rings and fields; Euclidean domains; unique factorisation domains; extensions of fields; applications to straight edge and compass constructions.
Corequisite modules: Mathematics (Mil) 312, 322
Prerequisite pass modules: Mathematics (Mil) 212, 222, 242, 252

Home department: Mathematics (Mil)

12478 Military Ethics

114 (8) Military Ethics (5L)

This module will enhance student knowledge about military ethics with links to human rights and international humanitarian law. The student will learn the role of military ethics in military command, be empowered with a dynamic model on moral judgement and how to apply it as a commander.

Home department: Industrial Psychology (Mil)

22969 Military Geography

114 (12) Concepts and Techniques in Geography (4L, 3P)

The origin, nature and four main traditions of geography; the impact of man on the environment; population geography; cultural geography; the geography of spatial behaviour; political geography, economic geography; the geography of natural resources; urban geography; the regional concept; the historical development of cartography; cartometry (map scale, map projections); data acquisition (topographic surveying, aerial photography and remote sensing); map communication (layout, design, map symbols and representation); data classification (statistical, thematic and quantitative); computer assisted mapping and animated cartography.

Home department: Military Geography

144 (12) The Physical Environment (4L, 3P)

Movement and seasons of the earth; atmosphere of the earth; insulation and temperature; atmospheric pressure and winds; atmospheric flows and disturbances; atmospheric moisture; the

hydrosphere; the South African weather and climate; interpretation of climatological data; synoptic weather charts and climogrammes. The internal structure of the earth; endogenesis of continental, sub-continental and regional scale; exogenetic processes (weathering and mass wasting, fluvial processes, ground water and karst topography, water and wind in arid regions); ocean processes (tides, waves, sea currents, coastal processes and landforms); the South African geomorphological landscape; terrain representation and contour interpretation; stream orders; profiles and slopes; aerial photo interpretation of the physical environment.
Method of Assessment: Flexible assessment

Home department: Military Geography

214 (20) Military Conduct and the Environment (4L, 3P)

Introduction to environmental theory; the environment as a system; South African environmental law: an overview; environmental resources and conflict; the urban environment and related environmental problems; military actions and the environment; environmental management in the military context – internationally and in South Africa; data capturing techniques (sampling techniques, questionnaires, workshops, etc.); data processing and interpretation; the procedure for environmental impact assessment.
Method of Assessment: Flexible assessment

Home department: Military Geography

244 (20) The Geography of Sub-Saharan Africa (4L, 3P)

The following issues regarding the sub-Saharan African region will be studied: the physical landscape; population geography – migration and refugee crisis; the human impact of societies on the environment; historical background; of states and nations; legacies of external influences; culture, conflict and change; economic and human development; the political landscape and instability, medical geography; urban geography; agricultural development; economic and cultural significance of natural resources. Geographical report on a selected topic of the region.

Home department: Military Geography

314 (24) Geographical Information Systems (4L, 3P)

Defining geographical information systems (GIS); fundamental geographical concepts for GIS-science; geographic information technology in the community with specific reference to the military community; the capturing, storing, retrieval, manipulation, querying and displaying of digital geographic data.

Home department: Military Geography

344 (24) Remote Sensing (4L, 3P)

Electromagnetic energy and remote sensing; sensors and platforms; radiometric correction; geometric aspects; image enhancement and visualisation; visual image interpretation; digital classification.

Home department: Military Geography

15377 Military History

114 (12) General Military History to 1914 (5L, 1T)

Introduction to the study of military history: the nature, approach and function of military history, basic concepts in military history; warfare in antiquity; medieval warfare; warfare in the early modern era; limited warfare in the eighteenth century; Napoleonic warfare wars of the Industrial Revolution: the American Civil War, Austro-Prussian War, Franco-Prussian War, Anglo-Boer War and the Russo-Japanese War; introduction to war and technology in the twentieth century.

Home department: Military History

144 (12) The Military History of Africa to 1945 (5L, 1T)

Introduction to the history of Africa: African historiography; warfare in sub-Sahara Africa since the earliest times; state formation and empires; Islam; trade and slavery; internecine warfare; resistance to colonial conquest; wars of colonial competition; introduction to national liberation, independence and internal conflict in Africa.

Home department: Military History

214 (16) South African Military History to the 21st Century (5L, 1T)

South African military historiography; early South African military history c. 1200 – 1652; intergroup conflict at the Cape, 1652 – 1795; the British Conquest of the Cape; the Difaqane/ Mfecane, 1815 – 1834; conflicts between the Voortrekkers, Matabeles and Zulus, 1836 – 1845; military power and the establishment of white hegemony during the second half of the 19th century; the First Anglo-Boer War, 1880 – 1881; the Second Anglo-Boer War, 1899 – 1902; the establishment and history of the Union Defence Force, 1912 – 1957; South African defence policy and imperial defence; the crisis year 1922; the rise of black resistance in the twentieth century; the South African Defence Force, 1957 – 1994; the South African National Defence Force: integration and transformation since 1994.

Prerequisite modules: Military History 144

Home department: Military History

244 (16) The First and Second World Wars, 1914 – 1945 (5L, 1T)

European armies, weapon systems and doctrines on the eve of the First World War; the First World War, 1914 – 1918; South Africa's participation in the First World War, 1914 – 1918; the causes of the Second World War; military developments, 1919 – 1939; the opposing forces in 1939; the Axis conquest of Central and Western Europe, 1939 – 1941; operations in the Mediterranean and North Africa, 1940 – 1943; the German campaigns in Russia, 1941 – 1942; total war against the Axis forces, 1942 – 1945; the war in the Pacific, 1941 – 1945; the revolution in military technology, 1942 – 1945; South Africa's participation in the Second World War; war and society in the era of total war; military historiography to 1945; the social and historiographic impact of the Second World War.

Home department: Military History

314 (24) Contemporary Warfare (5L, 1T)

The Cold War; the Korean War, 1950 – 1953; the Vietnam War, 1965 – 1975; the Arab-Israeli Conflict, 1948 – 1982; the Indo-Pakistani War, 1965 – 1971; the Iran-Iraq War (1st Gulf War), 1980 – 1988; the Falkland War, 1982; the 2nd Gulf War, 1991; the 3rd Gulf War, 2003; the influence of technology on conventional warfare since 1945; the post-Cold War era; peacekeeping operations; trends in contemporary military historiography.
Prerequisite module: Military History 244

Home department: Military History

344 (24) Low-Intensity Conflict in Africa since 1945 (5L, 1T)

Theoretical background of revolutionary war/internal conflict/low-intensity conflict, with particular reference to the revolutions in Russia, China and Cuba; trends in global terrorism; low-intensity conflict and revolution in Algeria, 1830 – 1962; insurgency, counterinsurgency and civil war in Angola, 1961 – 2001; insurgency, counterinsurgency and civil war in Mozambique, 1964 – 1991; the internal war in Rhodesia, 1972 – 1980; the internal conflict in South Africa, 1976 – 1994; South African counterinsurgency operations in South West Africa/Namibia and Angola, 1966 – 1989; the low-intensity conflict in the Democratic Republic of the Congo, 1960 – 2002; the SANDF, peace-support operations and military intervention in Africa, 1998 – 2002; military history and military professionalism.

Home department: Military History

12479 Military Leadership

144 (8) Military Leadership (3L, 2P)

The module will empower students with knowledge on ethical, participative and autocratic leadership, the role of military ethics to be a commander, the dark side of obedience, and how to

apply military ethics in different scenarios in the military – with its links to the code of conduct of the SANDF and the Constitution of South Africa.
Prerequisite module: Military Ethics 114

Home department: Industrial Psychology (Mil)

50210 Military Management

114 (12) Introduction to Organisation and Resource Management (5L)

This module will focus on the role of managers in the public sector by providing an overview of the management of the different functions within an organisation. Attention will be focused on the unique nature of the public sector; the ethical foundations for public sector officials; the environment in which the public sector manager operates as well as the management functions of the public sector manager.

Home department: Military Management

144 (12) General Management (5L)

An overview; the management environment; management of diversity; planning skills; creative problem solving; strategic and operational planning processes; organising skills; organising and delegation; management of change; leadership skills; group and team development; power; conflict and stress; control skills; control of human resources; financial controls of organisation.

Home department: Military Management

214 (16) Logistics Management (5L)

The role of logistics in the economy and organisation; customer service; logistics information systems; inventory management; managing materials flow; transport; warehousing; materials handling and packaging; purchasing; global logistics; organising for effective logistics; methods to control logistics performance; supply-chain management; implementation of logistics strategy.

Home department: Military Management

244 (16) Financial Management (5L)

An introduction to financial management with reference to the analysis of financial statements and long-term financial planning. The valuation of cash flows, shares and bonds. The analysis of capital budgeting and budget control, short-term financial planning and management.

Home department: Military Management

314 (24) Project Management (5L)

Project management concepts, needs identification, proposed solutions and the implementation of projects are addressed as part of the project life cycle. The project manager, project team, types of project organisations and project communication and documentation are analysed as part of the personnel management function. Lastly, project planning and control is studied as part of planning, scheduling, scheduling control, resource considerations and cost planning and performance.

Home department: Military Management

344 (24) Strategic Management (5L)

Overview of strategic management: formulation of strategy (formulation of a vision/ mission, external and internal analysis, determining long-term objectives, development of corporate and business strategies, strategic analysis and choice), strategy implementation (operationalisation and institutionalisation of a strategy) and strategic control.

Home department: Military Management

30815 Military Professional Development

178 (12) Military professional development (1L)

Civic education, Convention of Service Writing (CSW), military history, musketry, regimental aspects, profession of arms.

Home department: Military Management

46663 Military Strategy

214 (16) Study of Strategic Thought and Concepts (6L)

Introduction to strategic studies. The process of strategy formulation and execution. Political guidance and civilian control of the strategy process. The theory of strategy and modern problematic. Traditional land, aerial and maritime thought. The execution of military strategy on the operational level of war.

Home department: Military Strategy

244 (16) Introduction to African Security (6L)

Theoretical approaches to security co-operation: the concept of security, typology of security, security regimes, security communities, collective security. Studies in African security co-operation: Southern African security co-operation, West African security co-operation, peace and security architecture of the African Union. African security and the changed global agenda: economic development and the prospect for economic security in Africa, democracy and security in Africa, the environment and African security, ethnicity, ethnic conflict and security in Africa. National security policy of South Africa.

Home department: Military Strategy

314 (24) Contemporary Thought on Low-intensity Conflict (6L)

The internal conflict spectrum.

The aetiology of internal conflict.

Insurgency: types and strategy.

Civil war: the African dimension.

Civil violence: popular and external support.

Political terrorism; peace support operations.

Organisational profiles: militant movements and government forces.

Home department: Military Strategy

344 (24) Conventional Schools of Thought and Future Warfare (6L)

Introduction to contemporary conventional power. The continental school of thought. The aerospace school of thought. The maritime school of thought. Cyber power as a geographical domain of war. South African doctrine on conventional warfare.

Home department: Military Strategy

46698 Military Technology

212 (10) Strength of Materials (3L, 2T)

Statics: forces, moments and couples; equilibrium of forces; free-body diagrams; pulleys; forces in frames; method of sections, loads and structural members; forces in space; centroids of areas and moments of inertia. Stresses and strains: stress and strain relationships; direct stress relationship; Hooke’s law; stress concentrations; temperature stresses. Rivets and welding joints: rivet joints; stresses in and yielding of riveted joints; stresses in thin-walled cylinders under high pressure; types of welding joints; strength and design of welding joints. Normal and shear stresses: torque; torque equation; angular displacement; power on axles; ending moments and shear stresses

in straight beams; yielding of beams; compound tresses; Mohr's circle; elastic stability of columns; Euler's equations and relevant restrictions.
Prerequisite modules: Mathematics (Mil) 142, 152

Home department: Military Technology

222 (10) Fluid Mechanics (3L, 2T)

Fundamental concepts: definition of fluid; viscosity, compressibility; ideal fluid; ideal gas.

Statics: pressure distribution; pressure measurement; forces on submerged bodies; buoyancy and stability of submerged floating bodies. Dynamics: Euler and Lagrange descriptions; continuity, momentum, and energy equations derived for a control volume. Dimensional analysis: geometric, kinematics and dynamic similitude; Raleigh method; Buckingham Pi-theorem.
Prerequisite modules: Mathematics (Mil) 112, 122, 142, 152

Home department: Military Technology

242 (10) Fluid Mechanics (3L, 1T)

Fluid in closed conduits: laminar and turbulent flow; effect of viscosity; equation of motion; friction factors and pipe roughness; minor losses; pumps and piping systems. Flow over immersed bodies: introduction to boundary layer theory; drag on various two-dimensional and three-dimensional bodies; introduction to lift on airfoils. Navier-Stokes equations: equations of motion; applications to laminar flow; introduction to turbulent flow. Propellers: propellers and propulsion; Froude's momentum theory of propulsion; blade element theory; momentum theory applied to helicopter rotor.
Prerequisite modules:

- Military Technology 222
- Mathematics (Mil) 112, 122, 142, 152

Home department: Military Technology

252 (10) Numerical Techniques (3L, 2T)

Computer representation and truncation of numbers: number representation; truncation error; rounding error; error propagation. Simultaneous linear equations: Gaussian elimination; matrix inverse; determinants; matrix conditioning. Interpolation: Horner's rule; Taylor's polynomials; polynomial interpolation; Lagrange interpolation; spline functions. Numerical differentiation and integration: interpolatory differentiation; interpolatory quadrature; compound quadrature formulas; Gauss quadrature; improper integrals; estimation and error control; adaptive quadrature. Non-linear equations: graphical approach; bisection method; secant method; Newton's method; convergence and error properties; polynomial roots. Function approximation and data fitting: least-squares approximation; stabilisation of least-squares methods; Fourier analysis. Ordinary

differential equations: elementary methods; Runge-Kutta methods; simultaneous and higher-order differential equations; two-point boundary value problems; adaptive step-size; error control.
Prerequisite modules:

- Computer Inf. Systems (Mil) 114
- Mathematics (Mil) 112, 122, 142, 152

Home department: Military Technology

254 (16) Information Warfare (5L, 1T)

Theory of IW: resources; players; offensive IW; defensive IW.

The IW battlegrounds: play; crime; rights of the individual; national security.

Offensive IW: open sources; psy-ops and perception management; insiders; signal interception; computer break-ins and hacking; masquerade; cyber plagues.

Defensive IW: secret codes and hideaways; fake recognition; monitors and gatekeepers.

System security: security awareness; risk management; incident handling; protecting critical infrastructure; encryption policy.

Home department: Military Technology

312 (12) Aerodynamics (3L, 2T)

Fluid mechanics: continuity, momentum and energy equation in differential form for incompressible flow. Potential flow: definitions of velocity potential and stream function; standard flow, source and sink in terms of stream function; Biot-Savart's law; determination of flow around a Rankine oval and rotating cylinder; introduction to numerical potential flow. Two-dimensional aerofoil theory: development and solution of general model. Finite aerofoil theory: Helmholtz's vortex theorems; Lancaster-Prandtl aerofoil model; aerofoil properties for finite series distributions; monoplane equation; simplified horseshoe vortex; formation flying effects, ground effect. Computational fluid mechanics: introduction to computational fluid mechanics; Navier-Stokes and Euler equations; finite difference formulations; numerical solution of Euler equations for elementary flows. Drag: definition of drag components; boundary layer theory.
Prerequisite modules: Military Technology 242, 252

Home department: Military Technology

322 (12) Gas Dynamics (3L, 2T)

Fluid mechanics: continuity, momentum and energy equations in differential form for compressible flow; isentropic flow; propagation of small disturbances; stagnation conditions; steady one-dimensional flow of an ideal gas with changing area; Da Laval nozzles; propulsion nozzles. Shock waves: normal and oblique shock waves in ideal gases. Expansion waves: expansion waves in ideal gases. Aerofoils in compressible flow: qualitative discussion on the

Prandtl-Glauert corrections and Ackert's theory. Finite wings in supersonic flow: qualitative discussion on the flow model and solution procedures. Transonic and hypersonic flow: qualitative aspects of transonic and hypersonic flow.
Prerequisite modules: Military Technology 242, 252

Home department: Military Technology

342 (12) Aircraft Mechanics: Performance Analysis (3L, 2T)

Aircraft propulsion: Froude's momentum theory applied to a propeller; blade element theory; characteristics of propulsion configurations. Aircraft performance: aircraft performance in steady and accelerating flight, including gliding flight, climbing flight, take-off, landing and horizontal turning flight; determination of speeds for minimum drag and minimum power; optimisation of flight profiles for range and endurance; influence of adverse atmospheric conditions on aircraft performance.
Prerequisite module: Military Technology 312

Home department: Military Technology

344 (24) Electronic Warfare (3L, 1T)

Mathematics and physics: logarithms; exponents; decibel; electromagnetic principles.

Electronic warfare (EW): introduction; glossary of terms; EW background and structures; objectives; EW analysis and vulnerability; receiver antenna resonance; antenna parameters and characteristics; the ideal receiver; receiver parameters; receiver noise; types of EW receivers; EW processing.

Radar: basic radar; the radar equation; radar countermeasures; chaff.

Infrared: the IR spectrum and guidance principles; IR countermeasures; IR counter-countermeasures.

COMINT: introduction to communication systems; advanced communication systems.

Home department: Military Technology

352 (12) Aircraft mechanics: Stability and control (3L, 2T)

Static stability and control of aircraft: co-ordinate system; stick-fixed and stick-free static longitudinal stability; longitudinal control; manoeuvring; stick-fixed and stick-free lateral and directional stability; directional control; lateral control. Dynamic stability and control of aircraft: general equations of motion; linearisation of equations; analytical and numerical solution of equations; characteristic motions; handling quality; coupling effects.
Prerequisite module: Military Technology 312

Home department: Military Technology

33057 Nautical Science

112 (6) Coastal and Deepsea Navigation (4L, 2P)

The classification of Charts. Publications used in maritime navigation. Navigational instruments and aids. Correcting courses and bearings. Chartwork. Standardisation of Chartwork. Incorporate tidal streams and currents. Anchor and manoeuvre using precise pilotage techniques. Fog navigation and traffic separation schemes.

Home Department: Nautical Science

122 (6) Celestial Navigation (4L, 2P)

Navigational astronomy. The celestial coordinate system. Instruments used in celestial navigation.

Calculate altitudes, declination and meridian passage. Solar and sidereal time used in celestial navigation. Calculating amplitudes and azimuths. Calculating position using Marc St Hillair or Intercept method.

Home Department: Nautical Science

144 (12) Navigational Theory (6L, 2P)

Elements of oceanography with emphasis on physical oceanography. Included are waves, tides (national and international tidal calculations), currents, coastal processes and meteorology. Chart projections, chart construction and spherical trigonometry in support of loxodromic and orthodomic sailing methods.

Home department: Nautical Science (Mil)

214 (20) Navigational Systems (6L, 4P)

Basic components of Electronic Navigation Systems. Radio wave propagation and the frequency spectrum, acoustics and depth sounding systems, vessel speed measurement, satellite navigation systems, the ship’s master compass, GMDSS theory and inertial navigation systems.

Home department: Nautical Science (Mil)

244 (20) Introduction to Marine Engineering Principles (6L, 4P)

Energy conversion, applied thermodynamics and power output calculations for power plants. Steam and superheated steam calculations using gas tables. Power plants include diesel engines, gas turbines, steam plants and air-independent propulsion. Theory of power plant layout, auxiliary systems, control systems and combination plants are also covered. This semester carries a heavy mathematical component mainly in terms of mechanical engineering (applied thermodynamics).

Home department: Nautical Science (Mil)

314 (24) Ship Stability (6L, 4P)

Focus is on transverse static stability including many sub components i.e. dry docking, damaged stability, free surface effect, etc. Further attention is given to second moments and Simpson's Rules. Introductory dynamical stability and submarine stability is also covered. This semester carries a heavy mathematical component mainly in terms of applied mathematics.

Home department: Nautical Science (Mil)

344 (24) Introduction to Naval Architecture (6L, 4P)

General ship knowledge; Ship structures including conventional hull forms, tonnages and drafts and resistance. Types of hull designs are investigated including hydrodynamic supported vessels; hydrofoils and air cushion vessels. Calculations on propulsion devices (disc element theory) and steering devices are done. The ship response to wave spectra are investigated in terms of Response Amplitude Operators (RAOs). This semester carries a heavy mathematical component mainly in terms of fluid dynamics.

Home department: Nautical Science (Mil)

48283 Political Science (Mil.)

114 (12) Introduction to Politics (6L)

The nature and study of politics; the classification of governments and political systems; political ideologies; models of democracy and their application; the theory and the role of the state; the mass media and political communication; representation, elections and voter behaviour; political parties and party systems; the theory of the *trias politica* with an application to South Africa.

Home department: Political Science (Mil)

144 (12) Introduction to International Relations and Civil-Military Relations (6L)

International Relations: the study of international relations; theories of international relations; states and the inter-state system; non-state actors in international relations; Africa's international relations.

Civil-military relations: politics, the military and 'control'; military professionalism; democratic (parliamentary) oversight of the defence sector in Africa and South Africa; the state, the military and non-state armed groups in Africa: PMCs and militias; security sector reform in Africa: norms, challenges and recommendations.

Home department: Political Science (Mil)

214 (16) South Africa and the International Community (5L)

Phenomenon of globalisation; institutionalised international co-operation; international intergovernmental organisations; regional sub-system of Southern Africa; conflict and conflict

management in Africa; goals and scope of foreign policy; goals and scope of diplomacy; foreign policy in South Africa since 1994; the military dimension in South Africa's foreign policy; South African philosophy and policy on participation in peace missions; principles of best practice engagement in peace missions for Africa and South Africa; the UN Security Council, Africa and South Africa.

Prerequisite modules: Political Science (Mil) 144

Home department: Political Science (Mil)

244 (16) Introduction to African Politics (5L, 1T)

The study of African politics; the evolution of the African state; identity politics, civil society and the African state; power, authority and governance in Africa; the range of political systems in Africa; Africa's political economy; the shifting landscape of African conflict and security; the international relations of Africa.

Prerequisite modules: Political Science (Mil) 114

Home department: Political Science (Mil)

314 (24) African Political Thought (5L)

Ideology and the spectrum of political attitudes; the nation-state, nationalism and African nationalism; democracy and democratic government in Africa; capitalism and political economies in Africa; Marxism, socialism and socialism in Africa; ideology and the politics of development in Africa; the application of theory in post-colonial Zambia; the application of theory in post-colonial Tanzania; Steve Biko's Black Consciousness; tenets and manifestation of Pan-Africanism; the African Renaissance.

Prerequisite modules: Political Science (Mil) 214, 244

Home department: Political Science (Mil)

344 (24) Africa and the International Political Economy (5L)

Definitions and descriptions central to the study of political economy and the main characteristics of the world economic system; the evolution of the International Political Economy; the study of International Political Economy as a specific field of scholarly interest; Africa's contemporary economic history; internal and external causes of economic decline in Africa; foreign economic policy and the BRICS; lessons from successful states in the Developing World; the USA's and Africa's economy; China and Africa's economy; 'war economies' and the role of natural resources; the role of natural resources in the conflict in Sudan; the role of 'conflict diamonds' in Angola and Sierra Leone.

Prerequisite modules: Political Science (Mil) 214, 244

Home department: Political Science (Mil)

53449 Public and Development Management (Mil)

144 (12) Budget Management (5L)

Introduction; why states require funds; objectives of the modern state; functions of the state and service provision; sources of income for the state; tax regimes; state expenses; functions of the budget; expense responsibility; the budget cycle and the defence budget.

Home department: Public and Development Management (Mil)

214 (16) Public Labour Relations (5L)

Introduction; definitions; analysis; interaction and the processes in which the labour relations function. Labour relations systems; role of the state; South African labour relations systems in an historical context; the legal framework; labour unions and employer organisations in a theoretical context; communications in the workplace and labour relations procedures. Labour relations in the military environment and labour unions.

Home department: Public and Development Management (Mil)

244 (16) Development Management (5L)

Introduction; differing views; theories and an overview of development experiences in South Africa. The developing world; classifications, components, characteristics and measurement of development. Selected issues such as poverty, unemployment and urbanisation. Development management and strategies: the role of the state and NGOs in development. Development planning, participation, community development and the role of the military in development.

Home department: Public and Development Management (Mil)

314 (24) Organisational Science (5L)

This module focuses on the development of organisational theory. It addresses the following: organisations as systems; the components of the macro environment; the internal environment of the organisation; organisational effectiveness; the structure and design of institutions; contemporary problems of organisational growth and development of organisational culture and of organisational change and renewal.

Home department: Public and Development Management (Mil)

324 (24) Human Resource Development (5L)

The focus of the module is to empower the student with knowledge and skills to evaluate and develop military courses and study material. The module includes the following; strategic training needs analysis; organisational training needs analysis; an analysis of individual training needs for different levels of military courses; development of training material, manuals and programmes;

selection of training techniques; presentation skills, training in interpersonal skills, training the officer to become an instructor.

Home department: Industrial Psychology (Mil)

344 (24) Public Management under Administrative Law Principles (5L)

The module provides an introduction to South African administrative law as a set of guidelines for effective public management. Attention is given to basic concepts of constitutional law; general principles of administrative law; co-operative government and the sources of administrative law, administrative law relationships, legal subjects and administrative acts; just administrative action and control over administrative action and how these concepts relate to the actions of a public manager.

Home department: Public and Development Management (Mil)

13048 Physics (Mil)

114 (12) Mechanics (5L, 4P)

This is a calculus-based module: Motion along a straight line; vector algebra; motion in two and three dimensions; force and motion; work and kinetic energy; law of conservation of energy; systems of particles; collisions; rotation; rolling and sliding; torque; angular momentum; equilibrium; density and pressure; fluids in motion; oscillations; waves.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Corequisite modules: Mathematics (Mil) 112, 122

Home department: Physics (Mil)

124 (12) Introduction to Motion, Waves and Optics (5L, 3P)

This is an algebra-based module: Kinematics in one dimension; kinematics in two dimensions; forces and Newton’s laws of motion; dynamics of uniform circular motion; work and energy; impulse and momentum; rotational kinematics; rotational dynamics; elasticity and simple harmonic motion; pressure; fluids in motion; electromagnetic waves; mirrors, lenses and optical instruments; interference and the wave nature of light.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Corequisite module: Mathematics (Mil) 124

Home department: Physics (Mil)

144 (12) Electricity and Thermodynamics (5L, 4P)

This is a calculus-based module: Electric charge; electric fields; Gauss's law; electric potential; capacitance; current and resistance; basic circuits; electric currents and magnetic fields; inductance; electromagnetic oscillations and alternating current; temperature; heat; laws of thermodynamics; kinetic theory of gases; electromagnetic waves; images; interference; diffraction. Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Corequisite modules: Mathematics (Mil) 142, 152
Prerequisite module: Physics (Mil) 114

Home department: Physics (Mil)

154 (12) Principles of Electromagnetism and Thermodynamics (5L, 3P)

This is an algebra-based module: Electric forces and electric fields; electric potential energy and the electric potential; basic electric circuits; magnetic forces and fields; electromagnetic induction; alternating current circuits; temperature and heat; transfer of heat; laws of thermodynamics; heat engines; refrigerators; waves and sound; principle of linear superposition; interference phenomena. Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Corequisite module: Mathematics (Mil) 124

Home department: Physics (Mil)

212 (10) Applied Wave Theory (3L, 2P)

Basic wave concepts; wave equation; superposition and interference; lenses and mirrors; waves incident on a boundary; transmission spectra; aberration; military application of lasers; stealth. Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Prerequisite pass module: Physics (Mil) 114

Home department: Physics (Mil)

222 (10) Alternating Current Theory (2L, 2P)

Capacitance; inductance; transient and steady state currents in LR and RC circuits; phasors in the complex plane; complex power; three-phase electricity; transformers; LCR circuits; impedance; resonance; frequency filtering; Fourier analysis.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Corequisite module: Mathematics (Mil) 212
Prerequisite pass modules:

- Physics (Mil) 144

- Mathematics (Mil) 142, 152

Home department: Physics (Mil)

242 (10) Modern Physics (2L, 2P)

Simple atomic models; wave properties of particles; wave/particle duality; Heisenberg's uncertainty principle; special relativity; Schrödinger's equation; particle in a box; harmonic oscillator; eigenfunctions and eigenvalues; time dependence; barrier penetration. Basic statistical physics; black-body radiation; rate equations; population inversions; principals of lasers.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Prerequisite pass modules:

- Physics (Mil) 144, 212
- Mathematics (Mil) 212

Home department: Physics (Mil)

252 (10) Electromagnetism (2L, 2P)

Electrical current and magnetic field; materials in magnetic fields; Biot-Savart's law; Ampère's law; Divergence and Curl of Electrostatic fields; Steady Currents; Faraday's law; Electrodynamics and Relativity; Laws of electricity and magnetism in integral form; gradient, divergence and rotation of fields; fundamental theorems of integration, divergence and rotation and their physical implications; Maxwell's equations; electromagnetic waves.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Prerequisite pass modules:

- Mathematics (Mil) 212

Home department: Physics (Mil)

312 (12) Nuclear Physics (3L, 2P)

Nuclear structure; nuclear models; radioactive decay; a-decay; b-decay; gamma radiation; nuclear reactions; detection; accelerators; elementary particles; nuclear weapons.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
PP Physics (Mil) 242

Home department: Physics (Mil)

322 (12) Electronics I (2L, 2P)

Measuring instrument; semiconductor theory; diodes; bipolar junction transistors; field effect transistors; other electronic components; transistor amplifiers; operational amplifiers; feedback and stability; z and h parameters.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Prerequisite pass module: Physics (Mil) 222

Home department: Physics (Mil)

332 (12) Electronics II (2L, 2P)

Oscillator circuits; modulation; coding; microwave components; transmission lines; antennas; AD converters; logic; noise; signal processing computer programs.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Corequisite module: Physics (Mil) 322
Prerequisite pass module: Physics (Mil) 222

Home department: Physics (Mil)

342 (12) Statistical Physics (3L, 2P)

First law of thermodynamics; second law of thermodynamics; third law of thermodynamics; paramagnetism; simple systems; phase equilibria; classical gas; quantum gas; black-body radiation; FD and BE statistics.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Prerequisite pass module: Physics (Mil) 242

Home department: Physics (Mil)

352 (12) Solid State Physics (3L, 2P)

Crystal structure; Crystal lattice geometry; binding forces in crystal; X-ray diffraction; Defects in crystals; the influence of defects; point defects; vacancies; grain boundaries; dislocations; kinetic theory of gases; Phonos in crystals; one-dimensional chain; Debye model; Lattice specific heat; Electrons in metals; electronic structure of atoms; conduction electrons; free electron theory. Practical experiments and reports to support and supplements the theoretical work will be continuously assessed.
Prerequisite pass modules: Physics (Mil) 212, 222

Home department: Physics (Mil)

362 (12) Radar (3L, 2P)

Radar fundamentals: range; Doppler; coherence; radar; jamming effects; losses. CW radar: CW equation; FM; linear FM; multiple frequency; resolving range and Doppler.

Radar detection: noise; probability of detection; probability of false alarm; coherent and non-coherent pulse integration; detection threshold; CFAR.

Radar waveforms: low and band-pass signals; quadrature components; CW and pulsed; linear FM; high resolution; stepped frequency.

Pulse compression: analogue; digital.

Radar wave propagation: earth atmosphere; refraction; reflection; pattern propagation factor; diffraction; AREPS.

Clutter and MTI: single and dual line cancellars.

Radar antennas: directivity; power; gain; circular dish; array antennas; conventional beam forming.

Target tracking: single target track; multiple target track.

Signal processing: Fourier transform and series; convolution and correlation;

Z transform.
Prerequisite pass modules: Physics (Mil) 322, 332

Home department: Physics (Mil)

372 (12) Quantum Mechanics A (3L, 2P)

Mathematical structure of quantum mechanics: Operators, eigen-states. Schrodinger equation in spherical coordinates. Free particle, wave packet. One-dimensional problems: Infinite-square well, harmonic oscillator. Angular Momentum, orbital and spin quantum numbers. Hydrogen atom, quantum numbers. Two-particle systems. Atoms, Solids, and Quantum Statistical Mechanics.

Practical experiments and reports to support and supplement the theoretical work will be continuously assessed.
Prerequisite pass module: Physics (Mil) 242
Prerequisite modules: Mathematics (Mil) 212, 242

Home department: Physics (Mil)

382 (12) Electronic communication (3L, 1T)

Digital communication systems. Data communications systems. Microwave radio communications systems.

Satellite communications systems: Kepler's laws, Clark orbits, limits of visibility, satellite radio navigation and Navstar GPS.

Optical fibre communications systems: light sources, optical power, optical sources and link budget.

Cellular and PCS telephone systems: trellis encoding, CCITT modem recommendations, PCM line speed, extended super format, wavelength division multiplexing.
Prerequisite pass modules: Physics (Mil) 322, 332

Home department: Physics (Mil)

13977 Producing Intelligence Products

244 (16) Producing Intelligence Products (5L, 1T)

The purpose and features of a descriptive intelligence report; guidelines how to write a descriptive intelligence report; guidelines how to critique a descriptive intelligence report; the purpose and features of an explanatory intelligence report; guidelines how to write an explanatory intelligence report; guidelines how to critique an explanatory intelligence report; the purpose and features of an estimative/predictive intelligence report; guidelines how to write an estimative/predictive intelligence report; guidelines how to critique an estimative/predictive intelligence report; and a capstone project.

Home department: Political Science (Mil)

13982 Psychological Warfare

354 (24) Psychological Warfare (6L)

Definitions of psy-ops; aim & objectives of psy-ops; types & concepts of psy-ops; tactics, methods & scope of psy-ops; history and development of psy-ops: WWI & II, Cold War- era & Post-Cold War era; Civil Affairs; media of communication; target audience analysis; basic principles of and techniques of propaganda; propaganda parameters; propaganda analysis models; relationships among mass persuasion, mass media, and mass society; effect-analysis techniques; types of propaganda; principles and techniques of propaganda; channels of propaganda; ways, methods and means of distributing propaganda; propaganda and the media; construct and deconstruct propaganda messages; "Hearts & Minds"; media of communication, e.g. speech, writing, print (books pamphlets, handbills, posters, newspapers, and magazines), photography and motion pictures, radio and television; categories of military psy-ops; strategic psy-ops, operational psy-ops & tactical psy-ops; psy-ops and intelligence; psy-ops and collection; psy-ops and counter-intelligence; psy-ops and covert action; legal aspects; effect analysis; propaganda analysis (source, content, audience, media & effect).

Home department: Industrial Psychology (Mil)

56294 Security Law (Mil)

144 (12) Security Law (5L)

International Law: introduction, sources of international law, international law and municipal law, states and governments, international organisations, individuals, companies and groups, jurisdiction, immunity from jurisdiction, treaties.

Humanitarian Law: human rights, ius ad bellum, ius in bello, the United Nations and peace and security.

Operational Law: private defence, necessity, obedience to orders, official capacity.

Home department: Mercantile and Public Law (Mil)

13980 South African Intelligence History

254 (16) South African Intelligence History (5L, 1T)

South African intelligence historiography; introduction to African intelligence systems and commercial intelligence networks; British hegemony, colonial rivalry and "empires of intelligence": the colonial office, war office, and the growth of colonial intelligence structures; the First World War: case studies; the Second World War: case studies; War crimes; Propaganda; South African intelligence on a Cold War and post-Cold War landscape.

Home department: Military History

45764 Statistics (Mil)

144 (12) Statistics for Managers (6L, 2P)

Frequency distributions and graphical representations. Descriptive measures of location and dispersion. Sampling. Introductory probability theory, theoretical distributions and sampling distributions. Introduction to statistical inference: estimation theory and hypothesis testing of sampling averages and proportions. Regression and correlation. Analysis of variance. Introductory categorical data analysis and distribution-free methods. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.

Home department: Mathematics (Mil)

13971 Strategic Intelligence and Intelligence Management

314 (24) Strategic Intelligence and Intelligence Management (6L)

Strategic Intelligence: Strategic Intelligence as enabler of National Strategy; Challenges of Strategic Intelligence; Role of Policymakers, Oversight Mechanisms and Decision-Makers in Strategic Intelligence; The uses of strategic intelligence; The strategic intelligence processes and techniques; Strategic Intelligence Products such as report, digest, study, assessment, brief, advice, area studies and the estimate; Forecasting techniques; Strategic collection platforms; Strategic intelligence and the threat environment. (Proliferation of Weapons of Mass Destruction Asymmetric Warfare, Intra- and inter- state conflict, Cyber Warfare, Denial and Deception, Nuclear Proliferation, Private Security, Transnational threats, and Geostrategic developments); Interaction between strategic intelligence and national security; Intelligence and statecraft: The place of intelligence in the foreign and security policies of various governments, covering such issues as tasking and resourcing, interaction with law enforcement and military institutions, management and oversight of intelligence services, international liaison and cooperation, relations with civil society, and the utilisation of intelligence products in statecraft; Conflict analysis:

Foreign and security policies of key countries; interstate and intrastate conflict; ethnicity and civil war; crisis decision-making; civil-military relations; weapons proliferation and arms control; terrorism and counterterrorism; peace-building and reconstruction; Synthesis of the theory of strategic intelligence, contemporary-, and comparative intelligence studies as well as the management of Intelligence; and Interplay between strategic intelligence and diplomacy.

Intelligence Management: Management as a component of intelligence; Strategic Intelligence management process; Guiding principles of intelligence management; The relationship between intelligence management and strategic intelligence; Contemporary project management methodologies within the discipline of strategic intelligence management; Management of strategic collection systems; and The strategic intelligence management process within the Defence Force.

Home Department: Military Strategy

13976 Structured Intelligence Analytical Techniques

214 (16) Structured Intelligence Analytical Techniques (5L, 1T)

The history of structured analytical techniques; Different categories of analytical methods; Strategies for using structured analytical techniques; The different structured analytical techniques; Common errors in selecting techniques; and Guidelines for selecting an appropriate technique.

Home Department: Political Science (Mil)

Research and service bodies

1. Centre for Military Studies

1.1. Nature

The aim of the Centre for Military Studies (Cemis) of Stellenbosch University is to analyse security challenges. Cemis reports academically to the Faculty of Military Science, organisationally forms part of the Department of Defence and is located at the Faculty of Military Science at Saldanha.

1.2. Role

Cemis finds itself in a dual position. On the one hand, Cemis conducts research for the Department of Defence, which finances the Centre, and, on the other hand, Cemis is a research institution of Stellenbosch University. The Centre functions within the legal framework of the agreement between the Department of Defence and Stellenbosch University and within the ethical framework for scientific research of the University, and focuses on maintaining scientific standards, academic integrity and intellectual independence.

1.3. Objectives

1. Analysing security, and factors and trends influencing it, in general, as well as in Southern Africa.
2. Exchanging information on security trends with other national and international research bodies and, where possible, the undertaking of joint projects.
3. Giving guidance to Defence Force members and civilians who research security trends.
4. Disseminating research results to the security community and civilian target groups by means of presentations, publications and conferences.

1.4. Projects

Among the topics on which members of Cemis have already delivered presentations, papers, submissions and publications are the following:

- Continual expansion of South African thinking on national security;
- Civil-military relations;
- Military human resources and service systems;
- The management of manpower diversity;
- The increasing articulation of employee needs in the Department of Defence;
- Military professionalism, ethnicity and race in the Department of Defence;
- The nature, problems and challenges of the integration process in the Department of Defence;
- The views of defence force officers on topical issues during the transformation process;
- The growing influence of information processing on the management of conflict and war;

- The influence of information on joint training;
- The nature of the internal deployment of the SA National Defence Force;
- The connection between urban conflict and religious fundamentalism;
- The accountability of intelligence services;
- The principles in accordance with which armed forces, such as the SA National Defence Force, can conduct effective peacekeeping operations;
- Security trends in selected African states;
- The development, capabilities and roles of African armed forces;
- Long-term trends in conflict and security in Africa; and
- The characteristics of scientific security research.

1.5. Address

The Director

Centre for Military Studies

Military Academy

SALDANHA

7395

Tel: (022) 702 3093

Fax: (022) 702 3002 / 702 3060

Email: jcrl@ma2.sun.ac.za

2. Telematic Services Department

2.1. The aim of Telematic Services

The aim of Telematic Services is to ensure that the academic programmes on offer at the Military Academy become more cost-effective and more readily accessible to all Department of Defence personnel. Telematic Services has the additional advantage of providing education to personnel whilst they remain active in the labour market and furthermore does not necessitate the high costs associated with the transfer of residential student personnel.

2.2. Functions of Telematic Services

The function of Telematic Services is to provide quality non-residential, contextual higher military education and provide subjects, modules and programmes for which a student may enrol for either degree or non-degree purposes.

2.3. Programmes offered through Telematic Services

- BMil programme in Security and Africa Studies
- BMil programme in Human and Organisation Development
- BMil programme in Organisation and Resource Management

Duration of Each Programme

Maximum: Six years; Minimum: Four years

Admission Requirements

- You must be computer literate before commencing with your studies.
- Compliance with the minimum academic admission requirements as prescribed by Stellenbosch University.

2.4. Address

Telematic Services Coordinator

Telematic Services Department

Faculty of Military Science

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Alphabetical list of undergraduate subjects