Master of Science in Information Technology (MSIT)
Master of Science in Electrical and Computer Engineering (MS ECE)
Master of Science in Engineering Artificial Intelligence (MS EAI)

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

Carnegie Mellon University is on an exciting journey to transform graduate education in Africa. With a history of excellence in higher education and global thought leadership 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 (CMU-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 in Africa.

The Word is Carnegie Mellon University’s Student Handbook https://www.cmu.edu/student-affairs/theword/ which 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 africa-studentservices@andrew.cmu.edu

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

Vision
CMU-Africa’s vision is to educate and empower the next generation of African leaders and innovators by delivering a world-class educational experience. Our mission is to produce creative and technically strong engineers, who have been trained in the African context, and prepared to make transformative impact in their communities and the world.

CMU-Africa was established in 2011 and is the only top U.S. research university offering its master’s degrees with a full-time faculty, staff and operations in Africa. Born out of a partnership between CMU and the Government of Rwanda (GoR), CMU-Africa is addressing the critical shortage of high-quality engineering talent required to accelerate development in Africa—home to the fastest growing workforce in the world.

CMU’s presence in Rwanda provides a platform to engage in Africa’s most significant opportunities and challenges through world-class education and contextually relevant research.

Programs
Carnegie Mellon University Africa offers three degrees:

- 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)

Each degree is obtained by completing components defined in the degree’s curriculum. To obtain the degrees, students must successfully complete a minimum number of units (144 for MSIT or MS EAI, 96 for MS ECE, and 133 for MS-AD in ECE; one unit corresponds to, on average, one hour of work per week for a full semester) with an average grade of B. Each degree has further constraints on what courses can be used to satisfy the degree requirements. The degrees are described in more detail in later sections.

Statement of Assurance Policy
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 university ombudsman, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone +1 412-268-1018. Obtain general information about Carnegie Mellon University by calling +1 412-268-2000.

Carnegie Mellon University publishes an annual campus security and fire safety report describing the university’s security, alcohol and drug, sexual assault and fire safety policies, and containing statistics about the number and type of crimes committed on the campus, and the number and cause of fires in campus residence facilities during the preceding three years. You can obtain a copy by contacting the Carnegie Mellon Police Department at +1 412-
268-2323. The annual security and fire safety report also is available online at www.cmu.edu/police/annualreports.

Information regarding the application of Title IX, including to admission and employment decisions, the sexual misconduct grievance procedures and process, including how to file a report or a complaint of sex discrimination, how to file a report of sexual harassment, and how the university responds to such reports is available at www.cmu.edu/title-ix. The Title IX coordinator may be reached at 5000 Forbes Ave., 140 Cyert Hall, Pittsburgh, PA 15213; +1 412-268-7125; or tix@cmu.edu.

For more information regarding the statement of assurance please visit www.cmu.edu/policies/administrative-and-governance/statement-of-assurance.html.

Obtain general information about Carnegie Mellon University Africa by contacting africa-info@andrew.cmu.edu.

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/community-standards/index.html to understand the full set of Carnegie Mellon community expectations.
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.

- Academic Integrity Website: https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html
- University Policies Website: www.cmu.edu/policies/
- Graduate Education Website: http://www.cmu.edu/graduate/policies/index.html
- College of engineering graduate student’s policies: https://engineering.cmu.edu/education/academic-policies/graduate-policies/degrees.html

Departmental Resources

CMU-Africa Personnel

The focal points of contact for specific needs are the following:

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<td>Martin Saint</td>
<td>Director of Academics</td>
<td>Academic enquiries</td>
<td><a href="mailto:msaint@cmu.edu">msaint@cmu.edu</a></td>
</tr>
<tr>
<td>Timothy Brown</td>
<td>Director of Research</td>
<td>Research projects</td>
<td><a href="mailto:timxb@cmu.edu">timxb@cmu.edu</a></td>
</tr>
<tr>
<td>Mika Inamahoro</td>
<td>Student services Officer</td>
<td>General enquiries and student services</td>
<td><a href="mailto:minamaho@andrew.cmu.edu">minamaho@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Gikundiro Buki Olga</td>
<td>Academic Advisor</td>
<td>Academic process &amp; performance</td>
<td><a href="mailto:gbuki@andrew.cmu.edu">gbuki@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Flavia M. and Farida N.</td>
<td>Admissions &amp; Enrollment</td>
<td>Enrollment status, transcripts and visa applications</td>
<td><a href="mailto:africa_admissions@andrew.cmu.edu">africa_admissions@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Chipiwa Zimbwa</td>
<td>Director of Business Operations</td>
<td>Financial, HR and Contracting issues</td>
<td><a href="mailto:czimbwa@andrew.cmu.edu">czimbwa@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>TBD</td>
<td>Career Services Officer</td>
<td>Career, Internship, &amp; Alumni services</td>
<td></td>
</tr>
<tr>
<td>Sandra Malaika</td>
<td>Program Manager</td>
<td>MasterCard Foundation Scholars Program</td>
<td><a href="mailto:smalaika@andrew.cmu.edu">smalaika@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Ines Manzi</td>
<td>Associate Director of Student Affairs</td>
<td>General enquiries, Student Affairs &amp; Student accounts</td>
<td><a href="mailto:imanzi@andrew.cmu.edu">imanzi@andrew.cmu.edu</a></td>
</tr>
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Student Services

The Academic Advisor is a resource for information about registration and curriculum, processing University academic paperwork and the Student Services Officer will be guiding students to other resources as well as general information that concerns student welfare. They are responsible for the one-on-one sessions with students to understand academic and personal needs.

The Associate Director of Student Affairs will assist with inquiries about student accounts and billing, financial assistance and other matters related to attendance at CMU-Africa.

CMU-Africa COVID-19 protocols

As we experience another year of Covid-19, it is critical that we embrace our individual and collective responsibilities to uphold the standards of our community. We have adopted some protocols from the Rwanda Biomedical Center, to address the necessary actions required to reduce the spread of COVID-19 in both the university and broader Kigali communities. As a student at CMU-Africa, you must familiarize yourself with and abide by these protocols. For any enquiries, please contact africapso@andrew.cmu.edu.

Industry Engagement & Career Services

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

Career Services assists students and graduates in identifying career opportunities in organizations that promote environments in which they will be able to thrive and continue developing their technical and professional skills.

To learn more about career services, please contact the Career Services Officer, africa-careerservices@andrew.cmu.edu

CMU-Africa Facilities

CMU-Africa campus consists of a single building located in Kigali Innovation City.

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, Student Services Officer. 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 always responsible for the contents of the locker 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 top floor (Level 3) 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 empty all the trash bins. All food items left should be properly sealed to avoid any bad smell. Food that is not properly conserved will be thrown away. For any cleanliness issue, please report to the africa-studentservices@andrew.cmu.edu or the student guild that will submit the complaint to the administration.

**Requests for Maintenance**

If you have a request for maintenance for any area of the facility or equipment such as the photocopier, power sockets, water leakages, etc., you should submit a request for maintenance in writing to africa-studentservices@andrew.cmu.edu.

**Accessing Library Resources**

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

**Health Insurance**

All CMU-Africa students are eligible to join CMU-Africa’s medical insurance plan. Contact Student Services Officer to fill out health insurance form during the Orientation. All fulltime students at CMU-Africa are recommended to undergo TB testing at the beginning of the academic year.

All students attending CMU-Africa are also eligible to join Carnegie Mellon’s medical insurance plan offered at the Pittsburgh campus. A link to that page with full year premiums can be found here. The policy runs from September 1 through August 31, CMU-Africa students going to Pittsburgh for a Semester are required to subscribe to medical insurance plan and fulfill immunization requirement. Immunization guide can be found here.

**Counselling services**
Counseling and Psychological Services (CaPS) addresses the mental health needs of the CMU community through a variety of services. CaPS is attentive to issues of diversity and equality. They respect and value each person as a unique individual. They offer a safe and supportive space for students who have presented some challenges. For more info, visit [here](#).

CMU-Africa also offers the same services from our Wellness Center. They offer consultation services to students covering different areas, individual therapy and group workshops. They follow students that have issues but not limited to relationship problems, sleep disturbance, anxiety attacks, home sickness and cover the issues related to diversity of culture that is present on campus.

For scheduling an appointment, students should refer to the working hours and the contacts published every semester.

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**Security**

**CMU Alert Emergency Notification Service**

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

**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, should the damage be not covered under warranty.

CMU-Africa will assist students with the following:

- Transportation to and from the vendor. The student will have to be present when the laptop is taken to the vendor. CMU-Africa’s driver could assist the student by picking it up after repair when there are no issues with payment and to not inconvenience student’s class attendance.

- A loaner laptop is available for a **maximum of two weeks** for any student to use while their primary laptop (CMU-provided or personal) is being repaired or replaced. The process for getting a loaner laptop is to send a request to IT support [africa-it-help@andrew.cmu.edu](mailto:africa-it-help@andrew.cmu.edu) and Cc Student Services Officer [minamahoa@andrew.cmu.edu](mailto:minamahoa@andrew.cmu.edu) for
approval. Note that there are a limited number of loaner laptops available for students and the loaner should be returned immediately when their primary laptop is ready or after two weeks.

- Two laptops will be available in E201 for students to use in that room, e.g., after hours or on weekends for emergencies when IT staff are not in the building.

- In addition, two other laptops will be available through IT support workers during weekends.

- Situations where a student is unable to cover the cost of repair will be handled on a case by case basis and should be brought to the attention of CMU-Africa Student Services Officer.

**Stolen Laptop Policy**

Students must exercise due care of the laptop to prevent loss during their program at CMU-Africa. In case the laptop is stolen, the student will not be provided with another laptop from CMU-Africa.

Students must report the missing laptop as soon as possible to CMU-Africa and provide a Police Incident Report/Case number once it has been reported stolen. These students, however, will still be required to pay 25% of the cost of the missing laptop upon Clearance from the University at the end of their program, even if the laptop was not recovered.

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

**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 orientation.

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 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 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 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 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 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.

**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 check 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 africa-it-help@andrew.cmu.edu if you cannot find your Andrew User ID and password.

**Email**

All students automatically get G Suite accounts which enables email access online through https://email.cmu.edu. Andrew ID and password will be required to access the mailbox.

**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 laptops and devices**

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). Information on how you can do this can be found in


**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 one personal device in addition to any that will be provided by the university. suspension
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.

Admission

Admission policies

The CMU-Africa admission committee uses a holistic approach to make admission decisions in consideration of all aspects of the applicant’s application.

https://www.africa.engineering.cmu.edu/education/admissions/guidelines/index.html

Deferral

Admitted students are allowed to defer their admission for up to one year, non-extendable. Those who return the following year must apply for financial aid all over again as any financial aid offer received previously would have
Final Undergraduate Transcripts
Applicants admitted to any CMU-Africa program must submit final official transcripts, in a sealed envelope from their undergraduate University/College registrar a condition of enrollment at Carnegie Mellon. Certificates of graduation and/or degree certificates should also be submitted if provided by the institution. Failure to provide official transcripts documents by the end of the first semester of study at Carnegie Mellon will prevent the student from graduating at CMU-Africa.

Enrollment
Overview
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.

Faculty Advisors
Each incoming student will be assigned a faculty advisor and staff academic advisor that will help with decisions. Your faculty advisor is a resource for questions related to specific content knowledge about IT, EAI, and ECE. They will offer advice regarding your career and courses you may want to take to prepare.

You will find out who your faculty advisor is during orientation. Each student should schedule an individual meeting with their faculty advisor during orientation or up to the week after the start of their first semester.

One of the opportunities of a graduate education at CMU is the opportunity to interact one-on-one and in small groups with faculty. A faculty advisor can serve as a resource, mentor, evaluator, and colleague. They can assist with course selection, with monitoring and evaluating the student’s progress, and work with the student toward a successful academic and professional outcome. Beyond your advisor, you are welcome to communicate with any faculty member as needed.

Staff Academic Advisor
The staff Academic Advisor is the students’ primary advisor and will help the students in the areas of academic challenges, personal difficulty, academic plan and goals, enrollment forms signature and processing, transferring or withdrawing, leave of absence, policy clarification, registration check and other related administrative processes.

Degree Progress and Planning
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 add courses, drop courses, and select units for variable unit courses through 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 (https://www.cmu.edu/hub/calendar/index.html).
If a student is not progressing as expected, they are expected to seek advice and counsel from their staff academic advisor. If the student is concerned that they may be unable to complete degree requirements, they should contact their academic advisor for assistance.

**Degree Requirements Timeframe**

The duration of the programs is defined in the curriculum. Each component is assigned a 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 devote per week for that component for a full semester. To obtain a degree, students must successfully complete one of the below:

- a minimum number of 144 units for MSIT program in 3 to 4 semesters
- a minimum number of 144 units for MSEAI program in 3 to 4 semesters
- a minimum number of 97 units for MSECE program in 2 to 3 semesters
- a minimum number of 133 units for MS-AD in ECE program in 3 to 4 semesters

To have full-time status, students must enroll in at least 36 units each semester. In order to complete program requirements, students may need to enroll in more than 36 units.

The typical graduate course is 12 units (i.e., 12 hours per week). 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 of 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 may no longer sign up for additional semesters and must either graduate or leave the university. At the end of their last semester, if they have not yet satisfied graduation requirements, students would need to petition to the Director of CMU-Africa to be allowed back in the program.

More details on the programs can be found under [CMU-Africa education](#).

Students must be physically present and attend class at the start of the semester, except when health or other restrictions (e.g., COVID-19) require that the students take CMU-Africa courses remotely. If extenuating circumstances exist that prevent a student from attending class, a student must notify the academic advisor and instructors immediately. Not attending class from the start of the semester will have a detrimental effect on a student’s progress in the program. CMU-Africa will make an effort to verify all students have arrived to begin their program and will consider a student as “withdrawn from the university” if he or she is not here during the second week of orientation.

**Course Audit**

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 form to the Student Service’s Office prior to the fifth day of classes for a mini and the tenth day of classes for a Semester course.

**NOTE:** Once a Course Audit Approval form or a Pass/Fail form is submitted to the Academic Advisor, 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.
Retaking Courses
If a student does not pass a course, they can take a different course that will fulfill the requirement.

Retaking a course is generally not recommended. However, students may retake a prerequisite course in which they did not receive the minimum grade required.

All grades are recorded on the transcript and factored into the cumulative QPA; however, only the best 97 units that fulfill degree requirements are factored into the required 3.0 graduation QPA for MSECE and 144 units for MSIT or MSEAI.

Pass/No Pass Courses
Students who want to take a course pass/fail are required to register for the course and submit the pass/no pass approval form (https://www.cmu.edu/hub/docs/pass-fail.pdf) to their academic advisor for approval. If approved, the academic advisor will send the form to the HUB for processing.

Once a Pass/Fail Audit Approval form is submitted to the HUB, a letter grade (‘A’–’R’) will not be assigned for the course and the declaration cannot be reversed. Passing work (letter grade ‘A’–’C’) is recorded as ‘P’ (passing grade) or ‘S’ (satisfactory) on the student’s academic record, with both grades meaning the same; work with a grade at or lower than ‘C-’ will not receive credit and will be recorded as ‘N’ (not passing grade) on the student’s academic record. No quality points will be assigned to ‘P’/’S’ or ‘N’ grades; the units of ‘P’/’S’ or ‘N’ grades will not be factored into the student’s QPA.

The units of pass/no pass courses count toward the maximum course load units, but do not count toward the degree requirements. You can find the deadline for submitting this form on the 2021-2022 Academic-Calendar. After the deadline, students will not be able to request the option to pass/fail a course.

Any student may take a course pass/fail. For billing, the pass/fail course is considered the same as the traditional courses under the tuition charges. If a part-time student takes a course pass/fail, he/she will be charged part-time tuition based on the per-unit tuition rate for the course.

Maximum Units Allowed
A student may take more than the minimum number of units to graduate (144 for MSIT / MS EAI, or 96 for MS ECE or 133 for MSECE AS). 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 courses they apply to satisfy their degree requirements. Please refer to CIT policy on M.S. degree units (https://www.cit.cmu.edu/education/academic-policies/graduate-policies/registration-grading-credit.html#m.s.-degree-units

Registering for Courses
Contact Academic Advisor 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.

Academic Calendar
The official Academic Calendar for CMU-Africa can be found on 2021-2022 Academic-Calendar. The calendar includes class schedules; payment deadlines; add/drop deadlines and other important deadlines.
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 and personalized information, including course schedule, financial info and academic performance. To log on, go to SIO and enter your Andrew User ID and password. Students should create an academic plan and register for courses. Students should actively engage in their process by reviewing degree requirements on the website, connecting with their academic advisor, and conferring with a faculty advisor.

The registration process can be completed within SIO in these 4 easy steps:

1. Plan your course schedule
2. Review your planned schedule with your advisor
3. Check your registration time on SIO
4. Register for classes

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 or CMU-Africa Fall 2021 schedule

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.

Adding Courses
Students have the option of adding courses to their schedule starting at their assigned registration time until the add/drop deadline. If students wish to be added to a course after the add/drop deadline, the Course Add Request Form must be completed and signed by the course instructor. Then, the students must submit the form to their academic advisor for approval.

Course Locations
Students should register for sections of their courses according to their physical campus location. Please refer to the schedule of classes available on your campus.

Dropping Courses
Students have the option of dropping courses from their schedule starting at their assigned registration time until the add/drop deadline. When a course is dropped before the drop deadline, it does not appear on the transcript. As a courtesy to others, students should drop a course as soon as they decide not to take it. This will allow a waitlisted student to be enrolled and will limit the disruption to any team-based projects. Dropping a class may have an impact on the student’s tuition bill.
Withdrawing from Courses
Students should remove themselves from a course before the drop deadline each semester. If students choose to withdraw from a course after the drop deadline, the student must officially withdraw from the course and should consult with their advisor to discuss the withdrawal. Withdrawals take place after the drop deadline but before the last day of the semester, students must complete and submit the Course Withdrawal Request form with their academic advisor to withdraw from a course. Withdrawals receive a “W” grade for the course on a transcript; this “W” grade is not factored into the QPA but the course does count towards the maximum units. 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. Students can contact the Academic Advisor for more information. Further information is provided in https://www.cmu.edu/hub/registrar/course-changes/.

Courses with Time Conflicts
Students are not permitted to register for two courses that conflict in time. Registration may be possible with consent from an instructor, allowing the conflict or attendance at an alternate time. Students should forward permissions from instructors to their academic advisor in order to register for conflicting courses.

Prerequisites
While university may allow you to register for courses without the published prerequisite, it is the student’s responsibility to have adequate background knowledge to be successful in the subsequent course. You should consult with the instructors because it is up to their discretion whether or not a prerequisite course can be waived.

To access any of The HUB’s online services:
  ● Go to 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

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: enrollment verifications

Faculty Course Evaluations (FCE)
At the end of each semester, students provide anonymous feedback to faculty about courses through Faculty Course Evaluations. 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

Degree Certification Process & Graduation
A student must satisfy all degree requirements and achieve a minimum of 3.0 QPA in the courses being applied towards the required units to be eligible for degree certification. In addition, students must have provided a final copy of their undergraduate transcript(s) and must have a tuition balance of USD 0.00 to receive a diploma.

CMU-Africa graduation only occurs once a year and around the same time as the university commencement. Students who are certified after the annual ceremony will be invited to attend the next graduation ceremony.
Before graduation, students should review a proxy of their diploma to verify the information displayed there, such as the spelling of their name.

Academic Standards

Grades

Below are the grading policies for students.

University Policy on Grades

The university policy on grading (https://www.cmu.edu/policies/student-and-student-life/grading.html) offers details concerning university grading principles for students taking courses and covers the specifics of assigning and changing grades, grading options, drop/withdrawals and course repeats. It also defines the graduate grading standards.

CIT Grading Policy

CMU-Africa follows the CIT letter grade scale (https://engineering.cmu.edu/education/academic-policies/graduate-policies/registration-grading-credit.html). The letter grade scale is ‘A’ (highest for CIT students), ‘A-’, ‘B+’, ‘B’, ‘B-’, ‘C+’, ‘C’, ‘C-’, ‘D+’, ‘D’, and ‘R’ (lowest). CIT students cannot receive an ‘A+’ grade on their transcript, even if a course is taken from another college where ‘A+’ is given. Grades lower than ‘C’, meaning C- or below, are considered failure in CIT and will not count toward degree requirements.

Incomplete Grade

Incomplete grades will be assigned at the discretion of the course instructor, per the university grading policy.

Withdrawal Grade/Withdrawing from Courses

Students can withdraw from a course after the add/drop deadline until the last day of classes. This will result in a ‘W’ on the transcript, which is not factored into the QPA. To withdraw, the course withdrawal request form (https://www.cmu.edu/hub/docs/course-withdrawal.pdf) must be completed and submitted to the academic advisor for approval. If approved, the academic advisor will send the form to the HUB for processing.

Academic Performance

Quality Point Average

To graduate, each student must have a Quality Point Average (QPA) of at least 3.0 in the courses being used towards the graduate degree requirements. Coursework or graduate project units with a grade lower than ‘C’ will not be considered toward graduate degree requirements. However, they will be calculated into the student’s cumulative QPA.

Academic Probation

In the event that a student’s semester or cumulative QPA falls below a 3.0, that student will be placed on academic probation and will receive a letter from the department informing them. While on probation, students must meet with their academic advisor and comply with their recommendations. Once a student’s semester and cumulative QPA increase above 3.0, the student 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, the student may be permanently dismissed 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 appeal and grievance procedures.
Academic Integrity

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 adheres to Carnegie Mellon’s policy on academic integrity and all students are expected to review the policies prior to their arrival at CMU. CMU-Africa also adheres to CIT’s policy on graduate student academic integrity violations. Please review the University Policy on Academic Integrity (https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html). The policy includes the University expectations around academic integrity and provides definitions of cheating, plagiarism, and unauthorized assistance. A review of the University’s Academic Disciplinary Actions procedures (https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html) is also recommended. 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.

Instructors are responsible for defining academic integrity for students in their courses, including student performance expectations and attendance requirements. Students are responsible for understanding and abiding by the instructor’s academic integrity policies. Policies may vary from instructor to instructor and students should seek further guidance from a faculty member if they have specific questions about a course’s academic integrity policy.

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. Note that giving unauthorized assistance is considered cheating even if no specific student who benefits from the assistance is identified.
● 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
Penalties for Violating Academic Integrity
In accordance with the university’s policy, a student who violates the academic integrity policy will not be permitted to drop the course in which the offense occurred to avoid penalty. If the student attempts to drop the course, they will be reenrolled.

Multiple academic integrity violations may result in a student’s dismissal from the program. Students have the right to appeal an academic integrity decision.

Disciplinary Probation
Students who have committed 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 but must meet with their academic advisor.

Academic Disciplinary Actions
The procedures and penalties described in the university academic disciplinary actions are applied when there are academic integrity violations by graduate students.

MSIT
The MSIT degree curriculum offers three different areas of focus: a professional track, a research track, and an entrepreneurial track. The professional track is designed specifically for students interested in developing team project skills and become 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 innovation projects and technology business skills. All three tracks lead to the same MSIT degree and are distinguished by the coursework and the type of project completed as part of the degree. The tracks have the following main components:

<table>
<thead>
<tr>
<th>Degree Components</th>
<th>Professional</th>
<th>Research</th>
<th>Entrepreneurship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td>60 Units</td>
<td>60 Units</td>
<td>60 Units</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>60 Units</td>
<td>48 Units</td>
<td>60 Units</td>
</tr>
<tr>
<td>Practicum Project</td>
<td>24 Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Project</td>
<td></td>
<td>36 units</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurship Project</td>
<td></td>
<td></td>
<td>24 units</td>
</tr>
<tr>
<td>3-Month Internship</td>
<td>0 Units</td>
<td>0 Units</td>
<td>0 Units</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>144 units</strong></td>
<td><strong>144 units</strong></td>
<td><strong>144 units</strong></td>
</tr>
</tbody>
</table>
Concentrations

Through electives, students can choose to take courses in a broad set of areas, or they may choose to concentrate in an area of focus. Several concentrations are defined including Network Technologies, Software Development, Software Engineering, Cyber Security, Applied Machine Learning, Energy Systems, and IT Entrepreneurship. This list will be revised from time to time as documented on the CMU-Africa website.

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. Students who meet the requirement for a concentration will be given a separate document verifying their achievement.

Each concentration defines a selection of courses that are used to meet the concentration requirements. A student must complete at least 48 units in a specific concentration with a B (3.0) average to be considered as having acquired the skills of that concentration. To build practical skills, students should select internships and projects in their selected concentration.

Core Courses

All MSIT students are required to take the following core courses as part of the MSIT curriculum, by selecting 12 units in each of the 5 core areas available for a total of 60 units as follows: Students shall take 60 core units consisting of 12 units in each of the following areas:

1. IT Entrepreneurship,
2. Software,
3. Applied Machine Learning,
4. Secure IT Networks, and

<table>
<thead>
<tr>
<th>IT Entrepreneurship</th>
<th>Software</th>
<th>Applied Machine Learning</th>
<th>Secure IT Networks</th>
<th>Leadership and Professional Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>04-611</td>
<td>04-630</td>
<td>18-785</td>
<td>18-631</td>
<td>04-601 or 04-802</td>
</tr>
<tr>
<td>Strategic Use of Information in Enterprises (12 units)</td>
<td>Data Structures and Algorithms (12 units)</td>
<td>Data Inference and Applied Machine Learning (12 units)</td>
<td>Introduction to Information Security (12 units)</td>
<td>First Year Seminar or Entrepreneurship Seminar (6 units)</td>
</tr>
<tr>
<td>04-613</td>
<td>18-641</td>
<td>11-785</td>
<td>04-641</td>
<td>04-605</td>
</tr>
<tr>
<td>ICT Business Economics and Finance (12 units)</td>
<td>Design Patterns for Smartphone Development (12 units)</td>
<td>Introduction to Deep Learning (12 units)</td>
<td>Fundamentals of Telecommunications and Computer Networks (12 units)</td>
<td>Second Year Seminar (6 units)</td>
</tr>
</tbody>
</table>
Internships and Projects

**MSIT Internship**

MSIT students are required to complete a 10-12 week full-time internship prior to completing their degree. During an internship, students work as short-term employees of an organization to gain technical and professional experience by being immersed in a business environment performing real IT and engineering work for the host organization.

Students must be employed under contract by the organization during their internship. It is expected that the internships provided by these companies will be paid in the form of a stipend – a fixed amount of money that is remunerated on a monthly basis. Students are expected to produce the results as defined in the temporary employment contract.

Under extraordinary circumstances, the internship requirement may be waived, with permission from the CMU-Africa Director.

**Master's Practicum Project (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 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 just the right amount of process and documentation to meet clients' needs and effectively manage the project.

**Master's Research Project (academic 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.

**Master's Entrepreneurship Project (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, based on a selective process that assesses the entrepreneurship project that the student team proposes.

**Elective Courses**

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

Students can select up to 60 units of elective courses in the MSIT program. Online elective courses cannot exceed 12 units (out of 60 units). Exceptions must be approved by the Director of Academics.
Independent Study
Students can perform an Independent Study under the supervision of a faculty member 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 and plan of study. Then both will sign the form for approval.

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

MSIT Timeline
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.

<table>
<thead>
<tr>
<th>Semester 1 (late Aug - Dec)</th>
<th>24 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two core courses</td>
<td></td>
</tr>
<tr>
<td>One elective course</td>
<td>12 units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2 (Jan - mid-May)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two core courses</td>
</tr>
<tr>
<td>One elective course</td>
</tr>
<tr>
<td>First year Seminar</td>
</tr>
</tbody>
</table>

**MSIT Internship (mid-May – mid-Aug)**

<table>
<thead>
<tr>
<th>Semester 3 (Aug - Dec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s Practicum</td>
</tr>
<tr>
<td>One core course</td>
</tr>
<tr>
<td>Second year Seminar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 4 (Jan - May)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two elective courses</td>
</tr>
</tbody>
</table>

Total Units 144 units
Engineering Artificial Intelligence (EAI) is motivated by the explosive growth in applications of AI. It is seen that there is a need to apply not just the mathematical and scientific principles of the AI discipline but to embed these in engineering principles of design, processes, systems, manufacture, and construction. As a graduate engineering degree, it is intended to intersect with specific engineering disciplines, but more importantly to cut across disciplines to address important problems in areas such as transportation, building systems, manufacturing, energy, agriculture, security, health, and climate. It is envisioned that the degree, while providing a solid foundation, would provide students with an opportunity to focus on any of these cross-cutting areas, including a significant engineering application project.

Core Courses

All MS EAI students are required to take the following 72 units of Core Courses comprised of 12 units from each of the below six categories.

<table>
<thead>
<tr>
<th>Core Requirement</th>
<th>Courses that can meet each requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math fundamentals (12 units)</td>
<td>18751 Applied Stochastic Processes 19785/24785 Engineering Optimization 24786 Bayesian ML for Scientists and Engineers</td>
</tr>
<tr>
<td>Intro to AI in Engineering (12 units)</td>
<td>18662 Principles and Engineering Applications of AI</td>
</tr>
<tr>
<td>Intro to ML in Engineering (12 units)</td>
<td>06681 Data Science and ML in ChemE 18661 Intro to Machine Learning for Engineers 18665 Advanced Prob &amp; Stats for Engineers 18785 Data, Inference, and Applied ML 24787 ML and AI for Engineers</td>
</tr>
<tr>
<td>Data Analysis (12 units)</td>
<td>12709 Data Analytics for Engineered Systems 18899 Data Analytics + Big Data Science</td>
</tr>
<tr>
<td>Advanced AI (12 units)</td>
<td>04800 Probabilistic Graphical Models</td>
</tr>
<tr>
<td>Advanced ML (12 units)</td>
<td>18786 Introduction to Deep Learning 18797 Machine Learning for Signal Processing 24788 ML and AI for Engineers - Project</td>
</tr>
</tbody>
</table>

Colored numbers indicate courses that have been offered in the past to CMU-Africa students.

Domain Specialization Electives

Elective Courses are where students gain a focus relative to their engineering discipline. Students take 36 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 from the College of Engineering (courses with course numbers that begin with 04 (CMU-Africa), 06 (Chemical Engineering), 12 (Civil and Environmental Engineering), 14 (Information Networking Institute), 18 (Electrical and Computer Engineering), 19 (Engineering and Public Policy), 24 (Mechanical Engineering), 27 (Material Science and Engineering), 39 (CIT), and 42 (Biomedical Engineering))
Only technical and non-project courses can be used for this requirement. In particular, the following courses cannot be counted: 04-601, 04-605, 04-705, 04-706, 04-900, 04-980, or 18-980. All courses must be at the 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 they can be 600 and above courses from outside the college of engineering as approved by your advisor.

Applied Engineering Project
Students can put what they learn into practice using through a 36-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 review by faculty and external sponsors.

MS ECE
Electrical and computer engineering (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 and 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 detailed information on the MS ECE program, including the course requirements and curriculum, please refer to the main ECE website. You will be assigned an ECE faculty member at the CMU-Africa campus to be your advisor.

MS ECE Advanced Study Program (MS-AD in ECE)
The MS-AD in ECE is a three or four semester program (16 to 20 months), consisting of 133 units of graduate course work. The MS-AD in ECE program allows students admitted into the MS ECE to take additional courses. The extra courses allow students to explore more than one concentration or to go into greater depth and specialization than the standard MS ECE program. Students also have the option of doing an extended research project which will prepare them for Ph.D. studies and a research career.

The degree requires 133 units total for the course and project options. More details can be found here https://www.ece.cmu.edu/academics/ms-ece/advanced-program.html

Course option requirements
- 60 units of ECE Core Courses
- 36 units of CIT Elective Courses
- 36 units of General Technical Elective Courses
● 1 unit of Introduction to Graduate Studies

Up to 12 units of undergraduate coursework (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.

Project option requirements

● 48 units of ECE Core Courses
● 24 units of CIT Elective Courses
● 24 units of General Technical Elective Courses
● 36 units of M.S. Graduate Project coursework
● 1 unit of Introduction to Graduate Studies

Up to 12 units of undergraduate coursework (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.

University Policies/ CMU-Africa Protocols

Complete CMU Policies
For a complete reference to graduate education policies at Carnegie Mellon University, please visit http://www.cmu.edu/graduate/policies/index.html

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 academic 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 here.

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 graduate program:

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 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 student suspension.

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. The complete reference to this university policy is available at: http://www.cmu.edu/policies/student-and-student-life/withdrawal-of-a-degree.html.

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 Carnegie Mellon’s policy on student return is available at the following link: https://www.cmu.edu/hub/docs/return-loa.pdf

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.


Summary of Graduate Student Appeal and Grievance Procedures
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.

**Intellectual Property Policy**

This policy should be reviewed in its entirety on-line: [http://www.cmu.edu/policies/documents/IntellProp.html](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.

**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: The staff Academic Advisor can assist you with more information on the academic policies. Send email to gbuki@andrew.cmu.edu

**Safeguarding Educational Equity / Sexual Misconduct Policy**

The University prohibits sex-based discrimination, sexual harassment, sexual assault, dating/domestic violence, and stalking. The University also prohibits retaliation against individuals who bring forward such concerns or allegations in good faith. The University’s Sexual Misconduct Policy is available at [https://www.cmu.edu/policies/administrative-and-governance/sexual-misconduct/index.html](https://www.cmu.edu/policies/administrative-and-governance/sexual-misconduct/index.html). The University’s Policy Against Retaliation is available at [https://www.cmu.edu/policies/administrative-and-governance/whistleblower.html](https://www.cmu.edu/policies/administrative-and-governance/whistleblower.html). If you have been impacted by any of these issues, you are encouraged to make contact with any of the following resources:

- Office of Title IX Initiatives, [https://www.cmu.edu/title-ix/]  +1 412-268-7125, tix@cmu.edu
- University Police, +1 412-268-2323

Additional resources and information can be found at: [https://www.cmu.edu/title-ix/resources-and-information/resources.html](https://www.cmu.edu/title-ix/resources-and-information/resources.html).

At CMU-Africa, 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
Assistance for Individuals with Disabilities

Equal Opportunity Services serve as links between individuals with disabilities and the campus community. Academic accommodations are determined on a case-by-case basis. To receive services/academic 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/academic 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 academic accommodations, please contact Gikundiro Olga Buki gbuki@andrew.cmu.edu

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 calling 877-700-7050 or visiting www.reportit.net (user name: tartans; password: plaid). All submissions will be reported to appropriate university personnel.

The hotline is NOT an emergency service.

On-Site Emergencies

CMU-Africa has 24-hour security provided by Intersec Security Rwanda (ISCO) and security video camera system. The security guards are present at the entrance of the building and around the campus 24/7. If you have a problem that requires immediate attention, please contact the facility office that is in touch with security guard on duty. If you have a security incident to report, please submit a written statement to the Associate Director of Student Affairs, Ines Manzi, at imanzi@andrew.cmu.edu or to the Director of Business Operations, Chipiwa Zimbwa, at czimbwa@andrew.cmu.edu

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

Full Time vs. Part Time: Working While Studying

The MS ECE, MS-AD in ECE, MS EAI, 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 of technical course even if it is their last semester (withdrawal units, pass-fail units, and non-technical course units will not be considered to make up for full time units).

Students who wish to work while pursuing their CMU degree should discuss this with their academic advisor. In no case should a student work while receiving a scholarship without written approval of the scholarship sponsor.

Exit activities

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 sign a clearance form prior to their departure from the program. The form will be sent to students upon completing the program and before graduation day.

Exit /Career services surveys
Exit interviews are usually held throughout November and December (Fall semester) or May and June (Spring semester) of the final year depending on the program and they are designed to get feedback from students about the master’s programs. They are mandatory and organized by the student services office. The students are also asked to provide updates on their employment outcomes after graduation. Information about the survey is communicated in the students’ final semester.

Financial issues

Tuition sponsorship
Students with government, business or company sponsorship must provide Associate Director of Student Affairs 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 to share grade and academic progress information with their sponsor. The sponsorship letter should be returned to Associate Director of Student Affairs Office. For inquiries, please send email to 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 Student Affairs 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 exceed 10 hours per week during the academic year.

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 accounts 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 back 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/

Extracurricular activities

The student population is led by the Student Guild elected by all the students and this changes every year. They can be contacted on cmu-africa-guild@lists.andrew.cmu.edu

The student guild coordinates all the extracurricular activities and students’ organizations. Different activities are supported by the University and contributes to develop the student bonding and social interactions. On-campus and Off-campus fun activities are organized such as inter universities games, visit of different sites in Kigali and Rwanda. Past activities can be found on https://www.flickr.com/photos/cmu-africa/albums

As part of the extracurricular activities, the students created clubs based on the common interests. The current clubs are Data Science, Toastmaster Techy Talker, Software Engineering, Internet of Things (IoT), Women in Tech, Energy and Embedded Systems and the newly founded French club “Le Verbe du Technicien”.

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: Mika Inamahoro, Student Services Officer at africa-studentservices@andrew.cmu.edu

By signing, you affirm that you have read a copy of the 2021-2022 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.

________________________
Signature and Date

________________________
Printed Name

Sign & return to CMU-Africa Office of the Student Services Officer or to africa-studentservices@andrew.cmu.edu, before Monday, August 30, 2021