

GRADUATE STUDENT HANDBOOK

2024 - 2025



Carnegie
Mellon
University
Africa



Table of Contents

1	Welcome & Introduction	3
2	Program Vision, Mission, and Values	4
2.1	Brief Overview of CMU-Africa	4
2.2	Vision	4
2.3	Mission	4
2.4	Core Values.....	4
3	Degrees Offered	5
4	Departmental Personnel	6
4.1	Staff and Faculty Directory.....	6
5	Departmental Resources.....	8
5.1	Purchasing and Reimbursement Procedures and Policies	8
5.2	CMU-Africa Facilities.....	8
5.3	Facility Management	8
5.4	Health Insurance	9
5.5	Andrew User ID and Password	9
5.6	Email	10
5.7	Computing Services.....	10
5.8	Computing Security	13
5.9	CMU-Africa Canvas.....	13
5.10	CMU-Africa Wellness Center	14
5.11	Counseling and Psychological Services (CaPS)	14
5.12	Student Organizations	14
6	Advising.....	14
6.1	Role of an Academic advisor and Advisor Assignments.....	14
6.2	Faculty Advisor and Academic Advisor	15
6.3	Faculty Advisor/Advisee Collaboration	15
6.4	Review/Redress of Academic Conflicts	16
7	Master's Degree Requirements.....	17
7.1	Residency Requirements.....	17
7.2	Registration Process.....	17
7.2.1	Overview.....	17

7.2.2	Student Responsibility	17
7.2.3	Student Information Online (SIO).....	17
7.3	Required Units for Degree Attainment.....	18
7.3.1	Master of Science in Information Technology (MSIT).....	19
7.3.2	Master of Science in Engineering and Artificial Intelligence (MS EAI)	29
7.3.3	Master of Science in Electrical and Computer Engineering (MS ECE)	33
7.3.4	Master of Science in ECE Advanced Degree Program (MS-AD in ECE).....	33
7.4	Department Policy for Courses Outside the College of Engineering.....	34
7.5	Teaching Requirements/Opportunities	35
7.6	Internship Requirements and Opportunities	35
8	Department Policies & Protocols	38
8.1	Petition Procedures.....	38
8.2	Department Policy for Withdrawing from a Course.....	38
8.3	Requirements for additional classes	38
8.3.1	Academic Skills Courses	38
8.4	"Grandfather" Policy	38
8.5	Variations to University Policies and Protocols	39
8.5.1	Change of Degree Program.....	39
8.5.2	Post Matriculation Guidelines.....	39
9	Grading & Evaluation.....	40
9.1	Grading Scale/System	40
9.2	Department Policy on Grades for Retaking a Course.....	40
9.3	Department Policy on Pass/Fail, Satisfactory/Unsatisfactory	40
9.4	Department Policy for Incompletes.....	40
9.5	Independent Study.....	40
9.6	GPA Requirements and QPA Requirements for Graduation.....	41
9.6.1	Quality Point Average	41
9.7	Satisfactory Academic Standing.....	41
9.8	Returning to Carnegie Mellon	42
10	Funding & Financial Support.....	42
10.1	Statement of Department Financial Support	42
10.2	Tuition sponsorship	43

10.3	Stipend.....	43
10.4	Department Fees.....	43
10.5	Travel/Conference and Research Funding	44
10.6	Additional Sources of Internal & External Financial Support	45
10.7	Requirements for the Continuation of Funding	45

1 Welcome & Introduction

Welcome to Carnegie Mellon University Africa and the College of Engineering.

Carnegie Mellon University has a prominent history of excellence in higher education and global thought leadership in technology innovation and is the **first United States research institution** offering engineering master's degrees on the continent of Africa.

[Carnegie Mellon University in Africa](#) has an intentional ambition to propel all students to reach their highest potential in intellectual and innovative pursuits, personal and social well-being, professional development, leadership, and entrepreneurial discovery that will impact and contribute to the African continent.

As a Carnegie Mellon University Africa student, you are now a member of a dynamic community of peers, scholars, and practitioners who will help support and challenge you during your academic journey. All community members are given many privileges and likewise accept responsibilities to uphold the standards of Carnegie Mellon University Africa. It is the responsibility of each student to read and understand the contents of this handbook.

To ensure you are knowledgeable of the university's expectations, policies, and guidelines it is important to familiarize yourself with the [Rword](#) or CMU-Africa Graduate Handbook. While this handbook is specific to your academic experience in the department, it is just one element of the Graduate Student Handbook Suite. There are several other resources within the suite that you should consult when needed:

- [College of Engineering Handbook](#)
- [The Word Student Handbook](#)

The [Rword](#) is intended to set guidelines and expectations for new and current Master's students at Carnegie Mellon University Africa. This handbook is not exhaustive and is subject to revision at any time by Carnegie Mellon University Africa (CMU-Africa) leadership.

This handbook, along with any revisions, will be posted and announced annually to the [CMU-Africa website](#). Last revised: September, 2024

Students with disabilities may request this handbook in other formats by contacting the [Student Affairs Team](#).

With Gratitude and Tartan Pride,



Conrad S. Tucker

Director, Carnegie Mellon University-Africa

2 Program Vision, Mission, and Values

2.1 Brief Overview of CMU-Africa

In 2011, upon the invitation of the Government of Rwanda (GoR), Carnegie Mellon and the GoR signed an agreement to establish a new CMU location in Kigali, Rwanda. This ambitious and innovative partnership was designed to respond to the critical shortage of high-quality engineering talent required to harness Africa's tremendous potential as home to the fastest-growing workforce in the world.

CMU-Africa is a regional ICT center of excellence educating a diverse composition of future leaders from all over Africa, who will use their hands-on skills and knowledge to advance technology innovation and grow businesses.

Visit the [CMU-Africa](#) website to obtain information about academics, research student life, event calendar and announcements.

2.2 Vision

Our vision is to advance Africa's intellectual and digital development.

2.3 Mission

CMU-Africa's mission is to deliver transformative educational programs to cultivate future technology leaders, entrepreneurs and innovators from across Africa. CMU-Africa engages in collaborative research and innovation to address African and global challenges.

2.4 Core Values

Collaboration

We commit to each other through transparency, trust, communication, and accountability to work together to achieve our shared goals. We commit to work with a broad range of partners to achieve our mission.

Excellence

We commit to the attainment of the highest standards of quality, timeliness, and performance in all our programs, services, and operations.

Inclusion

We commit to foster and empower an inclusive community that embraces individuals and ideas from a broad diversity of perspectives.

Integrity

We commit to act with honesty, trustworthiness, and dependability in alignment with the highest academic, professional, and ethical standards.

3 Degrees Offered

Our full-time graduate programs are educating future leaders who will use their hands-on, experiential learning to advance technology innovation and grow the businesses that will transform Africa.

Carnegie Mellon University Africa offers four degree programs:

- [Master of Science in Information Technology \(MSIT\)](#)
- [Master of Science in Electrical and Computer Engineering \(MS ECE\)](#)
- [Master of Science in Electrical and Computer Engineering Advanced Study Program \(MS-AD in ECE\)](#)
- [Master of Science in Engineering Artificial Intelligence \(MS EAI\)](#)

Please note: The instruction for all degrees and programs will occur in English.

4 Departmental Personnel

4.1 Staff and Faculty Directory

The Carnegie Mellon University Africa faculty and staff are available to guide and provide you with support to complete your graduate degree program. Refer to the online [Directory](#) for the full list and below are primary staff that will assist you with various services.

Service	Title	Name
Admissions and New Student Matriculation toward Enrollment	Admissions and Enrollment Officer	Flavia Mugire
Diversity, Equity and Inclusion	Associate Director of Diversity, Equity and Inclusion	Nancy Biwott
Graduate Admissions	Associate Director of Admissions	Rosine Kamahoro
Graduate Recruitment	Associate Director of Recruitment	Abraham Darriel
Guidance with Degree Plans, Course Registration, Curriculum and Degree Program Completion, General Academic Advising	Academic Advisor (transitioning out)	Gikundiro Buki Olga
Guidance with Student Account, Financial and Payment Plan Matters	Finance Officer	Reginald Donkor
Inquiries Related to Faculty Matters	Academic Affairs Coordinator	Gisele Gihozo
Internships, Career Pathway and Career Professional Development, Guidance with Job Portal	Career Services Officer (transitioning out)	Patricia Musiime
Matters Related to Mastercard Foundation Scholars Program	Program Manager	Gikundiro Buki Olga
New Student Orientation and Co-curricular programs	Student Success and Co-Curricular Manager	Lucy-Anna Kelly

Student Affairs, Financial Aid, Student Programming	Associate Director of Student Affairs	Ines Manzi
Student Wellness, Student Clubs, Student Guild, Student Visas	Student Services Officer	Mika Inamahoro
Conference support for alumni	Faculty Support Coordinator	Esther Bugaiga

Emails to Request Support Services

Support Service Inquiries	Department	Email Address
Campus Facility	Facilities	africa-facilities@andrew.cmu.edu
Faculty, Student Conferences	Academic Affairs	africa-academics@andrew.cmu.edu
Financial and Payment Plan Matters	Finance	africa-finance@andrew.cmu.edu
Guidance to Organize Campus Student Event, Guidance with Social Media Support	Event Management	cmu-africa-events@andrew.cmu.edu
Human Resources	Human Resources	africa-hr@andrew.cmu.edu
IT Tickets	Information Technology	africa-it-help@andrew.cmu.edu
New Admitted Student Matters	Graduate Admissions	africa-admissions@andrew.cmu.edu
Student Account and Scholarships Matters	Student Account	africa-financial-aid@andrew.cmu.edu
Student Support Matters	Student Affairs	studentsupport-africa@andrew.cmu.edu

5 Departmental Resources

5.1 Purchasing and Reimbursement Procedures and Policies

All graduate student purchases with clear business justification must be requested through the student affairs team or academic affairs team. If graduate students will be making purchases, they must be aware of the department's protocols to work with for these purchases. More information on University purchases and policies can be accessed through this [link](#).

5.2 CMU-Africa Facilities

CMU-Africa is housed in the [Regional ICT Center of Excellence](#) Building in the Kigali Innovation City.

5.3 Facility Management

All facility and equipment requests and complaints which may include access to the photocopier, power sockets, water leakages, etc., should be submitted to africa-facilities@andrew.cmu.edu.

a) Access to Facilities

- Students will be provided with individual ID cards for secure access to the facility and will be responsible for their individual use.
- Students are responsible for reporting any security-related incident that they may be aware of.
- Students on a leave of absence suspension must surrender their student ID card to the Student Services Officer. Lost or stolen cards should be reported immediately to the Student Services Officer.
- It is the responsibility of the student to get replacement cards for lost or stolen cards.
- Student ID cards will be deactivated upon graduation.

b) Lockers

- Students will be assigned a locker and a key on the first day of the semester.
- Students are responsible for the locker's contents and safe keeping of the key for the duration of their program.
- Students must clear the locker contents and return the key upon graduation.

c) Policy on Lost or Stolen Locker Keys

In the event of a lost locker key, students will pay for the cost of reproducing another key or in an extreme case, installing a new lock and key for the locker. Students will be responsible for the locker's contents while the locker is assigned to them. CMU-Africa will not assume any liability for the locker's contents' loss, damage, or theft.

d) Lounge/ Kitchenette Cleanliness

The student kitchen/lounge is available to all CMU-Africa students. The cleaning staff will clean the floor and empty the trash bins once a day. Students will be responsible for cleaning the microwave, coffee machine and other electric appliances. For any concerns about the cleanliness, report to the [facility officer](#).

e) Nursing room

A serene nursing room is located on the ground floor, D-wing. It features comfortable seating with pillows for mothers and a refrigerator. The space is designed to offer privacy and calm,

fostering a peaceful environment for mothers. You can contact the [facility officer](#) for more information on access procedures.

f) Library Resources

The Carnegie Mellon University digital library provides access to full-text databases, online journals, books, music and videos and online subject-specific search. Students can access the digital library resources at [library.cmu.edu](#). Most library resources must be accessed through the CMU Virtual Private Network. A customized guide has been created for CMU-Africa students. Students can access this guide at the [library](#).

In addition, hard-copy books can be borrowed from [the Academic Affairs Coordinator](#).

g) Available Heavy-Duty Printers for Student Use

- *Location A303:* A high-capacity printer is accessible for student printing needs around the clock, offering black and white printing, scanning, and copying services.
- *D-wing, Lower Ground Floor Quiet Space:* An additional heavy duty printer is available for continuous student use, also equipped for black and white printing, scanning, and copying.

Both printers are operational 24/7 to accommodate your printing requirements. Should you require any support with using the printers, please do not hesitate to send a support ticket to [CMU-Africa IT Help](#)

h) Security

All students, faculty and staff will be registered 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 [IT Ticket](#).

5.4 Health Insurance

All CMU-Africa students are eligible to join the CMU-Africa medical insurance plan. To subscribe, students should fill a health insurance form provided during Orientation. The policy runs on an annual renewable basis from September 1 through August 31. CMU-Africa students who travel to Pittsburgh for a Semester exchange program are required to subscribe to the medical insurance plan and fulfill the immunization requirement. The Pittsburgh immunization guide can be found [here](#).

5.5 Andrew User ID and Password

An official Andrew User ID is assigned to you upon enrollment and is required to access the Carnegie Mellon Web Portal, email, student account and other computing services. You will set up your confidential password upon your initial access. If you need help with your Andrew User ID and password contact Help Center africa-it-help@andrew.cmu.edu.

5.6 Email

All enrolled students are given a [G Suite](#) account that will allow email through [Web Login](#) and your *Andrew ID* and *password* is required for access.

5.7 Computing Services

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

[A. Student Laptop Policy](#)

Each new CMU-Africa student is given the option of accepting a laptop provided by CMU-Africa at the start of their CMU-Africa degree program. The provided laptop is to be strictly for use during their studies at CMU-Africa. If they accept the laptop, upon completion of their degree program at CMU-Africa, they are required to either return it in good working condition (as assessed by CMU-Africa IT team) or purchase it at 25% of the original cost of the laptop.

Given their educational purpose for CMU-Africa students, these laptops should not be transferred to anyone else or kept unused by the student. It is acceptable not to take the laptop if a student has a personal laptop that meets or exceeds the CMU-Africa laptop specifications. The CMU-Africa laptops come with a 2-year warranty that covers manufacturing defects but does not cover accidents or negligence. As such, students will be responsible for laptop problems caused by accidents or negligence.

In case a student's CMU-Africa provided laptop needs repair, the student will be responsible for taking it to the vendor. The vendor will determine whether the warranty covers the repair or not. Students will then be responsible for paying the cost of repair if the damage is not covered under the warranty.

CMU-Africa will aid in the following ways:

- Transportation of the damaged laptop to and from the vendor. The student will have to be present when the laptop is taken to the vendor. To avoid the student's classroom attendance inconvenience, a CMU-Africa driver may pick the laptop from the vendor on behalf of the student where payment is not a requirement.
- A loaner laptop is available for a maximum of two weeks while their primary laptop (CMU-provided or personal) is being repaired or replaced. The request for a loaner laptop should be submitted to [IT Ticket](#) and cc the [Student Affairs Team](#) for approval. Note that there are a limited number of loaner laptops available for students, and the loaner should be returned immediately the primary laptop is repaired in a period that should not exceed two weeks.
- Two loaner laptops will be available after working hours and during weekends. They can be requested for by sending an email to africa-it-help@andrew.cmu.edu

- The CMU-Africa Student Services Officer will handle cases where a student is unable to cover the cost of laptop repair.

B. Stolen Laptop Policy

Students are required to exercise care of the laptop issued to them to prevent loss in the period of their studies at CMU-Africa. Stolen laptops will not be replaced by CMU-Africa.

In the event of a stolen laptop, the student owner is required to report the stolen laptop within 24 hours to the CMU-Africa Student Services Officer. The report should include a Police Incident Report/Case number. A surcharge of 25% of the cost of the laptop will be required to obtain clearance from the University at the end of the program for all stolen laptops that are not recovered.

Failure to report a missing laptop to the Police and CMU-Africa will result in the student having to pay the **full cost** of the laptop.

C. 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 orientation.

D. Computing Best Practices

We ask that students commit themselves to the following computing 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 automatically update every day. New viruses are being discovered on a regular basis, which puts your computer and information at risk if the anti-virus software 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. Ensure that all the critical data you need for study or work is backed up using [Box](#) or [G Suite's Drive](#).

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 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 immediately at africa-it-help@andrew.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 must obey the law.

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

5.8 Computing Security

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.

a) Securing your laptops and devices

Viruses, worms, Trojans, and break-ins are 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). Information on how you can do this can be found below:

<https://www.cmu.edu/iso/news/laptop-safety.html>

b) Accessing the Network

Students can access network resources including the Internet, email, [Canvas](#) and library resources through the campus wireless network.

c) 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.

5.9 CMU-Africa Canvas

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

[Canvas](#) is a web-based course-management system designed to allow students and faculty to participate in online delivery of classes activities to complement face-to-face instruction. Canvas

is an academic resource center that allows instructors to provide students with course materials, engage in virtual chats, discussion board forums, online quizzes and more.

Canvas allows students to view course registrations, course syllabus, course grades via the online Grade Book, access course information, and documents, submit and upload course assignments, and view staff and faculty announcements. The “Communication” tool allows students to contact instructors and fellow students via email, view student pages and engage with peers in workgroups.

The [Canvas User Guide](#) is online and please contact the Canvas Support Team for technical assistance at canvas-help@andrew.cmu.edu or 412-268-9090.

5.10 CMU-Africa Wellness Center

All students are encouraged to take advantage of the various good health and well-being individual and group services offered in the Wellness Center. Confidential in-person and virtual counseling and mental wellness sessions are offered by appointment so please contact [Justine Mukamwezi](#).

5.11 Counseling and Psychological Services (CaPS)

The [Counseling and Psychological Services](#) (CaPS) located at the CMU Pittsburgh campus offers confidential virtual well-being counseling and mental wellness sessions by appointment to support domestic and international students with their transition to university student life.

5.12 Student Organizations

The CMU-Africa [Student Guild](#) is an energetic student leadership organization elected by the peers to represent the student body. We encourage you to become involved in our student organizations and participate in various on-campus and off-campus [extracurricular activities](#) hosted by the [Student Guild](#) and other energetic [Student Clubs](#). The student clubs are managed by the Student Guild who coordinate the student activities. The CMU-Africa [Flicker webpage](#) gives you an opportunity to view photos of the student activities.

The Student Affairs staff support and provide guidance to the Student Guild and Student Clubs campus to contribute to the overall student life and social interaction experience.

6 Advising

6.1 Role of an Academic advisor and Advisor Assignments

The primary role of the Academic Advisor is to ensure students [adhere to coursework](#) outlined in their academic plan for the master’s program to ensure degree completion within the specified length of time. In addition, the Academic Advisor will assist students with items like course registration, withdrawal from courses, academic and personal challenges that may impact degree completion, transfer or request a leave of absence from university, fulfill enrollment verification requests, and other related matters.

Newly admitted students are assigned a Faculty Advisor during the Student Induction Program. Graduate students should schedule a time to meet with their academic advisor during the Student Induction Program and/or the first week at the start of the semester.

6.2 Faculty Advisor and Academic Advisor

All enrolled students are assigned a Faculty Advisor and Academic Advisor to assist and provide guidance with academic decisions. Faculty Advisors respond to student questions about specific degree programs that include MSIT, MS EAI, and MS ECE. In addition, Faculty Advisors can assist with course selections, offer advice on career pathways and doctoral studies, provide support to ensure students persist and complete degree programs.

1. Students are expected to schedule a meeting with their advisors within the first week of class and prior to course registration week
2. Students are expected to complete their degree plan and share with faculty advisors ahead of the meeting
3. Subsequent meetings can be scheduled within the semester by both the student and faculty advisor to check on or review degree plan and progress towards graduation

6.3 Faculty Advisor/Advisee Collaboration

A faculty advisor plays a crucial role in a graduate student's academic and professional development, offering guidance throughout their educational journey. This relationship involves helping students navigate their course selections and research endeavors, providing expert advice. Faculty advisors also play a key role in the student's **professional growth** by facilitating networking opportunities, encouraging conference participation. By acting as both an advisor and advocate, faculty advisors or faculty mentors contribute significantly to the student's success and preparedness for their future career.

The following are some processes involved in successfully creating an advising session between student and advisor.

1. At the beginning of the semester, new students would be assigned to advisors
2. Students are expected to schedule a meeting with their advisors within the first week of school resumption and course registration week
3. Students are expected to complete their degree plan and share with faculty ahead of the meeting
4. Once faculty have confirmed availability for the meeting, student and faculty advisors have a one-on-one meeting either via Zoom or in person
5. Subsequent meetings can be scheduled within the semester by both the student and faculty advisor to check on or review the progress and plan of the student

Sample topics include:

The changing role of an advisor over the lifetime cycle of the graduate student

- Advising on classes, research methods and processes, writing, publication process, conference presentations, thesis writing and presentation, job search.

Research management, time management, and work expectations

- How research project assignment will be made, reporting requirements, responsibility for budgets and appropriate charges, safety requirements in laboratories and studios, management of support staff- undergraduates or new graduate students, publication expectations and processes- decisions of authorship lineup, writing responsibilities, determination of when a publication is ready for submission, faculty's responsibility for monitoring the integrity with which the research is carried out, student's responsibility for accurate record keeping, ethical responsibilities of research endeavors.
- Students undertaking research must have that research proposal endorsed by a **faculty advisor** and approved by the Director of Academics before the student can embark on research. Thereafter, research advisors(supervisors) are responsible for advising students and continuous tracking of progress. The student will track progress and share with the advisor based on the research plan outlined in the project proposal.

Attending conferences and meetings

- Funding resources, determination of submission of abstracts for presentation or publication, how will the decisions be made about who represents the research at conferences, protocols of representing Carnegie Mellon at conferences.

Respect and confidentiality

- Maintaining confidentiality of research projects and publications, respect of confidentiality among and between group members.

Communication

- Maintain open lines of communication, respond to one another in a timely fashion, address conflicts respectfully and seek guidance when needed, clearly define timelines and expectations.

6.4 Review/Redress of Academic Conflicts

Graduate students will find the Summary of [Graduate Student Appeal and Grievance Procedures](#) on the [Graduate Education Resource webpage](#). Generally, graduate students are expected to seek informal resolution of all concerns within the applicable department 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 information about the administration and academic policies of the program.

7 Master's Degree Requirements

7.1 Residency Requirements

It is essential to fulfill the [Government of Rwanda's Immigration](#) requirements.

The student visa application process for international students requires an original copy of a police clearance certificate or certificate of good conduct from the visa applicant's current country of residence.

As an international student at CMU-Africa, you must apply for a student visa within 15 days of arrival in Rwanda. Upon arriving in Rwanda, you will embark on the visa application through the [student visa application portal](#). After obtaining the visa, the student will proceed to obtain a residence card.

7.2 Registration Process

7.2.1 Overview

Upon successful matriculation to progress toward enrollment at CMU-Africa students are required to meet with their Faculty Advisor to create an academic plan for their master's degree program and register for courses. It is imperative for students to take the **initiative** to engage with their Academic Advisor and frequently review the coursework and other requirements for their master's degree program on the [Academics](#) CMU-Africa webpage.

7.2.2 Student Responsibility

It is the sole responsibility of the student to manage the academic progression of their program. Students are expected to ensure that they are taking the necessary prerequisites and courses to complete degree requirements on time. Students can add courses, drop courses, and select units for variable unit courses through [Student Information Online \(SIO\)](#). It is the students' responsibility to be aware of all academic deadlines, including the [add deadline](#), the [drop deadline](#), the [pass/fail deadline](#), and the [audit deadline](#). Academic deadline information can be found within [The HUB's Academic Calendar](#). For information on CMU-Africa deadlines refer to the CMU-Africa [2024-2025 Academic Calendar](#).

Students who are not progressing toward degree completion and are concerned they are unable to fulfill the required prerequisites and courses for the master's degree program should seek advice from their Faculty Advisor and guidance from the Academic Advisor.

Students are not permitted to register for two courses held at the same time and will cause a conflict with their class schedule. Registration may be permitted with **consent** from the course instructor. After instructor permission is granted the student must inform the Academic Advisor to be given access to register for the courses.

7.2.3 Student Information Online (SIO)

The [Student Information Online \(SIO\)](#) is the official platform students use to register for courses in [4 easy steps](#). Students can access the SIO system at [The HUB](#) with their Andrew ID and password. The [SIO](#) has a Course Planning Module that allows students to view and modify their semester class schedule prior to submitting their course registration in the system. It is mandatory for students to register for credit, non-credit and audited courses.

At the end of the first semester all students are assigned a time to register for the next semester. If the Student Account has a tuition balance and/or fees greater than \$0.00 students will not be permitted to register until the balance owed is paid in full.

7.3 Required Units for Degree Attainment

The duration of CMU-Africa master's degree programs are defined in the [curriculum](#) and each course or component is assigned a specific number of units.

The total number of units of a course or component indicates the average number of hours a student should *devote per week* for the course or component in a full semester and this includes *presence in class, course readings, assignments*. To earn a master's degree students must complete a specific number of units within the duration of a program below.

Degree Program	Units	Semesters
Master of Science Information Technology (MSIT)	144	3 to 4
Master of Science Engineering and Artificial Intelligence (MS EAI)	144	3 to 4
Master of Science Electrical and Computer Engineering (MS ECE)	97	2 to 3
Master of Science Advance Study in Electrical and Computer Engineering (MS ECE)	133	3 to 4

Full-time status students must enroll in at least **36 units each semester**. To complete the degree program required prerequisites and courses students may need to enroll in more than 36 units. The maximum number of units allowed in a semester is **48 units**. A typical graduate course is 12 units (i.e., 12 hours per week). There are full-semester courses that are 6 units. CMU also offers half-semester classes called "minis". The average number of hours per week devoted to a mini course should be twice the number of units assigned for that mini. The typical mini is 6 units (i.e., 12 hours per week for half a semester).

Once a student has exceeded the minimum required number of credits for their degree program by 24 units they are ineligible to register for courses and **must either graduate or leave** the university. Students at the end of their last semester for master's degree programs that have not satisfied graduation requirements will need to petition the Director of CMU-Africa to extend to complete coursework. Refer to [CMU-Africa Academics](#) for more information about degree programs.

Students are responsible for completing their registration each semester via their SIO portal. Students who are not enrolled **by the tenth day of class** will be withdrawn from the university.

This section outlines the degree requirements for the CMU- Africa master's programs below. CMU-Africa [course catalog](#) provides the list of courses with descriptions.

Degree Program
Master of Science in Information Technology (MSIT)
Master of Science in Engineering Artificial Intelligence (MS EAI)

[Master of Science in Electrical and Computer Engineering \(MS ECE\)](#)

[Master of Science in Electrical and Computer Engineering Advanced Study Program \(MS-AD in ECE\)](#)

7.3.1 Master of Science in Information Technology (MSIT)

The MSIT degree curriculum offers three different areas of focus that include the following: (1) Professional Track, (2) Research Track, and (3) Entrepreneurial Track. Each track has specific core courses, elective courses, and projects and an overview is shown below.

The Professional Track is designed for students interested in developing team project skills and becoming Information Technology (IT) professionals.

The Research Track is designed for students interested in pursuing a research career or a Ph.D. after their MSIT.

The Entrepreneurial Track is for students who want to develop their own entrepreneurship projects and technology business skills.

A revised MSIT curriculum has been recently approved and below are a few things for students to note:

1. The existing curriculum(before revision) is being referred to as the Old MSIT curriculum
2. The revised curriculum is being referred to as the New MIST curriculum.
3. The MSIT Class of 2025 should refer to the Old MSIT curriculum.
4. The MIST Class of 2026 should refer to both the Old and New MSIT curriculum. Students in the MSIT class of 2026 have the chance to choose between the two curricula. However, students will not be allowed to switch between curriculums once the decision has been taken and noted by the Academic Advisor. The chosen curriculum will be considered until graduation.

7.3.1.1 Old MSIT Curriculum:

a) Structure

To satisfy graduation requirements, students must accrue 144 units, but no more than 168 units. In addition, a student must earn at least a C in each course counting toward the degree. Moreover, a student must achieve a minimum cumulative quality point average (CQPA) of 3.0, which is an average of a B grade, to graduate. The MSIT program is arranged into three tracks as mentioned earlier and follows the breakdown given below.

For the **Professional Track**, the 144 units include 60 units of core courses, 60 units of elective courses, which can include up to 12 units of undergraduate credit (courses with numbers between XX-300 and XX-599), and up to 15 units of MSIT Independent Study (04-980), 24 units of MSIT Practicum (04-900), seminars, and a three-month master's internship.

For the **Research Track**, the 144 units include 60 units of core courses, 48 units of elective courses, which can include up to 12 units of undergraduate credit (courses with numbers less than XX-600), 36 units of Engineering Research Project (04-990), seminars, and a three-month master's internship. 6 units of the Research Methods in Engineering (04-701) course can be used to satisfy part of the requirements for the Engineering Research Project.

For the **Entrepreneurship Track**, the 144 include 60 units of core courses, 60 units of elective courses, which can include up to 12 units of undergraduate credit (courses with numbers less than XX-600), 24 units of an entrepreneurship project, seminars, and a three-month master's internship.

Degree Components	Professional	Research	Entrepreneurship
Core Courses	60 Units	60 Units	60 Units
Elective Courses	60 Units	48 Units	60 Units
Practicum Project	24 Units		
Research Project		36 Units	
Entrepreneurship Project			24 Units
Mandatory 3-Month Internship	0 Units	0 Units	0 Units
Total	144 Units	144 Units	144 Units

b) Core Courses

All students are required to take 60 units of MSIT core courses outlined in the curriculum. It is mandatory for students to select 12 units from each of the five core areas for a total of 60 units. The five core areas listed below and refer to CMU-Africa [course catalog](#) list of

1. IT Entrepreneurship
2. Software
3. Applied Machine Learning,
4. Secure IT Networks
5. Leadership and Professional Skills

Current courses that meet the core requirements are listed in the table below

IT Entrepreneurship		
Course Name	Course Number	Course Units
Strategic Uses of Digital Information and Enterprise	04-611	12
ICT Business Economics and Finance	04-613	12
Foundations of Entrepreneurship	04-800	12
Market Planning for High Tech Innovation	04-612	12
Tech Startups: Tools and Techniques	04-616	12

Software		
Course Name	Course Number	Course Units
Data Structures and Algorithms for Engineers	04-630	12
Introduction to Systems Software Engineering	04-800-I	12
Advanced Database Systems	04-631	12
DevOps: Software Development and IT Operations	04-632	12
Design Patterns for Smartphone Development	18-641	12
Foundations of Software Engineering	18-652	12
Software Architecture and Design	04-634	12
Model-driven Software Engineering	04-801-O4	6
Embedded Systems Development	04-633	12
Applied Machine Learning		
Course Name	Course Number	Course Units
Data, Inference, and Applied Machine Learning	18-785	12
Introduction to Deep Learning	11-785	12
Introduction to Probabilistic Graphical Models	04-654	12
Artificial Intelligence for Engineers	04-655	12
Recommender Systems	04-800-B	12
Deep Learning Systems: Hardware, Compilers, and Algorithms	04-801-A1	6
Machine Learning for Earth Observation	04-800-AB	12
Social Network Analysis	04-800-AC	12
Secure IT Network		
Course Name	Course Name	Course Name
Introduction of Information Security	18-631	12
Fundamental of Telecommunications Computer Networks	04-641	12
Internet of Things (IoT)	04-645	12
Vulnerability Assessment and Testing	04-721	12

Network Security	18-731	12
Networking Lab	18-859	12
Cyber Defense	04-623	12
Intrusion Detection Systems	04-625	12
Information Systems Audit and Standards	04-624	12
Applied Cryptography	04-622	6
Leadership and Professional Skills		
Course Name	Course Number	Course Units
ICT in Africa Seminar (take in first year)	04-601	6
ICT Entrepreneurship Seminar (take in first year)	04-603	6
Global Leadership Seminar (take in second year)	04-604	6
ICT Professional Development Seminar (take in second year)	04-605	6

c) Elective Courses

Students can select 60 units of elective courses in the MSIT program. Online elective courses cannot exceed 12 units of the 60 units of elective courses. Students can submit a request for an exception to the Director of Academics.

d) Sample Timeline

The MSIT degree is designed for students to complete core courses, elective course courses, and projects in three or four semesters plus a three-month internship. Students can complete the program in three semesters by taking one additional 12-unit course in two of the three semesters. A standard four-semester schedule to earn the required 144 units for the MSIT master's degree program is outlined below.

Semester 1 (late Aug - Dec)	
Two core courses	24 units
One elective course	12 units
Semester 2 (Jan - mid-May)	
Two core courses	24 units
One elective course	12 units
A first year seminar	6 units

MSIT Internship (mid-May – mid-Aug)	
Semester 3 (Aug - Dec)	
Master's Practicum	24 units
One core course	12 units
A second year seminar	6 units
Semester 4 (Jan - May)	
Two elective courses	24 units
Total Units	144 units

7.3.1.2 New MSIT Curriculum:

a) Structure

To satisfy graduation requirements, students must accrue 144 units, but no more than 168. In addition, a student must earn at least a C in each course counting toward the degree. Moreover, a student must achieve a minimum cumulative quality point average (CQPA) of 3.0 , which is an average of a B grade, to graduate. The MSIT program is arranged into three tracks as mentioned earlier and follows the breakdown given below.

For the **Professional Track**, the 144 units include 72 units of core courses, 36 units of domain courses, 12 units of elective courses, 24 units of MSIT Practicum (04-900), and a three-month master's internship. Domain or elective courses can include up to 12 units of undergraduate credit (courses with numbers between XX-300 and XX-599), and up to 15 units of MSIT Independent Study (04-980).

For the **Research Track**, the 144 units include 72 units of core courses, 36 units of domain courses, 36 units of Engineering Research Project (04-990), and a three-month master's internship. Domain courses can include up to 12 units of undergraduate credit (courses with numbers less than XX-600). 6 units of the Research Methods in Engineering (04-701) course can be used to satisfy part of the requirements for the Engineering Research Project.

For the **Entrepreneurship Track**, the 144 units include 72 units of core courses, 36 units of domain courses, 12 units of elective courses, 24 units of an entrepreneurship project, and a three-month master's internship. Domain and elective courses can include up to 12 units of undergraduate credit (courses with numbers less than XX-600).

Degree Components	Professional	Research	Entrepreneurship
Core Courses	72 Units	72 Units	72 Units
Domain Courses	36 Units	36 Units	36 Units

Elective Courses	12 Units	0 Units	12 Units
Practicum Project	24 Units		
Research Project		36 Units	
Entrepreneurship Project			24 Units
Mandatory 3-Month Internship	0 Units	0 Units	0 Units
Total	144 Units	144 Units	144 Units

b) Core Courses

All students are required to take 72 units of MSIT core courses and 36 units of domain courses as outlined in the curriculum. It is mandatory for students to select 12 units from each of the six core areas for a total of 72 units. The six core areas are listed below

1. Software Engineering
2. Applied Machine Learning
3. Cybersecurity
4. Network Technologies
5. IT Entrepreneurship
6. Leadership and Professional Skills.

Current courses that meet the core requirements are listed in the table below

Software Engineering		
Course Name	Course Number	Course Units
Data Structures and Algorithms for Engineers	04-630	12
Applied Machine Learning		
Data, Inference, and Applied Machine Learning	18-785	12
Artificial Intelligence for Engineers	04-655	12
Introduction to Machine Learning for Engineers	18-661	12

Cybersecurity		
Introduction of Information Security	18-631	12
Network Technologies		
Fundamental of Telecommunications Computer Networks	04-641	12
Networking Lab	18-859	12
IT Entrepreneurship		
ICT Business Economics and Finance	04-613	12
Foundations of Entrepreneurship	04-800-E	12
Leadership and Professional Skills		
ICT in Africa Seminar (take in first year)	04-601	6
ICT Entrepreneurship Seminar (take in first year)	04-603	6
ICT Professional Development Seminar (take in second year)	04-605	6

c) Domain Courses

Every student is required to take at least 36 units from the list of domain courses, shown in the table below 3. The domain courses are reviewed and updated by CMU-Africa faculty from time to time. Note that courses in the table of core courses that are not selected are automatically available for selection in the domain structure.

Software Engineering		
Course Name	Course Number	Course Units
Foundations of Software Engineering	18-652	12
Design Patterns for Smartphone Development	18-641	12
Advanced Database Systems	04-631	12
DevOps: Software Development and IT Operations	04-632	12

Software Architecture and Design	04-634	12
Software Accessibility	04-636	12
Embedded Systems Development	04-633	12
Model-driven Software Engineering	04-801-O4	12
Introduction to Systems Software Engineering	04-800-I	12
Applied Machine Learning		
Introduction to Deep Learning	11-785	12
Machine Learning for Earth Observation	04-800-AB	12
Mobile Big Data Analytics and Management	04-637	12
Data Analytics	18-787-K3	6
Machine Learning for Signal Processing	18-797	12
Introduction to Probabilistic Graphical Model	04-654	12
Recommender Systems	04-800-B	12
Cybersecurity		
Ethical Hacking	04-721	12
Network Security	18-731	12
Cyber Defense	04-623	12
Intrusion Detection Systems	04-625	12
Applied Cryptography	04-622	12
Cybersecurity Operations Project	04-800 AH	12
Information Systems Audit & Standards	04-624	12
Network Technologies		

Internet of Things	04-645	12
Wireless Communications and Mobile Networks	18-759	12
Cloud Infrastructure and Computing	04-800J	12
Cloud Computing	15-619	12
Applied Smart Grid Telecoms	18-867	6

d) Elective Courses

Students can select units of elective courses to fulfill their graduation requirements. The CMU-Africa [course catalog](#) provides the full list of all courses with descriptions.

e) Sample Timeline

The MSIT degree is designed for students to complete core courses, domain and elective courses, and project courses in three or four semesters plus a three-month internship. Students can complete the program in three semesters by taking one additional 12-unit course in two of the three semesters. A standard four-semester schedule to earn the required 144 units for the MSIT master's degree program is outlined in the table below.

Semester 1 (late Aug - Dec)	
Two core courses	24 units
One domain course	12 units
Semester 2 (Jan - mid-May)	
Two core courses	24 units
One domain course	12 units
A first-year seminar	6 units
MSIT Internship (mid-May - mid-Aug)	
Semester 3 (Aug - Dec)	
MSIT Practicum project/ MSIT Entrepreneurship project	24 units
One core course	12 units

A second-year seminar	6 units
Semester 4 (Jan - May)	
Two courses (one domain and one elective course)	24 units
Total Units	144 units

7.3.1.3 MSIT Internships and Projects

d) MSIT Internship

MSIT students must complete a 10–12-week full-time internship to fulfill a degree requirement. Under extraordinary circumstances, the internship requirement may be waived with permission from the CMU-Africa Director. The purpose of the internship is for students to work as short-term employees at an organization to gain technical and professional experience. Students are immersed in a business environment and given an opportunity to perform real IT and engineering work for the host organization.

Students must be employed under contract by the organization during their internship. The expectation for the organization that offers the internship will compensate students with stipend that is paid monthly. The expectation for students is to deliver the results as defined in the temporary employment contract.

e) Master's Practicum Project for Professional Track

The Practicum provides an opportunity to consolidate and apply the skills and knowledge developed in previous coursework in a team-based effort to solve 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 project management skills, including the specialized knowledge and skills needed to solve a real problem. Team members must learn to work effectively with clients, quickly understand their problem, negotiate deliverables and then select, adapt and apply the right amount of process and documentation to meet clients' needs and effectively manage the project.

f) Master's Entrepreneurship Project for Entrepreneurship Track

The Entrepreneurship Project is an opportunity for students to build and practice skills in developing information technology ideas that create value for a selected set of customers. Students work in small teams on a concrete project to bridge the gap between entrepreneurial theory and practice. This project combines both independent team study and working with technical and professional mentors to apply concepts in the creation of a new information technology venture. Only *a small number of students* are expected to be allowed into the entrepreneurship project track, based on a selective process that assesses the entrepreneurship project that the student team proposes.

g) Master's Research Project for Research Track

The Research Project is conducted under the supervision of a faculty research adviser who first approves the proposed research project based on the student's skills and mutual research interests. 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 submission of a scholarly paper.

h) Engineering Independent Study

With the approval and supervision of a faculty member students perform an [Independent Study](#) that focuses on a topic that is pertinent to their interest of study. It is mandatory for the student to obtain approval from the faculty member that will supervise the topic and plan of study. If approved the independent study can fulfill 3 to 15 units toward the MSIT degree. The Independent Study [form](#) must be signed by the student and faculty member. The Independent Study option cannot be used to meet the requirements for the MSIT Research Track.

7.3.2 *Master of Science in Engineering and Artificial Intelligence (MS EAI)*

Engineering Artificial Intelligence (EAI) is motivated by the explosive growth in applications of Artificial Intelligence (AI). There is a need to apply not just the mathematical and scientific principles of the AI discipline, but also to embed these in engineering principles of design, processes, systems, manufacture, and construction. As a graduate engineering degree, EAI intersects with specific engineering disciplines, but also cuts across disciplines to address important problems in areas such as transportation, building systems, manufacturing, energy, agriculture, security, health, and climate. While providing a solid foundation in EAI, the degree also provides students with an opportunity to focus on any of these cross-cutting areas, including a significant engineering application project.

a) MS EAI Core Courses

All students are required to take 72 units of MS EAI core course. Students must select 12 units from each of the six categories shown in the table below that includes a list of current courses that meet the core requirements.

Mathematical Fundamentals		
Course Name	Course Number	Course Units
Applied Stochastic Processes	18-751	12
Advanced Probability & Statistics for Engineers	18-665	12
Mathematical Foundations of Machine Learning	04-650	12
Introduction to Artificial Intelligence		
Artificial Intelligence for Engineers	04-655	12
Principles and Engineering Applications of AI	18-662	12

Introduction to Machine Learning		
Introduction to Machine Learning for Engineers	18-661	12
Data Analytics		
Data, Inference, and Applied Machine Learning	18-785	12
Data Analytics	18-787	6
Big Data Science	18-788	6
Advanced Artificial Intelligence and Machine Learning		
Introduction to Probabilistic Graphical Models	04-654	12
Introduction to Deep Learning	11-785	12
Introduction to Deep Learning	18-786	12
Machine Learning for Signal Processing	18-797	12
Machine Learning for Signal Processing	11-755	12
Engineering Artificial Intelligence Systems Designs		
AI System Design	04-652	12

b) MS EAI Engineering Electives

Elective Courses will allow students to gain a focus relative to their engineering discipline. Students take 48 units in consultation with their advisor. This is an opportunity to focus on AI, machine learning, or data processing and storage courses. Alternatively, students can build on their undergraduate engineering to take advanced courses in specific engineering domains such as energy systems, cyber security, or building systems to develop the engineering context in which to embed their AI expertise.

Students work with their faculty advisors to select College of Engineering courses with numbers that begin with the following codes:

Department Course Code	Engineering Program
42	Biomedical Engineering
04	CMU-Africa
06	Chemical Engineering

12	Civil and Environmental Engineering
39	CIT
18	Electrical and Computer Engineering
19	Engineering and Public Policy
14	Information Networking Institute
27	Material Science and Engineering
24	Mechanical Engineering

Only technical and non-project courses can be used for this requirement. The following courses cannot be counted toward the degree requirements:

Course Number	Course Name
04-601	ICT in Africa Seminar
04-603	ICT Entrepreneurship Seminar
04-604	Global Leadership
04-606	Academic Skills for Engineers I
04-607	Academic Skills for Engineers II
04-608	Advanced Academic Skills for Engineers
04-609	Advanced Academic Skills for Engineers II
04-980	Engineering Independent Study
04-990	Engineering Research Project
18-980	M.S. Graduate Project

All courses must be at graduate level 600 and above. Of the 36 units of domain specialization electives, at least 24 must meet the above requirements. Up to 12 units can either be undergrad courses 300 and above in the College of Engineering or be 600 and above courses from outside the College of Engineering as approved by your Academic Advisor.

Engineering Electives 48 Units

It is mandatory that 36 units be 600 level or above within the College of Engineering and from the following departments:

Course Numbers	Departments
42-xxx	Biomedical Engineering
04-xxx	CMU-Africa

06-xxx	Chemical Engineering
39-xxx	CIT
12-xxx	Civil and Environmental Engineering
18-xxx	Electrical and Computer Engineering
19-xxx	Engineering and Public Policy
14-xxx	Information Networking Institute
27-xxx	Material Science and Engineering
24-xxx	Mechanical Engineering

Exceptions

The courses below may not be counted toward Engineering Elective Coursework.

Course Numbers	Departments
04-601	CMU-Africa
04-603	
04-604	
04-605	
04-606	
04-606	
04-607	
04-608	
04-609	
04-900	
04-910	
18-701	Electrical and Computer Engineering
18-702	
24-792	Mechanical Engineering
18-701	Electrical and Computer Engineering
18-702	

It is a requirement that 12 units be from either of the following areas:

- i. College of Engineering Departments: 300 level or higher
- ii. Any CMU department with the approval of the Academic Advisor: 600 level or higher

c) MS EAI Applied Engineering Project

Students place applicable learning into practice through a **24-unit project**. The project starts in the first semester through a seminar class where students study different engineering applications of AI and Machine Learning to opportunities in Africa. In subsequent semesters they develop their **system design as well** as their project plan. In their second year, they implement and test their solution for a Capstone project under the guidance of faculty who also grades the Capstone project.

Student projects are developed over several semesters starting in the first semester and below are courses that contribute to EAI Applied Engineering Project.

Project Course Name	Course Number	Course Units
Applications of AI in Africa	04-651	6
EAI Project Methods	04-653	6
EAI Capstone	04-950	12

7.3.3 Master of Science in Electrical and Computer Engineering (MS ECE)

[Master of Science in Electrical and Computer Engineering](#) (MS ECE) comprises a broad and diverse set of areas and permeates nearly all areas of application of importance in society today. ECE ranges from nanotechnology to large scale systems and impacts areas such as communications, computing and networking, energy, cyber-physical systems, biotechnology, robotics, computer vision, information storage and security, data analytics, distributed systems, and privacy. Faculty and students in ECE 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.

The MS ECE degree at CMU-Africa is one and the same degree as is offered on the main campus in Pittsburgh. The Pittsburgh campus manages the MS ECE degree and graduation requirements. For more information about the MS ECE program, including the course requirements and curriculum refer to ECE [website](#).

7.3.4 Master of Science in ECE Advanced Degree Program (MS-AD in ECE)

The [Master of Science in ECE Advanced Degree Program](#) is a three or four semester program and the duration is from 16 to 20 months that comprises 133 units of graduate coursework. The MS-AD in ECE program allows students admitted into the MS ECE program to take additional courses or execute project work. The extra courses allow students to delve into greater depth and specialization beyond the standard MS ECE program. Students also have the option to do an extended research project to help prepare them for Ph.D. studies and a potential career in research.

The MS ECE degree comprises 133 units and this includes *coursework* and *project options*. For more information about the MS ECE program, including the course requirements and curriculum refer to [ECE website](#).

Course Option Requirements	
ECE Core Courses	60 Units
CIT Elective Courses	36 Units
General Technical Elective Courses	36 Units
Introduction to Graduate Studies	1 Unit
Total	133 Units

A maximum of 12 units of undergraduate coursework at the 300-level or higher can qualify toward the 133 units of core or elective ECE degree requirements. Qualifying coursework must be offered by the same department as either an approved core or elective course.

Project Option Requirements	
ECE Core Courses	48 Units
CIT Elective Courses	24 Units
General Technical Elective Courses	24 Units
Graduate Project Coursework	36 Units
Introduction to Graduate Studies	1 Unit
Total	133 Units

A maximum of 12 units of undergraduate coursework at the 300-level or higher can qualify to be substituted toward the 133 units of core or elective requirements. Qualifying coursework must be offered by the same department as either an approved core or elective course.

7.4 Department Policy for Courses Outside the College of Engineering

Up to 12 units can either be undergrad courses 300 and above in the College of Engineering or be 600 and above courses from outside the College of Engineering as approved by your Academic Advisor.

7.5 Teaching Requirements/Opportunities

a) Teaching Assistant Assignments

Teaching Assistants are a vital part of successful CMU-Africa course delivery. All students will receive an email each semester when applications open for the upcoming semester, typically around the date the Schedule of Classes is published. Students are encouraged to communicate with the faculty of any course(s) they are interested in supporting, who can discuss the course expectations and staffing needs. However, please note that the application and hiring process is entirely managed through the CMU-Africa [Recruitment Portal](#).

b) Teaching Assistant Eligibility Requirements

A student is considered for a teaching assistantship if they:

- Are a current full-time student; enrolled in at least 36 units of courses
- Express interest in a TA position by completing the application via the Recruitment Portal.
- Will not be on **academic probation** during the semester they are a TA.
- Have no past or current academic integrity infractions.
- Have taken and passed the course they are applying to with grade B and higher (except for new courses) or are otherwise well-qualified.
- Do not have another active contract with CMU (research assistant, IT, admin support, etc.) during the semester.
- Will not be on a Leave of Absence during the semester.
- Are physically located in Kigali and able to come to campus for all course meetings, recitations, labs, office hours, etc. CMU-Africa students in Pittsburgh are not permitted to TA CMU-Africa courses.

c) Teaching Assistant Training Workshops

CMU-Africa is committed to providing a high level of teaching excellence and ensuring a positive student learning experience. When serving as Teaching Assistants for CMU-Africa courses, students are extensions of the department charged with representing these values. Students are therefore required to complete training during the first semester in which they are hired to work as a TA.

The TA training is not part of any degree requirements but is necessary to serve as a TA. Once a student has fulfilled the training requirement, participation is not required again. If a student has served as a TA previously but has never completed the training, it will be required before beginning the next TA assignment. Hired Teaching Assistants will be contacted about the training requirements prior to the start of classes. Students are expected to plan their time accordingly. TA contracts can be terminated for failing to attend prescribed TA training.

7.6 Internship Requirements and Opportunities

The CMU-Africa Corporate Internship Program is an outstanding initiative that offers our students the chance to engage with professionals from diverse organizations and gain valuable practical work experience. These corporate internship placements are a key component of the CMU-Africa program and provide a significant learning experience for our master's students.

Internships typically occur during the summer term between the first and second year of studies and last for three months.

Participation in the internship program is mandatory for students in the MSIT program. MSIT students must complete a 10–12-week full-time internship as part of their degree requirements with the expectation of working approximately 40 hours per week.

To support our students financially, CMU-Africa require all internship sponsors to provide compensation to the interns. Each December, the Career Services Officer reaches out to the industry partners and invite them to submit internship offers or placement opportunities to be advertised to students via the [Corporate Internship Portal](#).

The portal enables employers to advertise their internship opportunities to students. Enrolled students can access the portal using their Andrew email.

Employers are guided through a form to provide details about the internship project. It must be approved by a faculty representative to ensure the opportunity aligns with CMU's academic requirements before it is advertised.

Projects must be challenging, relevant to our students' career aspirations, and well-developed to facilitate student growth and the acquisition of new experiences.

Timeline for internship recruitment is typically as follows:

- December 20XX:
 - Send request to IT to initiate the process of updating the Internship portal (Corporate, Co-Funded)
 - Send IT the new list of students to update on the portal
- January 20XX: Portal onboarding for new students and partners
 - Receive new links for industry/faculty and students – access to the portal – issues linked to IT Support email
 - Companies can start submitting internship project proposals on the Corporate Internship Portal
- Mid- February 20XX:
 - Companies are invited to attend a Career Fair to meet and interview first-year students/internship candidates
- March- April 20XX:
 - Companies receive applications from students and schedule interviews
- April 30, 20XX:
 - Deadline for companies to select their final interns
- April 15- May 15, 20XX:
 - Onboarding of interns, e.g. travel visa requests, work permit applications, etc.
- May 18- June 1, 20XX:
 - Students start their internship assignments at host companies
- June 30 20XX:
 - Close all offers on the portal

At the end of the internship cycle, students are required to submit an internship report. This can be in the form of interim experience, presentations in the following semester regarding the experience, assessments of their experience as it relates to their course of study, etc.

Resources to Explore **Potential Internships and full time opportunities:**

- [CMU-Africa Corporate Internship Portal](#)

- [Handshake](#)
- [Career Services opportunities portal](#)
- [Career and Professional Development Center](#)

8 Department Policies & Protocols

8.1 Petition Procedures

Once a student has exceeded the minimum required number of credits for their degree program by 24 units they are ineligible to register for courses and must either graduate or leave the university. Students at the end of their last semester for master's degree program that have not satisfied graduation requirements will need to petition the Director of CMU-Africa to extend to complete coursework. Refer to [CMU-Africa Academics](#) for more information about degree programs.

8.2 Department Policy for Withdrawing from a Course

After the deadline to drop, students may withdraw from a course by accessing by the end of the 10th week of class as noted in the academic calendar. After the deadline to drop, a W (withdrawal) grade is assigned and appears on the student's academic record.

Refer to the [CMU-Africa academic calendar](#) for guidance on add/drop, withdraw, pass/no pass and [voucher process request](#).

8.3 Requirements for additional classes

8.3.1 Academic Skills Courses

All students in MSIT and MSEAI with a Duolingo English Test (DET) score below 120, an IELTS score below 6.5, or a TOEFL score below 93 are strongly encouraged to complete 12 additional units of academic skills courses. These units are in addition to the required 144 units. These students will take Academic Skills for Engineers I in the fall semester and Academic Skills for Engineers II in the spring semester. The Advanced Academic Skills for Engineers courses are optional and may be taken at the student's discretion. The academic skills courses are listed in the table below.

Academic Skills Course Name	Course Number	Course Units	Semester Offered
Academic Skills for Engineers I	04-606	6	Fall
Academic Skills for Engineers II	04-607	6	Spring
Advanced Academic Skills for Engineers I	04-608	6	Fall
Advanced Academic Skills for Engineers II	04-609	6	Spring

8.4 "Grandfather" Policy

The "Grandfather" Policy will apply to the MSIT program during the 2024/2025 and 2025/2026 academic years. Students admitted for Fall 2024 can follow either the old or the new MSIT curriculum. However, students must choose the curriculum to follow during their first semester. Students are expected to meet the graduation requirements outlined in the selected curriculum - either the old or the new MSIT curriculum.

8.5 Variations to University Policies and Protocols

8.5.1 *Change of Degree Program*

Students are expected to graduate from the degree program for which they were admitted. In extraordinary circumstances, students may switch their degree program between MS IT and MS EAI. It is not possible to change between MS IT/MS EAI and MS ECE **without withdrawing** from the current program and following the regular application process for the new program. A change from MS ECE to MS-AD in ECE or vice versa is academically straightforward but may have financial assistance implications. Contact your [Academic Advisor](#) for additional information.

- Students are expected to first go through a successful 1st semester before they can apply for a change of degree program
- Get the Petition to switch degree program from your Academic Advisor
- Fill it out, sign, Your Faculty advisor signs, Return to Academic Advisor
- It is advised to start the process by the end of October to give time to the administration to make a decision before Spring Semester course registration week in their first Fall semester
- The deadline for switching degree program is the 1st week of your 2nd Semester.

8.5.2 *Post Matriculation Guidelines*

a) Return of University Property

Students must return all borrowed CMU-Africa material such as laptops, phones/tablets, books, or any other Carnegie Mellon University property. A signed clearance form is required prior to their departure from the program. The clearance form will be sent to students upon completing the program and before graduation day.

b) Career Services Graduate Destination Survey

Every Fall and Spring semester the Career Services Office asks CMU-Africa recent graduates about their post-graduation plans of whether they plan to work in the industry, pursue a PhD program, or explore other career or research interests. The short graduate destination survey will take less than five minutes to complete, and the results are valuable for future graduates to learn about “what’s next” after graduation and your feedback will help the Career Services Office to plan to meet student needs in the future.

9 Grading & Evaluation

9.1 Grading Scale/System

CMU-Africa adheres to the CIT letter grade scale. The letter grade scale is as follows: 'A', 'A-', 'B+', 'B', 'B-', 'C+', 'C', 'C-', 'D+', 'D', and 'R'. CIT students will not receive an 'A+' grade on their transcript even if a course is taken at another college that posts 'A+' on the student's transcript. Grades that are lower than a C- are considered a "No Pass" at CMU-Africa in the CIT and will not count toward fulfilling master's degree requirements.

9.2 Department Policy on Grades for Retaking a Course

Students who do not earn a passing grade for a course may take a different course that will fulfill the degree requirement for the program. A Student may retake a course if the grade earned did not meet the minimum grade requirement.

All grades are recorded on the student [academic transcript](#) and factored into the cumulative Quality Point Average (CQPA) to fulfill the master's degree program requirements.

9.3 Department Policy on Pass/Fail, Satisfactory/Unsatisfactory

All students are eligible to take a course with a Pass/Fail option. Students will be charged for the course and billing for tuition will be posted on the [Student Account](#). For part-time students, the tuition charged is based on the per-unit tuition rate for the course

9.4 Department Policy for Incompletes

Carnegie Mellon students are expected to complete a course during the academic semester in which the course was taken. However, if the instructor agrees, a grade of I (incomplete) may be given when a student, for reasons beyond his or her control, has been unable to complete the work of a course, but the work completed to date is of passing quality and the grade of incomplete provides no undue advantage to that student over other students.

In awarding an "I" grade, an instructor must specify the requirements for completing the work and designate a default letter grade where no further work is submitted. Students must complete the required course work no later than the end of the following academic semester, or sooner if required by prior agreement. The instructor must record the permanent grade by the last day of the examination period of that following semester, or Enrollment Services will administratively assign the default grade.

9.5 Independent Study

With the approval and supervision of a faculty member students perform an Independent Study that focuses on a topic that is pertinent to their interest of study. It is mandatory for the student to obtain approval from the faculty member that will supervise the topic and plan of study. If approved the independent study can fulfill **3 to 15 units** toward the MS IT / MSEAI degree.

The [Independent Study form](#) must be signed by the student and faculty member. The Independent Study option *cannot* be used to meet the requirements for the MS IT Research Track, MSEAI Applied Engineering Project or MS ECE Graduate Project.

9.6 GPA Requirements and QPA Requirements for Graduation

9.6.1 Quality Point Average

For the Academic Advisor to certify students for graduation the student must have a Cumulative Quality Point Average ([CQPA](#)) of at least 3.0(a mean grade of B) in required courses earned for their master's degree program. Coursework or graduate project units with a grade lower than 'C' will not be considered to fulfill course requirements for their master's degree program. Courses with a grade lower than "C" are calculated into the student's cumulative QPA.

9.7 Satisfactory Academic Standing

Academic Probation

Students with a semester QPA below a 3.0 will be placed on academic probation. The Academic Advisor will officially inform the student of their academic probation by letter. During the academic probation period it is mandatory for the student to meet with the Academic Advisor and Faculty advisor to adhere to the recommendations to improve their academic performance in subsequent semesters.

Once a student's semester QPA is above 3.0 he/she is automatically removed from academic probation. If a student has a semester QPA lower than 3.0 at the end of two consecutive full semesters he/she may be permanently dismissed from the master's program at the discretion of the Director of CMU-Africa. Students in this circumstance will have an opportunity to appeal the dismissal and should refer to the [Graduate Student Appeal and Grievance Procedures](#) for guidance.

Student Suspension/Required Withdrawal Policy

All students should refer to the [Student Suspension/Required Withdrawal](#) policy to become familiar with the three types of suspensions describe below.

- a) **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](#)).
- b) **Disciplinary Suspension** is the result of serious personal misconduct and is imposed by the [Office of Student Affairs](#) and for more information refer to [The Word/Student Handbook](#).
- c) **Administrative Suspension** is the result of failure to meet university financial obligations or failure to comply with local health regulations and is imposed by Enrollment Services. For more information refer to the [Student Accounts Receivable Collection Policy and Procedures](#) for financial obligations.

Students that are on suspension may not:

- register for courses

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

A student with multiple academic integrity violations may result in dismissal from the master's degree program. Students have the right to [appeal an academic integrity decision](#).

Disciplinary Probation

Students who commit an academic integrity violation are placed on disciplinary probation within the department for the remainder of their academic program. While on disciplinary probation, students are allowed to continue with the program and are required to meet with the Academic Advisor.

Academic Disciplinary Actions

The procedures and penalties described in the University's [Academic Disciplinary Actions](#) are applied when there are academic integrity violations by graduate students. These procedures outline the process for investigating, reporting, and adjudicating violations of the University Policy on Academic Integrity. The procedures also outline the appeal process.

9.8 Returning to Carnegie Mellon

When a student plans to return to CMU after a leave of absence, he/she must complete the Petition for Return from Leave of Absence form at least one month prior to the start of the semester. We recommend doing so prior to the registration period for the upcoming semester (for Fall, April and for Spring, November). The student must also meet any conditions that were set by the program, the department, or the university at the time of leave was granted. Further information about the Carnegie Mellon University policy on student return is available at the following link: <https://www.cmu.edu/policies/student-and-student-life/return-student.html>

Returning from Suspension:

To return from a suspension, a student must have the following approval:

- a) Academic Suspension — Director, CMU-Africa
- b) Disciplinary Suspension — Director of Enrollment Management and Student Success;
- c) Administrative Suspension — Director of Enrollment Management and Student Success.

Based on the [Summary of Graduate Student Appeal and Grievance Procedures](#), students can appeal any/all of these decisions.

10 Funding & Financial Support

10.1 Statement of Department Financial Support

CMU-Africa Financial Aid has a variety of scholarships and fellowships that provide financial support for graduate students with an exceptional academic record and demonstrated

leadership potential. The Financial Aid Committee will determine the amount of tuition aid and will select awardees in accordance with university policies and procedures. Please contact the [Financial Aid Committee](#) for more information.

10.2 Tuition sponsorship

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

10.3 Stipend

New students who receive stipend through CMU-Africa will be required to complete the onboarding process on Workday by July 31 including their bank details to be able to start receiving their first payment at the end of August.

The stipend is paid to enrolled students in Rwandan francs from August to May. This says only in the Fall and/or Spring Semesters.

The stipend is paid monthly into a designated local bank account held in the Republic of Rwanda only.

10.4 Department Fees

CMU-Africa only charges the tuition fee and does not the student activity, technology or transportation fee. You can visit the [Tuition page](#) for more details.

Cost of attendance	Tuition for academic year 2024-2025
African students	\$16,000
International students	\$57,435

Estimated annual cost of living	Low range	High range
Housing	\$1,800	\$3,000
Food	\$1,200	\$1,500

Transportation	\$180	\$360
Internet connectivity	\$120	\$300
Miscellaneous expenses	\$900	\$1,350
International student visa fee	\$20	\$20
Total for estimated living expenses	\$4,220	\$6,530

Resources provided:

- Laptop
- Textbooks
- Technology fee
- Health insurance
- Campus shuttle service
- Student life activities

10.5 Travel/Conference and Research Funding

CMU Africa offers a targeted discretionary fund to support various research activities. The available supports are as follows:

Student Summer Stipend Support

CMU Africa provides a summer stipend for one **current student per faculty member** to work on a research or education project. This support is typically available during the internship period.

Student Conference Travel

Each student can receive up to \$3,500 to cover costs associated with attending and presenting research results at one professional conference during their academic program. These funds can be used for conference registration, airfare, ground transportation, and other expenses in accordance with the CMU business travel policy. The funds are available for up to one year post-graduation.

Application Process for Funding

Before Submitting Your Paper to a Conference

1. **Meeting with Faculty Supervisor:** Arrange a meeting with the faculty member who supervised your research project. During this meeting, have your paper reviewed and receive guidance on academic standards and norms.
2. **Conference Information:** Provide all relevant information about the conference and seek advice on its appropriateness as a venue for your research.

After the Paper Has Been Accepted

1. **Contact for Support:**

- Students: Email Mika Inamahoro to request travel support.

- Alumni: Email Esther Bugaiga to request travel support.
2. ***Approval Email:*** Request an approval email from your faculty supervisor. This email should confirm:
- The conference is an appropriate and reputable venue for the research.
 - The applicant will be presenting the paper.
 - The faculty supervisor is a co-author on the paper.
 - The participation will be valuable for both the applicant and CMU relative to the cost of attending.
3. ***Complete the Google Form:***
- After contacting Mika Inamahoro (for students) or Esther Bugaiga (for alumni), you will receive a link to a Google form.
 - Fill out the form thoroughly, including a detailed breakdown of the estimated expenses.
 - Upload the approval email from your faculty supervisor.
 - Upload your research paper.
 - Ensure all information is accurate and complete before submitting the form for review.

10.6 Additional Sources of Internal & External Financial Support

- All CMU-Africa students are eligible for need-based financial aid. Many students are awarded a financial package that covers a substantial fraction of the cost of attendance.
- The generous support from the Government of Rwanda and the Mastercard Foundation enables CMU-Africa to offer comprehensive, need-based financial aid designed for students from diverse socioeconomic backgrounds regardless of financial circumstance to attend our institution and successfully complete [a master of science program](#).
- CMU-Africa through various sponsorship programs also offer different scholarships ranging from partial to full tuition coverage.
- Part time jobs are also available at CMU-Africa. Different categories of part time jobs include teaching assistance, administrative assistance, IT assistance and should not exceed 10 hours per week during the semester.

Hiring seasons and windows:

Below are the hiring deadlines for each semester and the same will be published by the [Human Resources Officer](#) in the period preceding each hiring season.

- Summer: 20 calendar days starting in April's first workweek.
- Fall: 20 calendar days starting in July's first workweek.
- Spring: 20 calendar days starting in October's last workweek

10.7 Requirements for the Continuation of Funding

- All sponsored students must maintain full-time enrollment (36 units and more) with a 3.0 cumulative GPA and meet Satisfactory Academic Requirements.
- Sponsored students can take less than 36 units in the last semester.

- If there are missing grades for the spring semester, the student will need to have their instructor update the missing grades.
- A letter of notification will be mailed to the student that will address the requirements for Satisfactory Academic Progress and define the student's specific academic progress to date.
- A student may appeal a [Financial Aid Satisfactory Academic Progress](#) decision by writing a letter explaining the extenuating circumstances, defining information that prevented them from making academic progress and what has changed in their situation that would allow them to demonstrate satisfactory academic progress at the next evaluation.