

# **Carnegie Mellon University** **Africa**

## **Department Information and Communication Technology- Rwanda 2018-2019 Handbook**

**Master's Degree in Information Technology (MSIT)**

**Master's in Electrical and Computer Engineering (MS ECE)**

**Last revision date (7.12.18)**

**Note: The information contained in this graduate handbook template focuses on the resources and locations available at the Carnegie Mellon University Africa Campus.**

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## Welcome

Carnegie Mellon University has embarked on an exciting opportunity to transform graduate education in Africa. With a history of excellence in higher education and as a global thought leader in technology innovation, Carnegie Mellon is the first U.S. research institution offering degrees in Africa with an in-country presence.

Carnegie Mellon University Africa in Rwanda offers a wide range of opportunities for local and international industries to engage, including internships, corporate practicums, research collaborations and programs for sponsoring students through scholarships.

You are encouraged to visit <https://www.africa.engineering.cmu.edu/> to get more information about Carnegie Mellon University and more focus on our programs in Africa.

The Word is Carnegie Mellon University's Student Handbook <https://www.cmu.edu/student-affairs/theword/> this contains additional information regarding University-wide policies, procedures, resources and opportunities.

For any other information about your life at CMU-Africa, feel free to contact our student services at [olga@africa.cmu.edu](mailto:olga@africa.cmu.edu)

Vijayakumar Bhagavatula  
Director, Carnegie Mellon University Africa  
U.A & Helen Whitaker Professor of ECE

## Brief Overview of CMU-Africa

Carnegie Mellon University Africa (CMU-Africa) offers a Master of Science in Information Technology (MSIT) and a Master of Science in Electrical and Computer Engineering (MS ECE). Each degree is obtained by completing components defined in the degree's curriculum. Each component is assigned a defined number of units. The total number of units of a component represents the average number of hours (including class time, readings, assignments, etc.) that the student is expected to perform per week for that component for a full semester. For half-semester (i.e., mini) courses, the average number of hours per week devoted to that course should be twice the units assigned for that mini. To obtain these degrees, students must obtain a minimum number of units (144 for MSIT, 96 for MS ECE) with an average grade of B.

## Degrees Offered:

Below we describe the MSIT then the MS ECE degrees.

### MSIT

The MSIT curriculum offers two different areas of focus: a professional degree and an academic degree.

The professional degree is designed specifically for students interested in becoming information technology (IT) professionals and looking to develop a career in existing businesses or starting their own business. It has the following main components:

<b>Professional Degree Components</b>	<b>Units</b>
Core Courses	48 Units
Elective Courses	60 Units
Master's Seminar	12 Units
Practicum	24 Units
Three-month Internship	0 Units
<b>Total</b>	<b>144 Units</b>

The academic degree is designed for students interested in pursuing a research career and/or a Ph.D. after their MSIT. It has the following main components:

<b>Academic Degree Components</b>	<b>Units</b>
Core Courses	48 Units
Elective Courses	48 Units
Master's Seminar	12 Units
Research Project	36 Units
Three-month Internship	0 Units
<b>Total</b>	<b>144 Units</b>

## Concentrations

The MSIT offers courses in six concentrations: Telecommunication & Networking, Software Engineering, Cyber Security, Data Science, Energy and IT Entrepreneurship.

Concentrations provide course selection guidance for students interested in acquiring skills in specific career paths. Concentrations are not compulsory and they do not lead to a different degree and will not be mentioned on the MSIT certificate.

Each concentration includes at least one core course and a selection of elective courses. A student must complete at least 36 units in a specific concentration to be considered as having acquired the skills of that concentration. To build practical skills, students should select internship, practicum, and/or research in their selected concentration.

## Core Courses

All students are required to take the following core courses as part of the MSIT curriculum, by selecting 12 units each in 4 out of the 5 concentrations available for a total of 48 units and allocated as follows:

- 1) 12 units of Software Engineering core courses,
- 2) 12 units of IT Entrepreneurship core courses, and
- 3) 24 units of technical core courses divided equally between two different technical core areas.

The technical core areas are currently:

- a) Telecommunication and Networking,
- b) Cyber Security, and
- c) Data Science

Concentration				
REQUIRED		CHOOSE TWO of THREE		
IT Entrepreneurship	Software Engineering	Cyber Security	Data Science	Telecommunication and Networking
04-611 Strategic Use of Digital Information in Enterprises (12 units)	04-630 Data Structures and Algorithms for Engineers (12 units)	04-635 Introduction to Info Security (12 units)	18-875 Data, Inference and Applied Machine Learning (12 units)	04-641 Fundamentals of Telecommunications and Computer Networks (12 units)
04-613 Business Economics for ICT (12 units)	18-652 Foundation of Software Engineering (12 units)		18-899/R3 Data Analytics (6 units)	04-644 Wireless Networks (12 units)
	15-619 Cloud Computing (not before second semester) (12 units)		18-899/R4 Big Data Science (6 units)	

## Seminar, Internships, Practicum, and Research

### MSIT First-Year Seminar

In the MSIT first-year seminar, students select, investigate, discuss, and explore solutions for multidisciplinary problems in information and communication technology. Students are assigned weekly reading assignments and each week different students (or student groups) prepare presentations and lead the discussions. Students work on academic and professional skills.

### MSIT second-year seminar

In the MSIT second-year seminar, students explore career opportunities in information and communication technology (ICT) through individual and group projects, presentations and discussions. Drawing on internships, other work experiences, selected readings, and guest lectures, the role of specific professional and technical skills critical to success will be examined and strategies for lifelong learning will be developed.

### MSIT Internship

In the MSIT internship, each student works full time in industry or in research projects with a CMU- Africa faculty member and can count it as their internship. This gives the student an opportunity to become familiar with a specific field in ICT, apply technical knowledge in a real-world setting, and gain experience working with ICT professionals.

### Master's Practicum (professional option)

This course provides the opportunity to consolidate and apply the skills and knowledge developed in previous coursework in a team-based approach to a real problem. A team of students works with a client on a real-world problem of value to the client. Most importantly, this is an opportunity to apply the team's advanced engineering and management skills, including the specialized knowledge and skills needed to solve a real problem. In particular, team members must learn to work effectively with clients, quickly understand their problem, negotiate deliverables and then select, adapt and apply just the right amount of process and documentation to meet clients' needs and effectively manage the project.

### Master's Research Project (academic option)

The research project is conducted under the supervision of a faculty research adviser who first approves this research focus based on the student's skills and mutual interest. The research adviser and the student define and approve a study plan appropriate for the research. The research project will lead to a presentation and defense of a thesis in front of a committee and may lead to the publication of a scholarly paper.

## Elective Courses

Elective courses will be offered in a variety of areas related to the technology and business of information and communication technology. These courses will be offered by resident CMU-Africa faculty as well as by faculty from other CMU campuses through short-term visits and distance learning.

Students can select up to 60 units of elective courses in the MSIT. Online elective courses cannot exceed 12 units (out of 60 units). Exceptions have to be approved by the Associate Director for Academics.

## Independent Study

Students can perform an Independent Study under the supervision of a faculty to focus on a subject of particular interest to them. Independent study can count for 3 to 15 units towards the MSIT degree. The student is required to obtain approval from the faculty supervisor on the topic. Then both will sign the form for approval.

The Independent Study option is not available for students choosing the MSIT academic degree.

## MSIT Schedule

The MSIT degree is designed to be completed in three or four semesters, plus a three-month internship. A typical four-semester schedule is outlined below. Students can complete the program in three semesters by taking one additional 12-unit course in two of the first three semesters.

<b>Semester 1 (late Aug - Dec)</b>	
Two core courses	24 units
One elective course	12 units
<b>Semester 2 (Jan - mid-May)</b>	
Two core courses	24 units
One elective course	12 units
First year MSIT Seminar	6 units
<b>MSIT Internship (mid-May - Aug)</b>	
<b>Semester 3 (Aug - Dec)</b>	
Master's Practicum	24 units
One elective course	12 units
Second year MSIT Seminar	6 units
<b>Semester 4 (Jan - May)</b>	
Two elective courses	24 units
<b>Total Units</b>	<b>144 units</b>

## MS ECE

Electrical and computer engineering comprises a broad and diverse set of areas and permeates nearly all areas of application of importance in society today. Electrical and Computer Engineering (ECE) ranges from nanotechnology to large scale systems and impacts areas such as communications, computing and networking, energy and cyber-physical systems, biotechnology, information storage and security, data analytics, distributed systems, and privacy. Faculty and students in Electrical and Computer Engineering seek to advance education and technology in all areas of this field and are engaged in teaching and research that advances both the fundamentals of the field through advances in materials, devices, circuits, signal processing, control, computer architecture, and software systems as well as through the design, building and demonstration of systems at all scales. This is a dynamic and exciting field to be a part of and the Department of Electrical and Computer Engineering offers the very best programs at all levels for students to engage in this field.

For detailed information on the MS ECE program, including the course requirements and curriculum, please refer to the ECE [website](#).

## Full vs. Part Time

The MS ECE and MSIT programs are intended to be full time programs. Full time is defined as signing up for and maintaining at least 36 units throughout the semester. Dropping or withdrawing from classes so that the remaining classes total to less than 36 units does not qualify as maintaining full time status. Full time status must be maintained by students who are on a scholarship or other financial aid. In a student's final semester they may take less than 36 units as long as this allows them to complete their degree. In semesters with fewer than 36 units, the tuition is prorated relative to 36 units. Students spending a semester in Pittsburgh must maintain at least 36 active units even in if it is their last semester (withdrawal units should not be considered to make up for full time units)

## University Policies & Expectations

It is the responsibility of each member of the Carnegie Mellon community to be familiar with university policies and guidelines. In addition to this departmental graduate student handbook, the following resources are available to assist you in understanding community expectations. Please review them:

- The Word/Student Handbook: [www.cmu.edu/student-affairs/theword//index.html](http://www.cmu.edu/student-affairs/theword//index.html)
- Academic Integrity Website: [www.cmu.edu/academic-integrity](http://www.cmu.edu/academic-integrity)
- University Policies Website: [www.cmu.edu/policies/](http://www.cmu.edu/policies/)



- Graduate Education Website: <http://www.cmu.edu/graduate/policies/index.html>
- College of engineering graduate students policies :

<https://engineering.cmu.edu/education/academic-policies/graduate-policies/degrees.html>

## Carnegie Mellon University Statement of Assurance

Carnegie Mellon University does not discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex, handicap or disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information.

Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state, or local laws or executive orders.

Inquiries concerning the application of and compliance with this statement should be directed to the vice president for campus affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, USA, telephone +1 412-268-2056.

Obtain general information about Carnegie Mellon University by calling +1 412-268-2000.

Obtain general information about Carnegie Mellon University Africa by calling +250(0)788 407 270.

The Statement of Assurance can also be found on-line at: <http://www.cmu.edu/policies/documents/SoA.html>.

## Ethics Reporting Hotline

The health, safety and well-being of the university community are top priorities at Carnegie Mellon University. CMU provides a hotline that all members of the university community should use to confidentially report suspected unethical activity relating to financial matters, academic and student life, human relations, health and campus safety or research.

Students, faculty and staff can anonymously file a report by visiting [www.reportit.net](http://www.reportit.net) (user name: tartans; password: plaid). All submissions will be reported to appropriate university personnel. The hotline is NOT an emergency service.

## The Carnegie Mellon Code

Students at Carnegie Mellon, because they are members of an academic community dedicated to the achievement of excellence, are expected to meet the highest standards of personal, ethical and moral conduct possible.

These standards require personal integrity, a commitment to honesty without compromise, as well as truth without equivocation and a willingness to place the good of the community above the good of the self. Obligations once undertaken must be met, commitments kept.

As members of the Carnegie Mellon community, individuals are expected to uphold the standards of the community in addition to holding others accountable for said standards. It is rare that the life of a student in an academic community can be so private that it will not affect the community as a whole or that the above standards do not apply.

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity of others. New knowledge cannot be developed without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist.

The commitment of its faculty, staff and students to these standards contributes to the high respect in which

the Carnegie Mellon degree is held. Students must not destroy that respect by their failure to meet these standards. Students who cannot meet them should voluntarily withdraw from the university.

The Carnegie Mellon Code can be found on-line at:

<https://www.cmu.edu/student-affairs/theword/>

NOTE: It is the responsibility of each member of the Carnegie Mellon community to be familiar with university policies and guidelines. This booklet highlights some of the key points of these policies and guidelines as they apply to CMU-Africa. It is expected that CMU-Africa faculty, students and staff will review this resource is available at [https://www.cmu.edu/student-affairs/theword/comm\\_standards/index.html](https://www.cmu.edu/student-affairs/theword/comm_standards/index.html) to understand the full set of Carnegie Mellon community expectations.

## Policy against sexual harassment and sexual assault

Sexual harassment and sexual assault are prohibited by CMU, as is retaliation for having brought forward a concern or allegation in good faith. The policy can be viewed in its entirety at:

[http://www.cmu.edu/policies/documents/SA\\_SH.htm](http://www.cmu.edu/policies/documents/SA_SH.htm). If you believe you have been the victim of sexual harassment or sexual assault, you are encouraged to make contact with any of the following resources:

- National Police, 3512
- CMU- Africa Associate Director of Operations, +250 788 840 7270
- Counseling & Psychological Services, +1 412-268-2922, 0784334988

## Complete CMU Policies

For a complete reference to graduate education policies at Carnegie Mellon University, please visit this website: <http://www.cmu.edu/graduate/policies/index.html>

## Departmental Resources

### CMU-Africa Personnel

The academic and administrative staff are located on both 4<sup>th</sup> and 5<sup>th</sup> floor, wings A & B of Telecom House. The focal points of contact for specific needs are the following:

Names	Position	Services	Location	Contact
Tim Brown	Associate Director of Academic Affairs	Academic enquiries	Office B509	<a href="mailto:timxb@cmu.edu">timxb@cmu.edu</a>
Gikundiro Olga Buki	Student services	Student affairs & general enquiries	Office A501	<a href="mailto:gbuki@andrew.cmu.edu">gbuki@andrew.cmu.edu</a>
Flavia Mugire	Admissions & Enrollment Services	Enrollment status	Office B411	<a href="mailto:flavia@andrew.cmu.edu">flavia@andrew.cmu.edu</a>
Chipiwa Zimbwa	Associate Director of Finance & HR	Financial issues	Office B415	<a href="mailto:finance@andrew.cmu.edu">finance@andrew.cmu.edu</a>
Mika & Farida	Administrative coordinator	Building issues	Office B412/B51	<a href="mailto:logistics@rwanda.cmu.edu">logistics@rwanda.cmu.edu</a>
Marie-Ange Rukundo	Career and Alumni Services Officer	Career and Alumni services	Office A511	<a href="mailto:mrukundo@andrew.cmu.edu">mrukundo@andrew.cmu.edu</a>
Sandra Malaika	Program Manager	MasterCard Foundation Scholars Program	Office A501	<a href="mailto:smalaika@andrew.cmu.edu">smalaika@andrew.cmu.edu</a>

Other important contacts can be found on our website by clicking on:  
<https://www.africa.engineering.cmu.edu/faculty-and-staff/faculty.html> and  
<https://www.africa.engineering.cmu.edu/faculty-and-staff/staff.html>

## CMU-Africa Facilities

CMU-Africa facilities are on the 4th floor (wings A, B, C), 5th floor (wings A, B, C) and 1<sup>st</sup> floor (wing A). The floor plan can be found at the entrance of each wing.

### Access to Facilities

- " Students will be provided with individual cards for secure access to the facilities and are responsible for their individual use. Any person invited by students to enter facilities should be registered prior to entry. Students are responsible for reporting any security related incident that they are aware of.
- " If a student takes a leave of absence or is suspended for any reason, their access card should be returned immediately to Mika Inamahoro, Administrative Coordinator. Lost or stolen cards should be reported immediately to Mika Inamahoro as well.
- " Once a student has graduated, their card will be deactivated.

### Lockers

- " Every student will be assigned a locker and a key on the first day of orientation. Students are responsible for the contents of the locker and keeping the key in a safe place for the duration of the program. Students must clear the contents of the locker and return the key upon graduation.

### Policy on Lost or Stolen Locker Keys

- " If the key is lost or stolen, the student will not be given another key. The student will have to pay for the cost of reproducing another key, or in an extreme case, installing a new lock and key for the locker. The student will be responsible for the contents of the locker at all times while the locker is assigned to them. CMU-Africa assumes no liability for loss, damage, or theft of the contents of the locker.

### Lounge/ Kitchenette Cleanliness

The student kitchen and appliances provided on the first and fourth floor must be kept clean at all times. The cleaning staff is not responsible for cleaning the microwave, coffee machine and other electric appliances in the student kitchenette/lounge. These are the students' responsibilities. The cleaning crew will only clean once per day the rooms and remove all the dustbins to be cleaned. All food items left should be well closed to avoid any bad smell. Food that is not properly conserved will be thrown away.

### Requests for Maintenance

If you have a request for maintenance to any area of the facility or equipment such as the photocopier, power sockets, leakages, etc.; you should submit a request for maintenance in writing to [logistics@africa.cmu.edu](mailto:logistics@africa.cmu.edu).

## Accessing Library Resources

Carnegie Mellon University's digital library provides access to full-text databases, online journals, books, music and video and online subject-specific search. You can access the digital library resources at <http://search.library.cmu.edu>. A customized guide has been created for CMU-Africa students. You can access this guide at <http://guides.library.cmu.edu/Rwanda> which provides students with an overview of how to access resources most effectively. In addition to this, we locally have 632 hard-copy books that you can borrow from the mini-library with Farida Ndagiza.

## Health Insurance

All CMU-Africa students are eligible to join CMU-Africa's medical insurance plan, contact student services officer [gbuki@andrew.cmu.edu](mailto:gbuki@andrew.cmu.edu) to fill out health insurance form on the first day of Orientation.

All students attending CMU-Africa are eligible to join Carnegie Mellon's medical insurance plan. A link to our page with full year premiums can be found [here](#). The policy runs from August 1 through July 31, CMU-Africa students going to Pittsburgh for a Semester are required to subscribe and fulfill immunization requirement, Immunization guide can be found [here](#), while all full time students at CMU-Africa are recommended to do TB testing.

## Return of university property

Students must return all borrowed CMU-Africa materials such as laptops, phones/tablets, books/materials, or any other Carnegie Mellon University property and signing a clearance form prior to their departure from the program. This form will be sent to you upon completing the program and before graduation day by Student Services Officer, Gikundiro Olga Buki.

## Security

### On-Site Emergencies

CMU-Africa has 24-hour security provided by Intersec Security Rwanda and security video camera. One security guard is present on each floor 24/7. If you have a problem that requires immediate attention, please contact the security guard on duty. If you have a security incident to report, please submit a written statement to the Associate Director of Operations, Ines Manzi, at [imanzi@andrew.cmu.edu](mailto:imanzi@andrew.cmu.edu).

The entire building is guarded by national police officers.

If you are in an emergency situation such as a fire, assault, feel physically endangered, or are witnessing a crime, you should call [Rwanda Police](#) at the following toll free numbers:

**General Emergency-** 112

**Gender Based Violence-** 3512

### CMU Alert Emergency Notification Service

All students, faculty and staff are encouraged to register for the CMU-Africa Alert Emergency Notification Service, which sends text messages and emails to registered phones and email accounts in the event of a campus emergency. Registrants will be contacted by the CMU Alert system only if there is a campus emergency. Questions regarding the CMU Alert service should be sent via email to [johnsonn@andrew.cmu.edu](mailto:johnsonn@andrew.cmu.edu).

## Computing Services

Computing Services has responsibility for the vision, policy making, planning, development, implementation and overall administration for computing, library, and related technologies in support of the University's teaching, research, and administrative activities. Major features of that responsibility are coordinated with other institutional leaders, both academic and administrative to ensure that the University's vision is realized.

## Computing Policy

The purpose of this policy is to set forth guidelines so that members of our community may use the campus

network and computing facilities in ways that are responsible and respectful of privacy. This policy sets forth the university's expectations of acceptable behavior on the part of computer systems users at Carnegie Mellon by providing guidelines for appropriate use of computing and related communication systems and examples of inappropriate use. These standards of acceptable behavior also extend beyond the campus community into the Internet. Just as it is unacceptable to violate others' rights to privacy, property and resources within Carnegie Mellon, it is also unacceptable to violate those rights on systems that are not at Carnegie Mellon but are accessible through Carnegie Mellon's connection to the Internet.

This policy applies to all users of Carnegie Mellon computing systems, including students, faculty and staff, and any others granted the use of university computing resources. It applies to the use of all computing facilities owned, leased, operated or contracted by Carnegie Mellon University. As used in this policy, terms such as "computing," "computing/communications systems," "computing resources," etc., refer to all computers, communication systems, and peripherals, software, telephones and systems with similar functions, which are owned by Carnegie Mellon, or which utilize Carnegie Mellon infrastructure such as telephone lines or computer networks.

Although this policy does not attempt to deal specifically with legal issues, university members are responsible to act in compliance with the law, including any federal, state and local laws governing computer and telecommunications use, as well as all other applicable university policies.

Please review the policy in its [entirety](#) and return the acknowledgement form to the Student Services Officer by the end of the first week of orientation.

## Best Practices

We ask that students commit themselves to the following best practices:

### 1. Use a strong password or passphrase

Review the [Guidelines for Password Management](#) for the definition of a strong password and for recommended practices for safeguarding your password. Never write a password down or share it with anyone.

### 2. Never leave your computer unattended in public locations

While security cable locks may serve as a theft deterrent, many have been shown to be ineffective against a determined thief. If you need to leave your computer unattended in your car, place it in the trunk or in some location where it is not visible to a passerby.

### 3. Keep your computer's software up-to-date

Configure your computer to download and install security updates automatically. Due to the number of patches developed in a relatively short span of time, it can become quite cumbersome to manage patches manually.

### 4. Safeguard your computer with antivirus software and a personal firewall

Configure your computer's anti-virus software to update automatically every day. New viruses are being discovered on a regular basis, which puts your computer and information at risk if the anti-virus on your computer is not updated regularly.

### 5. Safeguard institutional data and your own personal data

Avoid storing sensitive data on CDs, DVDs, USB thumb drives and other types of media that can be easily misplaced or stolen. If storing sensitive data on such media is necessary, ensure that the data is encrypted.

### 6. Think before you click

Be cautious when clicking on hyperlinks. Learn how to recognize fraudulent or malicious URLs by playing [Anti-Phishing Phil](#). Never open unexpected email attachments. If in doubt, verify authenticity by phone or email.

Don't get lured in by phishing emails. Learn how to recognize phishing traps in email by playing [Anti-Phishing Phyllis](#).

### **7. Treat your mobile device like any other computer**

Smartphones, tablets and other mobile device are just small computers and they experience many of the same security issues as a more traditional computer. Your pledge to cyber security should apply to your computer as well as your mobile devices.

### **8. Report suspected security concerns immediately**

If you suspect your computer has been compromised, or if you suspect any other type of breach in the security of Carnegie Mellon's resources, contact the Help Desk at [it-help@africa.cmu.edu](mailto:it-help@africa.cmu.edu)

### **9. Do not share copyright protected materials without authorization**

You might not like it, but copyrighted materials are protected by law. We all HAVE to obey the laws.

It is **illegal** to share copyrighted material for which you do not have written distribution permission. Exercise caution when using [file sharing](#) applications.

## **The Help Center**

Location: A402

Phone: +250(0)788312445/ +250(0)789111096

Email: [it-help@africa.cmu.edu](mailto:it-help@africa.cmu.edu)

The Computing Services Help Center provides students, faculty, and staff members with technical assistance and information about computing at Carnegie Mellon University Africa. Walk-in and phone hours are available Monday through Friday 8am-4pm. Students can contact the Help Center by phone, in person, or by sending e-mail to the contact information provided above.

## **Andrew User ID and Password**

Your Andrew Account is your key to access many of the university's computing services such as the Carnegie Mellon Web Portal, computing clusters, and e-mail. Once this is assigned, you can learn what your account and e-mail address are by visiting the Carnegie Mellon directory webpage: <https://directory.andrew.cmu.edu/> Contact the Help Center at [it-help@africa.cmu.edu](mailto:it-help@africa.cmu.edu) if you cannot find your Andrew User ID and password.

## **Webmail**

Students can access their Carnegie Mellon-Rwanda Email account through [MyAndrew WebMail](#), a web-based email service, regardless of where they are. All they need is their Andrew account information and an Internet connection. Computing Services on the campus supports the Microsoft Outlook 2007 mail client and welcomes students to try it out.

## **Computing Security**

[www.cmu.edu/iso](http://www.cmu.edu/iso)

Computing Services' Information Security Office is responsible for directing efforts to maintain the security of data and integrity of computing devices on campus. The Information Security Office (ISO) strives to keep all University affiliates informed about the latest cyber security threats, safe computing practices and relevant information security policies and compliance issues.

## Securing your Windows Computer

Viruses, worms, Trojans and break-ins are fairly commonplace and can wreak havoc on a student's computer's programs, operating system or data. Students must protect their machines (portable and at home). Antivirus software is available online at MyAndrew.

## Accessing the Network

Students will be able to access network resources including the Internet, email, Canvas and library resources through the campus wireless network. All the devices that need to use the wireless network will need to be registered by the CMU-Africa's IT support team. Students will be allowed to register only personal device in addition to any that will be provided by the university.

## VPN

CMU-Africa uses Cisco AnyConnect Virtual Private Network (VPN) client to create a secure connection, called a tunnel, between your computer and the server. This tunnel allows secure communications and the ability to connect to Carnegie Mellon resources off-site.

**IMPORTANT:** VPN does not eliminate the need for an Internet Service Provider (ISP). You must have a valid internet connection before you can connect to the VPN server.

For more detailed information on connecting to the VPN client, please visit the computing services [website](#). Please also review the [VPN usage guidelines](#) that have been established to ensure that the Carnegie Mellon community has a clear understanding of proper procedure and usage.

## CMU-Africa Webpage

<https://www.africa.engineering.cmu.edu/>

This link gives students access to general information about CMU-Africa including academics, student life, event calendar and announcements.

## CMU-Africa Canvas

<https://canvas.cmu.edu/>

Canvas is a Web-based course-management system designed to allow students and faculty to participate in classes delivered online and use online materials and activities to complement face-to-face teaching.

Canvas enables instructors to provide students with course materials, discussion boards, virtual chat, online quizzes, an academic resource center, and more. The degree to which Canvas is used in a course varies with instructor.

Canvas also allows students to view their entire listing of courses along with the Announcements, Course Information, Staff Information and Course Documents. Students typically upload their documents to Canvas to submit assignments.

Students can use the set of communication tools provided within the "Communication" area to contact each other or the instructor via email, participate in a discussion board forum, view student pages found in the class roster, and work in groups.

Students will also be able to view their course grades using the online Grade book from within Canvas. For further information, please access the user guide for Canvas online.

## Laptops

Every student will be given the option of receiving a laptop from CMU-Africa on the first day of orientation. Students will be fully responsible for the laptops they receive and will have to return the laptop upon graduation or when they leave CMU-Africa. Students have the option of using personal laptops but they must be verified by

IT support to make sure the specifications are up to the appropriate standards.

All students must sign an acknowledgement form upon receipt of the laptop, agreeing to the terms of the laptop policy as stated in the handbook.

### Procedure for Returning Laptops

Upon graduation, students will be given the option of buying their laptops at a reduced price or returning the laptop. The resell price will then be communicated to students just before graduation. Students who do not wish to purchase their laptops must return their laptops to IT support in good condition or paid in full by the time of graduation. Students leaving the University for any other Reasons apart from graduation should return the laptops in good working condition or pay the full price of the laptop.

### Student Services

The Student Services Officer, Gikundiro Olga Buki, is available to assist students with enrollment matters including course registration, drop, and withdraw as well as general information. The Associate Director of Operations, Ines Uwera Manzi will assist with inquiries about student accounts and billing, financial assistance and any other matter related to attendance at CMU-Africa that concerns student welfare.

The following online services have been established to improve our student services. All applications can be found by visiting the [HUB's website](#).

### Student Information Online (SIO)

SIO is a secure site where you can find important, personalized information, including E-Bills and student account information, financial aid status/eligibility, grades and QPA, and course schedule. You can plan your schedule, register for classes, update your contact information, sign up for E-Check & E-Refund, authorize friends and family to receive your E-Bill, request verifications, and much more. To log on, go to [www.cmu.edu/hub/sio](http://www.cmu.edu/hub/sio) and enter your Andrew User ID and password.

### Schedule of Classes (SOC)

SOC is a real-time searchable database of course information, including course descriptions. To log on, go to <https://enr-apps.as.cmu.edu/open/SOC/SOCServlet>

### Faculty Course Evaluations (FCE)

The FCE system allows members of the Carnegie Mellon community (students, faculty and staff members) to view course evaluation statistics on university colleges, departments, courses and instructors. To log on, go to <http://www.cmu.edu/hub/fce/index.html>

### To access any of The HUB's online services:

- " Go to [www.cmu.edu/hub](http://www.cmu.edu/hub)
- " Choose the appropriate online service from the left-hand navigation
- " Log into the system by entering your Andrew User ID and password

### Assistance for Individuals with Disabilities

Equal Opportunity Services serve as links between individuals with disabilities and the campus community. Accommodations are determined on a case-by-case basis. In order to receive services/accommodations verification of a disability is required as recommended in writing by a doctor, licensed psychologist or psycho-educational specialist. All information will be considered confidential and only released to appropriate personnel on a need to know basis.

To access services, individuals must initiate a request in writing for specific services/accommodations (books on



tape, enlargements, interpreters, etc.). The university makes available memorandums of introduction for students to give to professors, which document disability and describe the accommodations.

For more information or to initiate a request for accommodations, please contact Gikundiro Olga Buki [olga@africa.cmu.edu](mailto:olga@africa.cmu.edu)

## Enrollment

Enrollment is the process whereby students notify Student Services of their intent to attend Carnegie Mellon University Africa. This is done by 1) registering for courses and 2) settling/paying their semester charges. These two requirements must be met before the first day of classes each semester. Most students register well in advance of the semester and a student account invoice is sent that states a payment due date.

## Enrollment Services Forms

Enrollment Services forms for various policies and procedures (Leave of Absence, Withdrawal, Change of Name, Transcript Request, etc.) can be found at [www.cmu.edu/hub/forms.html](http://www.cmu.edu/hub/forms.html).

## Registering for Courses

Contact your department to register or to change your course schedule. Visit the Schedule of Classes (SOC) online to view the most accurate listing of course offerings. You may also use the Plan Course Schedule feature in Student Information Online (SIO) to plan your schedule for upcoming semesters. Students are encouraged to meet with their academic advisor prior to finalizing their course selections.

The registration process can be completed within [SIO](#) in 4 easy steps:

- " Plan your course schedule
- " Review your planned schedule with your advisor
- " Check your registration time on [SIO](#)
- " Register for classes
- " Learn how to complete these [4 easy steps](#).

## Enrollment Verification

Enrollment Services is the only University office that can provide an official letter of enrollment, official transcript and enrollment verification. Enrollment verification can be requested online through The HUB at: <https://www.cmu.edu/hub/registrar/student-records/verifications/enrollment.html>

## Academic Advisors

Each incoming student will be assigned an academic advisor that will help with curriculum decisions. When assigning students to advisors we consider their work experience and declared area of interest; we try to fit each student with an appropriate advisor.

You will find out who your advisor is during orientation. Each student will have an individual meeting scheduled with their advisor during orientation or in the week after to the start of their first semester.

Advisors can be identified as mentor, evaluator, and colleague. He/she is responsible for assisting with course selection, for monitoring and evaluating the student's progress, and for working closely with the student toward a successful academic and professional outcome.

Beyond your advisor, you are welcome to communicate with any faculty as needed because of the courses they teach or area of expertise.

## Academic Calendar

The official Academic Calendar for CMU-Africa can be found on <https://www.africa.engineering.cmu.edu/students/academics/index.html#academic-calendar>. The calendar includes class schedules; payment deadlines; add/drop deadlines and other important deadlines.

## Exit Interviews

Exit interviews are usually held throughout May and June of the final year and they are designed to get feedback from students on the master's programs. They are mandatory and organized by the student services office.

## Industry Engagement & Career Services

The CMU-Africa experience extends well beyond the classroom. We provide students with professional development, practical learning through industry internships and practicums where students work in teams on problems provided by industry sponsors, and a suite of career services, including seminars on the job search, interviewing skills, resume writing, and an annual internship fair and an annual career fair to allow formal engagement between prospective employers and students.

The overall strategy for career services is to ensure that all graduates from the Carnegie Mellon University programs in Rwanda are gainfully employed in organizations that can provide excellent opportunities in which they can continue developing their professional and technical skills.

To learn more about career services, please contact Marie-Ange Rukundo, Career and Alumni Services Officer, [mrukundo@andrew.cmu.edu](mailto:mrukundo@andrew.cmu.edu)

## Degree Attainment and Academic standard Grading Policy

The general grading policy used by Carnegie Institute of Technology (CIT) is described on the [university grading policy page](#). The following are CIT-specific policies for graduate grading.

Project work may be given an S (Satisfactory) grade on a semester-by-semester basis, but a letter grade (A, A-, B+, B, B-, C+, C, C-, D+, D, or R) must be given in the final semester for a multi-semester project. The units with an S grade are counted toward degree requirements but are not included in computing the average grade.

Course work or graduate project units with a grade of C- or lower are not acceptable toward graduate degree requirements.

A student may take more than the minimum number of units to graduate (144 for MSIT or 96 for MS ECE). However, a student must graduate in the first semester when they achieve their graduation requirements. A student with extra units beyond the minimum number of units to graduate may choose which units they apply to satisfy their degree requirements. The average grade of the units applied to the degree shall be at least B (or 3.0).

Once a student has exceeded the minimum number of credits by 24 units (168 for MSIT or 120 for MS ECE) they may no longer sign up for additional semesters and must either graduate or leave the university. As an example, an MSIT student has taken 162 units in their first three semesters. Although they have more than 144 units, this student has not yet satisfied the requirements for the MSIT degree. Since they have less than 168 units the student could sign up for up to 54 units in their fourth semester. At the end of their fourth semester, if they had completed 168 units or more, they would not be able to sign up for any further courses.

See more on: [www.cmu.edu/policies/documents/Grades.html](http://www.cmu.edu/policies/documents/Grades.html)

## Course Audit Information

Auditing is presence in a classroom without receiving academic credit or a letter grade. The extent of participation must be arranged and approved by the course instructor. Students wishing to audit a course are required to register for the course, get the permission of the instructor and advisor, and complete and return the <https://www.cmu.edu/hub/forms.html> form to the Student Service's Office prior to the fifth day of classes for a mini and eleventh day of classes for a Semester course.

**NOTE:** Once a Course Audit Approval form or a Pass/Fail form is submitted to the Student Services Office, a letter grade will not be assigned for the course. Students choosing to audit a course or take a course pass/fail are required to pay their student account by the payment deadline.

## Policy on Course Add, Drop and Withdrawal by Graduate Students

The official academic calendar publishes deadlines before which students may add, drop, or withdraw from classes. Students may add classes early in the semester subject to ordinary limits on the maximum number of credits. Students may drop a course subject to maintaining full-time status. When a course is dropped by the deadlines, the course is removed entirely and disappears from a student's academic record. Adding or dropping a class may have an impact on the student's tuition bill. After the drop deadline, a later deadline is set where students may withdraw from a course subject to maintaining full-time status. When a student withdraws from a course, a "W" (Withdrawal) is assigned as a grade, which appears on the student's academic record. This "W" grade does not affect a student's QPA. However, the units are still counted for the purposes of tuition and towards the maximum number of units that are allowed to be taken. A graduate student can petition the department head to remove a "W" grade from their transcript if there are extenuating circumstances. You can contact Gikundiro Olga Buki for more information.

## Academic Performance

Good academic standing is defined by having a cumulative GPA of at least 3.0 or above. A student will be put on academic probation if the student's GPA is lower than 3.0 in the most recently completed semester. A student on academic probation will be removed from probation after the following semester if the student's semester GPA is 3.0 or better for that semester. If a student has a semester GPA lower than 3.0 at the end of two consecutive full semesters, the student may be permanently dropped from the program at the discretion of the Director of CMU-Africa. If this occurs, the student will have an opportunity to appeal per the guidelines provided in <https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>

## Statute of Limitations for Master's Degree Studies

All units required for a master's degree in the College of Engineering, whether earned in residence or transferred from another institution, must be recorded on the transcript within six years of the date on which the student enrolled in the program. This statutory period can be extended by the CIT (i.e., College of Engineering) Associate Dean for Graduate and Faculty Affairs for special circumstances that do not make it possible for the student to complete the requirements within the statutory period. Any request for a waiver of the statute of limitations for master's degree studies must be approved by the head of the department or program offering the master's degree and by the CIT Associate Dean for Graduate and Faculty Affairs. The waiver request must explain the exceptional circumstances that warrant an extension. For cases in which a waiver is granted, the waiver will cover specific courses and will specify a time period for completion of the program.

See: <https://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html>

## Policy on Cheating and Plagiarism

Students at Carnegie Mellon are engaged in preparation for professional activity of the highest standards. Each profession constrains its members with both ethical responsibilities and disciplinary limits. To assure the validity of the learning experience a university establishes clear standards for student work.

In any presentation, creative, artistic, or research, it is the ethical responsibility of each student to identify the conceptual sources of the work submitted. Failure to do so is dishonest and is the basis for a charge of cheating or plagiarism, which is subject to disciplinary action. CMU-Africa reserve the right to suspend or expel a student faced with an academic integrity violation in cheating or plagiarism.

## Definition of Cheating and Plagiarism

*Cheating* includes but is not necessarily limited to:

- Plagiarism, explained below.
- Submission of work that is not the student's own for papers, assignments or exams.
- Submission or use of falsified data.
- Theft of or unauthorized access to an exam.

- Use of an alternate, stand-in or proxy during an examination.
- Use of unauthorized material including textbooks, notes or computer programs in the preparation of an assignment or during an examination.
- Supplying or communicating in any way unauthorized information to another student for the preparation of an assignment or during an examination.
- Collaboration in the preparation of an assignment. Unless specifically permitted or required by the instructor, collaboration will usually be viewed by the university as cheating. Each student, therefore, is responsible for understanding the policies of the department offering any course as they refer to the amount of help and collaboration permitted in preparation of assignments.
- Submission of the same work for credit in two courses without obtaining the permission of the instructors beforehand.

*Plagiarism* includes, but is not limited to, failure to indicate the source with quotation marks or footnotes where appropriate if any of the following are reproduced in the work submitted by a student:

- A phrase, written or musical
- A graphic element
- A proof
- An idea derived from the work, published or unpublished, of another person  
Specific language

## Academic Disciplinary Actions Overview for Graduate Students

The procedures and penalties described in the university <https://www.cmu.edu/student-affairs/ocsi/academic-integrity/documents/academic-disciplinary-actions-overview-for-graduate-students.2013.pdf> are applied when there are academic integrity violations by graduate students.

## Summary of Graduate Student Appeal and Grievance Procedures

<https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>. Graduate students will find the Summary of Graduate Student Appeal and Grievance Procedures on the Graduate Education Resource webpage. This document summarizes processes available to graduate students who seek review of academic and non-academic issues. Generally, graduate students are expected to seek informal resolution of all concerns within the applicable department, unit or program before invoking formal processes. When an informal resolution cannot be reached, however, a graduate student who seeks further review of the matter is to follow the formal procedures outlined here. These appeal and grievance procedures shall apply to students in all graduate programs of the University. Students should refer to the department specific information in this handbook for department and college information about the administration and academic policies of the program.

## CMU-Africa academic Policies/Protocols

### Student Leave Policy

Students must sometimes interrupt their studies for a variety of reasons (financial, academic or personal). Students choosing to take a leave of absence must first contact their department advisor to discuss their plans while on leave to work out any conditions that may be necessary for a smooth return to Carnegie Mellon.

A student may leave Carnegie Mellon by either withdrawing from the university (this means leaving the university with no intention of returning) or by taking a leave of absence (this means leaving the university temporarily, with the firm and stated intention of returning).

The complete policy on Student Leave is available at [www.cmu.edu/policies/documents/StLeave.html](http://www.cmu.edu/policies/documents/StLeave.html).

## Student Suspension/Required Withdrawal Policy

University Suspension is a forced, temporary leave from the university. There are three types of suspension for students that apply to both graduate and undergraduate students:

*Academic Suspension* is the result of poor academic performance or violation of academic regulations and is imposed by the student's college or academic department (see university and college academic policies).

*Disciplinary Suspension* is the result of serious personal misconduct and is imposed by the [Office of Student Affairs](#) (see [The Word/Student Handbook](#)).

*Administrative Suspension* is the result of failure to meet university financial obligations or failure to comply with federal, state or local health regulations and is imposed by Enrollment Services. (See [Student Accounts Receivable Collection Policy and Procedures](#) for financial obligations. Contact [Student Health Services](#) for information about health regulations.)

Suspended students may not:

- " register for courses
- " attend classes
- " use campus facilities
- " participate in student activities
- " be members of student organizations
- " have student jobs

The complete Student Suspension/Required Withdrawal Policy is available at <http://www.cmu.edu/policies/documents/Suspension.html>.

## Withdrawal of a Degree

The university reserves the right to withdraw a degree even though it has been granted should there be discovery that the work upon which it was based or the academic records in support of it had been falsified. In such a case the degree will be withdrawn promptly upon discovery of the falsification.

## Maternity Accommodation Protocol

Students whose anticipated delivery date is during the course of the semester may consider taking time away from their coursework and/or research responsibilities. All female students who give birth to a child while engaged in coursework or research are eligible to take either a short-term absence or formal leave of absence. Students in course work should consider either working with their course instructor to receive incomplete grades, or elect to drop to part-time status or to take a semester leave of absence. Students engaged in research must work with their faculty to develop plans for the research for the time they are away.

Students are encouraged to consult with relevant university faculty and staff as soon as possible as they begin making plans regarding time away. Planning for the student's discussion with her academic contact(s) (advisor, director, etc.) will be reviewed during this meeting.

Note: Associate director of operations can assist you with more information on the academic policies. Send email to [imanzi@andrew.cmu.edu](mailto:imanzi@andrew.cmu.edu)

## Intellectual Property Policy

This policy should be reviewed in its entirety on-line:

<http://www.cmu.edu/policies/documents/IntellProp.html>

The following is a summary of the policy. This policy attempts to:

- Create an environment that encourages generation of new knowledge by members of the campus community.
- Facilitate wide transfer of useful inventions and writing to society.
- Motivate the development and dissemination of intellectual property by providing appropriate financial rewards to the creators and the university, and administrative assistance to creators.
- Ensure that financial return from the development of intellectual property does not distort decisions and operations of the university contrary to the university's mission.

## Financial issues

### Tuition sponsorship

Students with government, business or company sponsorship must provide Associate Director of operations a copy of their sponsorship letter and/or financial guarantee from their sponsor. Additionally, the student must sign a release form to allow Carnegie Mellon to share grade and academic progress information with their sponsor. The sponsorship letter should be returned to Associate Director of operations Office. For inquiries, please send email to [imanzi@andrew.cmu.edu](mailto:imanzi@andrew.cmu.edu).

### CMU-Africa Financial Aid

CMU-Africa has a variety of scholarships and fellowships that provide financial support for graduate students with an exceptional academic record and demonstrated leadership potential. The Director of CMU-Africa will determine the amount of the fellowships and will select awardees in accordance with university policies and procedures. Please contact the Associate Director of Operations [imanzi@andrew.cmu.edu](mailto:imanzi@andrew.cmu.edu) for more information.

Part time jobs are available at CMU-Africa. Different categories of part time jobs include teaching assistance, administrative assistance, IT assistance and should not go beyond 10 hours per week for fulltime students.

### Billing & Payments

Carnegie Mellon University Africa accepts payments by wire transfer or bank deposit. The account information needed for a wire transfer is included at the bottom of each invoice. The name of the student must be included in the wire transfer message.

The student account office is able to work with students to set up manageable payment plans. Students with pending balance from a previous semester will have a hold put on their accounts that prevents them from adding or dropping courses and registering for the next semester's courses. For graduating students, any balance greater than zero will cause diplomas, degree verifications and transcripts to be held until the account is paid in full.

For more information regarding billing and payments, including electronic student account invoices (E-Bills), E-Pay/E-Refund, past due accounts, and more, visit <https://www.cmu.edu/sfs/billing/>

## CMU-Africa Handbook Acknowledgement form

The Carnegie Mellon University Africa program graduate student handbook has been prepared to inform you about program policies, CMU-Africa resources, degree attainment, and financial processes.

Please read this document carefully, and give special attention to the section on academic integrity.

To maintain your status as a master's degree seeking CMU-Africa student, you must complete your review of this handbook during the first week of classes and then sign a copy of this acknowledgement statement in the blank below.

Please return the signed original to: Olga Buki, Student Services Officer, Office A501

By signing, you affirm that you have read a copy of the 2018-2019 CMU-Africa graduate student handbook; that you understand the information contained therein, and that you agree to comply with the policies and procedures contained in the handbook.

Note that this handbook is not intended to cover every situation that may arise during your course of study, and is not a contract between you and the CMU-Africa programs.

Should there be any disagreements between this document and the written policies of the College of Engineering and Carnegie Mellon University, the College and University documents take precedence. However, the handbook should be followed as your general guide to the goals, policies, practices, and expectations of the Carnegie Mellon University Africa Master's Program.

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Signature and Date

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Printed Name

Sign & return to CMU-Africa Office of the Student Services Officer, Office A501 before Monday, September 3, 2018