



American University of Nigeria (AUN)

School of Graduate Studies

Catalog

2023-2026

School of Graduate Studies

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MESSAGE FROM THE DEAN

It is my special pleasure and privilege to welcome our current and prospective graduate students, as well as the wider AUN learning community to the 2nd edition of our graduate catalog for 2023-2026 academic years. All policy guidelines, programs structures and processes herein presented are purposefully designed, as well as globally and competitively benchmarked to engage and assist graduate students at the American University of Nigeria to navigate their academic journeys, while in compliance with context-specific NUC requirements, and ensuring high quality American-style Liberal Arts Education experiences.

I do hereby convey my profound gratitude to the AUN Deans Council, the Senate, the Governing Council, University Leadership and other institutional partners for their unique inputs, effortful collaborations and supports.

I now invite all current and prospective students to take a moment to consult with, and adopt the catalog document as a roadmap, as they embark upon or continue their respective academic journeys and scholarly inquiries at the American University of Nigeria.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Mbah', written in a cursive style.

Professor Chris Mbah
Dean, School of Graduate Studies
Professor of Marketing and International Business
AMERICAN UNIVERSITY OF NIGERIA
Yola, Nigeria



INTRODUCTION

American University of Nigeria (AUN) embraces and promotes scholarly integrity. Scholarly integrity encompasses “both research integrity and the ethical understanding and skill required of researchers/scholars in domestic, international, and multicultural contexts.” It also addresses “ethical aspects of scholarship that influence the next generation of researchers as teachers, mentors, supervisors, and successful stewards of grant funds” (Council of Graduate Schools, Research and Scholarly Integrity in Graduate Education: A Comprehensive Approach, 2012).

University Profile

History

American University of Nigeria was founded in response to the need for a world-class University in Sub-Saharan Africa. The goal of AUN is to train the future leaders of Africa and to serve as both a stimulus and agent of economic development throughout the region. To that end, all students, regardless of academic specialization, receive high-level training in information technology, in entrepreneurship and in arts and sciences, all of which are the key to future sustainable development. AUN is committed to providing the skills and the leadership essentials needed for advancing the continent's pressing social and economic challenges.

Location

The University is located in the city of Yola, capital of Adamawa, one of Nigeria's 36 states. The campus, which occupies nearly 1,000 hectares, is a serene mixture of desert and farmland. Adamawa, one of the six states in the North East region of Nigeria, shares the longest borderline with Republic of Cameroon. Yola is accessible by road and air, and daily flights from the Yola Airport connect through Abuja to regional, national and international locations.

Campus

The campus is attractive and modern. The main campus comprises 18 buildings, including dormitories, a spacious cafeteria, classrooms, commencement hall and office buildings and a standard e-Library. All buildings are fully air-conditioned with modern facilities. The entire campus has wireless Internet and dorms are provided with cable television in common rooms.

School of Graduate Studies

Introduction

The School of Graduate Studies has prepared this document for students, faculty and staff to help define their responsibilities and to explain the policies and procedures that govern graduate study at American University of Nigeria. It also contains information about programs, curricula & study plans. For further information, students should consult their dean's office, the coordinators of graduate programs at their respective Schools, or the chairperson of the department that houses their graduate program.

The School of Graduate Studies (SGS) at the American University of Nigeria is a community of scholars dedicated to excellence in original research, scholarly integrity, and effective teaching. We cultivate intellectual leadership and an authentic sense of community responsibility to bring knowledge, best practices and innovative ideas to bear on the challenges and opportunities presented in Nigeria, Africa and the world.

As the administrative arm of the **Graduate Studies Council (GSC)**, the School of Graduate Studies (SGS) monitors the progress of students enrolled in different graduate degree programs, from the time they are admitted to American University of Nigeria until they complete their degrees. This is done in coordination with the **University Graduate Studies Committee (UGSC)**, the Office of Enrollment Management, Office of the University Registrar, and the Office of the Dean housing the graduate programs.

The document also describes the admission cycle and the policies that govern the application, applicant evaluation, and admission of new graduate students. Students may apply for admissions to master's and doctoral programs at American University of Nigeria from any other university both within and from outside Nigeria. The **Graduate Studies Council (GSC)**, sets the minimum application requirements and has the ultimate authority to approve or deny graduate admission.

The **School of Graduate Studies (SGS)** facilitates the operation of graduate programs in all Schools and departments in the following ways:

- Through the **Graduate Studies Council (GSC)**, the GSC advises on and administers the development and approval of new graduate programs proposed by schools, and coordinates programs that involve more than one School as well as interdisciplinary programs.
- Serves as a home for postdoctoral fellows.
- Facilitates the use of non-AUN research laboratories and centers for graduate students, if needed.
- Organizes/administers postgraduate training programs such as thesis writing, literature reviews, writing for journals, how to get one's work published & presenting at conferences.
- The Dean of the School of Graduate Studies (SGS) reports to the Vice President for Academic Affairs & Provost and oversees the School of Graduate Studies. The School of Graduate Studies is under the leadership of a dean and is supported by the Graduate Studies Council. The SGS Dean is a member of the Council and the GSC monitors the quality of graduate studies at American University of Nigeria.
- The Vice President for Academic Affairs & Provost, the Dean of the School of Graduate Studies and the deans of schools housing graduate programs serve as advocates for graduate education, teaching, and research, working closely with the Council in developing new policies and procedures related to graduate education.
- The School of Graduate Studies (SGS) staff reviews appointments of graduate students to academic titles such as Teaching Assistants (TA) and Research Assistants (RA) to ensure compliance with policies and procedures established by Academic Affairs and the Graduate Studies Council. The School also monitors eligibility for fee and tuition remission.
- Ensures that applications for admission meet AUN and NUC standards and requirements.
- Processes acceptance and rejection letters for all applicants after the SGS approval decision.

Graduate Studies Partners

The graduate experience at American University of Nigeria and the work of the School of Graduate Studies (SGS) are dependent upon the efforts of the Graduate Studies Council (GSC), the Dissertation Board, Office of Enrollment Management, Office of the University Registrar, The Deans of the Schools housing Graduate programs, the Student Affairs Office, Faculty Advisors, and Graduate Teaching and Research Assistants.

Graduate Studies Council (GSC)

The Graduate Studies Council (GSC) which is chaired by the Vice President for Academic Affairs & Provost and the Dean of the School of Graduate Studies as Vice Chairperson, is responsible for safeguarding the excellence and quality of graduate education at the American University of Nigeria (AUN). The School of Graduate Studies (SGS) is the administrative arm of the Council and is empowered on its behalf to enforce established and approved academic regulations and policies. The Council membership will consist of senior faculty members, graduate program directors/coordinators from the different schools with graduate programs and disciplines within the institution. The duties and functions of the GSC consist of the following:

- Sets the policies and standards for graduate admission and degrees in coordination with the schools.
- Reviews established degree programs and proposals for new fields of study or degrees; establishes qualifications and policies for Graduate Student Teaching Assistants and Graduate Student Research Assistants; responds to issues referred to it by Office of Academic Planning & Quality Assurance, The Deans housing Graduate Programs, The Deans Council and the Vice President for Academic Affairs and Provost.
- Proposes internal regulations, in consultation and collaboration with coordinators of graduate programs of schools, academic departments with graduate programs, Office of Enrollment Management, Office of Student Affairs and Academic Planning & Quality Assurance, for the organization of graduate studies.
- Proposes, implements and supervises admission criteria into graduate studies.
- Studies and recommends new programs for endorsement by Senate and coordinates them with current ones.
- Recommends graduate courses to Senate for approval, amendment and modification.
- Recommends to Senate titles of graduate degrees on recommendation of schools' councils.
- Recommends to Senate awarding of graduate degrees.
- Decides on all matters related to graduate students in the University in consultation and collaboration with Schools' Graduate Program Coordinators, Enrollment Management, Student Affairs, Academic Planning & Quality Assurance, the Office of the Vice President For Academic Affairs and Provost.
- Issues approval of thesis supervision committees and judging panels in consultation and collaboration with the office of Academic Planning and Quality Assurance.
- Sets the general framework for research plans, rules for thesis writing, format for thesis production and templates of thesis exam reports.
- Periodically assesses graduate programs at the University in consultation with the Academic Planning & Quality Assurance through specialized committees from inside or outside the University.
- Examines periodic reports highlighting aspects of post graduate education at AUN, submitted by the departments of the University.
- Studies matters forwarded to it by the University Governing Council, Senate, the Council of Deans, Academic Planning & Quality Assurance and submits feedback reports to the office of VPAA & Provost.
- Establish a GSC Newsletter that disseminates content relevant to graduate studies at AUN

Role of Graduate Program Coordinators and Enrollment Management

- Ensures that applications for admission meet University standards
- Coordinate Graduate Admissions review and recommendation at the School level
- Is responsible for keeping and maintaining all graduate student records for all Graduate programs at the School in collaboration and consultation with the SGS.
- Assists students in resolving individual as well as systemic problems.
- Coordinate and consult with SGS to monitor and provide support at the school level for Graduate students due to take their PhD comprehensive exams, proposal defense and for Masters students, final capstones or thesis requirements.
- Coordinate and consult with the Dean, HoD's with Graduate programs, faculty and Graduate students for nominations for thesis supervisors and committee members
- Coordinate and consult with HoD's with graduate programs and the Dean for nominations of External Examiners for consideration by the SGS and the GSC.
- Coordinate and consult with SGS to monitor and provide support at the school level for students on academic warning, probation, dismissal and withdrawal.
- Manage and monitor graduate program study plans, students' progress, Academic calendar, convey approved schedules by the SGS for Graduate defense dates; PhD comprehensive examinations and all relevant matters to Graduate students, programs and opportunities.
- Develop graduate activities to enhance the learning experience at the school level
- Facilitate mentorship of postgraduate students with the faculty and amongst themselves.
- Establish faculty advising for graduate students and in consultation with HOD's with graduate programs and the Dean, assigned Graduate students to faculty teaching graduate courses and the Senior faculty in the school.
- Provide advising and information clearing at the School level for graduate students.
- Provide annual Report on Graduate education at the School level.
- Provide to the SGS with appropriate updated content about the Graduate programs in consultation with the HOD's and the Dean to facilitate continuous update and improve of the graduate web content of the University's website.
- Coordinate with the HoD's and the Dean for the teaching schedule for all graduate programs and ensure the schedule follows the students' study plans and expected progress.
- Coordinate and consult with the Dean to ensure appropriate teaching assignment to graduate courses for quality delivery of instruction and learning engagement.
- Coordinate and collaborate with HoD's , Academic planning and quality assurance for periodic review of all programs at the school to ensure meeting adequately learning outcomes, compliance of BMAS requirements, NUC and relevant International Accreditation requirements, standards and guidelines.
- Ensure the delivery and learning engagements, content and program structure of all postgraduate programs is reflective and meets the standards and requirements of North American Universities and that of reputable universities across the world.

ADMISSIONS & FINANCIAL AID

AUN's admissions policy complies with the requirements of the National Universities Commission (NUC). This policy provides information on the principles and procedures of admission and outlines the responsibilities of those involved in the admissions process. The selection criteria may differ by program according to the established school and program requirements. Admission to graduate programs at the American University of Nigeria(AUN) is competitive. Applicants are evaluated on the strength of their academic background, results of standardized exams (if required by the program), work experience, and any additional evidence of potential success in the program. Each year, program faculty members determine the number of admission offers they may extend based on available space for their program. There are two intakes a year: Fall (August) and Spring (January)

All prospective graduate students may apply online (www.aun.edu.ng) to complete the admission application form or an application form may be obtained from Admissions & Financial Aid Office ([graduate.admissions@aun.edu.ng](mailto:graduate.admissions@ aun.edu.ng)).

Admission Standards

To be considered for the graduate program, the general University graduate admission requirements are as follows:

- An earned baccalaureate and/or graduate degree from a national and international accredited institution of higher education, verified from official transcripts. Students enrolled in classes who have not submitted the required proof of relevant documents will have a hold placed on their record. This hold, which will prevent future registration, will not be released until the proper documentation has been provided.
- A satisfactory scholastic average; usually for a master's degree a minimum grade average of "B" (3.0/4.0 or 3.5/5.0 grade point) in the undergraduate degree. Individual graduate programs may have specific admission requirements.

Admission Documentation Requirements

- Graduate application (hard copy/online (aun.edu.ng))
- Nonrefundable application fee and evidence of payment
- Two (2) letters of recommendations from previous institution or past/current employer who can attest to the applicant's potential for graduate academic work
- NYSC Discharge/Exemption Certificate (Nigerian citizens only)
- Essay, Statement of Research Purpose or Mini-proposal (Where applicable)
- Current Curriculum Vitae

Notifying Applicants Who Are Admitted

Schools, through graduate program coordinator, should communicate their recommendations to the Office of Enrollment Management. The School should not notify successful applicants that they have been admitted until the official letter has been sent by the Office of Enrollment Management

in the name of the School of Graduate Studies Council.

Notifying Applicants Who Are Denied Admission

The Office of Enrollment Management will notify applicants who are not recommended for admission by means of an official letter.

REGISTRATION

Registration is conducted through the University Registrar's Office with support from the staff members. Returning students will self-register.

To enable independent student registration, students will have to access the student information system to facilitate online registration.

COURSE WORK, GRADING SYSTEM, PROBATION AND DISMISSAL

Course Workload

Enrollment requirement is between 6 - 9 credit hours per semester for all graduate students. Students who have advanced to the research stage enroll in 6 credit hours.

Grading System

American University of Nigeria uses the 4.0 grade point average (GPA) system. The grades described in Table 1 are approved for use at American University of Nigeria and are included in the determination of the grade point average.

Table 1. Grading system

Calculated in the Grade Point Average		
Grade		Quality Points
A (Excellent)		4.00
A-		3.67
B+		3.33
B (Good)		3.00
B-		2.67
C+		2.33
C (Satisfactory).		2.00
F		0.00
WF		0.00
Not Calculated in the Grade Point Average		
S/U	-	Satisfactory/Unsatisfactory
V	-	Incomplete
AW	-	Administrative Withdraw
W	-	Withdraw
WP	-	Withdraw Pass
TR	-	Transfer
IP	-	In progress
CC	-	Continual Course
P/F	-	Pass/Fail

Cumulative Average: Cumulative GPA should not be below a grade average of "B".

Noncredit grades: The following symbols are approved for use in the cases indicated, but will not be included in the determination of the grade point average (see also Table 1):

- S/U** Graduate students in good standing may take courses on a Satisfactory/Unsatisfactory (S/U) basis with the consent of their Faculty Advisors. A Satisfactory grade implies work of B minus quality or better. Courses graded S/U are not included in the grade-point average. A course graded U may not be counted toward students' degree programs. Credit for courses taken on an S/U basis is limited to one-third of the total credit hours that students have taken and passed.
- I** Students are doing satisfactory work but, for reasons beyond their control, they are unable to meet the full requirements of the course and as such is incomplete "I". Unless otherwise specified by the respective school, an "I" will be changed to the grade of "F" by the Registrar's Office. The course Instructor must submit the final grade no later than the last day of the following semester. If a student is assigned an "I", the Instructor must notify the student in writing of the requirements for removal of the "I" and of the deadline for removal of the "I" using an extension form. The student will be required to sign the extension form. A copy of the form must be submitted to the SGS at the time the "I" is submitted.
- AW** Administrative Withdrawal - Course and/or semester withdrawal for documented Medical or Judicial (i.e. Suspension, University Dismissal) reasons.
- W** Withdrawal - students may withdraw from a course without GPA penalty, during Weeks 2 through 6, of the Fall and Spring semesters. A student must obtain a Course Withdrawal Form. If approved, a final grade of 'W' will be assigned to the transcript.
- WP** Withdrawal Pass - students may withdraw from a course without GPA penalty, after Week 6, but before the last two weeks, of the Fall and Spring semesters. A student must obtain a Course Withdrawal Form. If the approval is granted, the transcript will indicate that the student withdrew with a passing grade (WP).
- WF** Withdrawal Fail - At the time of withdrawal, the student had failing grade. A student must obtain a Course Withdrawal Form. If the approval is granted, the transcript will indicate that the student withdrew with a failing grade (WF). Withdrawals are not accepted after the last day of classes for each semester.
- TR** Transfer - Approved transfer credit. Transfer credits accepted from other institutions are included in the total number of credits applicable to degree requirements, but grades earned in these courses are not used when computing the GPA (see the 'Transfer of Credit' section for more information).
- IP** (In progress) Current course work, final grade pending/ to be assigned
- CC** At the American University of Nigeria, this symbol designates a course that extends beyond the semester (Continued Course). The grade is not given until the course is completed. This symbol cannot be substituted for an "I" (Incomplete).
- P/F** Pass or Fail - This is assigned to a course that are based on general assessment of a panel or a report. Examinations such as internship, comprehensive exams etc.

Course Repeat

While the grade of C is permissible, no grade of two (2) C's will be allowed in a transcript. In an excess of two C's, the course must be repeated to improve the CGPA.

Degree Classification

The determination of graduate degrees shall be based on the Cumulative Grade Point Average (CGPA) earned at the end of the program. The GPA is computed by dividing the total number of credit points (TCP) by the total number of units (TNU) for all the courses taken in the semester. The CGPA shall be used in the determination of the class of degree according to the following breakdown:

CUMULATIVE GRADE POINT AVERAGE (CGPA)	CLASS OF DEGREE
3.80-4.0	Distinction
3.50-3.79	Merit
3.00-3.49	Pass
Below 3.00	Fail

Academic Standing

Graduate students may be classified as in good academic standing, on some form of probation, or subject to dismissal. Students are normally in good academic standing if they:

- Are making adequate progress toward the completion of degree requirements;
- Have a cumulative grade point average of at least 3.0;
- Do not have more than two (2) Incomplete grades on their records; and
- Have not received warning letters from the Registrar's Office/SGS or been placed on formal probation for academic or, in certain professional programs, clinical deficiencies.

Warning letters: The School, through the University Registrar's Office, sends the student a warning letter and requests the SGS to place the student on formal probation. The School of Graduate Studies Council requires that the University Registrar supply the following for the student's information:

- The nature of the problem or deficiency;
- The steps to be taken to correct the deficiency;
- A reasonable period in which to correct the problem or to show acceptable improvement; and
- An approximate date on which the student's record will next be reviewed.

Academic Probation

1. Students will be placed on academic probation by the University Registrar at the end of any semester in which their cumulative GPA is below 3.0 or have 2 C's in their transcript.
2. Students on probation have one semester in which to achieve a cumulative GPA of 3.0 or higher and repeating the course(s) with a C and earning a grade higher than a C in one of the repeated courses. Expected grade for the repeated course must be a 'B-' or higher.
3. Probation will be removed at the end of any semester in which the student attains a cumulative GPA of 3.0.
4. Students may be dismissed if they fail to remove their probation by the end of the second semester on probation.

5. Actions involving academic probation and dismissal are entered on the student's permanent record.
6. Students who leave American University of Nigeria not in good standing and remain out of the University for no more than two semesters may submit a written request for reinstatement to the University Registrar, which will be reviewed by School of Graduate Studies.
7. The request should outline activities since leaving American University of Nigeria that contributed to the student's academic development.
8. Courses taken at another institution during this interim period are not transferable.
9. Students who have been out of the University for more than two semesters must submit a new application for admission to the University Registrar.
10. Dismissed students may also be considered for reinstatement after a one-year waiting period.
11. Students requiring additional time to complete a degree will be required to appeal for an extension through the Dean of the School in which they are enrolled and recommended to the Graduate School.
12. The student must notify the Dean in writing of the necessity to extend enrollment for purposes of graduation and cite reasons for the need. (Notification will be hand-delivered and sent by email.)
13. Students on probationary status may register and enroll, but they may not hold academic appointments (i.e. TA, RA), receive graduate scholarships, or be awarded advanced degrees.
14. The University Registrar/Schools may recommend probation and dismissal on the basis of a written evaluation of the student's progress. However, only the School of Graduate Studies has the authority to place a student on probation, to remove probationary status, and, if necessary, to dismiss a student from graduate standing.
15. Some schools/departments may choose to issue warning letters to apprise students that they are not making satisfactory progress rather than request formal probation for a student. Special requests for probation and dismissal should be addressed to the Dean of the School of Graduate Studies.

Dismissal

There are generally two reasons a graduate student may be dismissed: for disciplinary reasons due to violations of the Code of Student Conduct and for academic deficiencies. The former is determined by the Dean of the SGS and the VP & Dean of Student Affairs with the concurrence of the VP for Academic Affairs & Provost. Dismissal for academic reasons is entirely under the purview of the Dean of the School of Graduate Studies.

Academic Dismissal

A student is subject to academic dismissal for the following reasons:

- the student's academic deficiencies as determined by the Registrar/School and the School of Graduate Studies were not corrected after a reasonable, established period of probation;
or

- the student failed the comprehensive, or qualifying, exam; or
- the University Registrar/School assesses that a student's academic progress, although sufficient for the award of a master's degree, was insufficient to merit the student's proceeding to the doctoral level; or
- the student failed to meet the necessary clinical standards in a professional program.

When a Student is Dismissed

After the student's record has been reviewed by the University Registrar and the School's Dean, their recommendations, if applicable, are reviewed by the School of Graduate Studies (SGS) Dean, and a letter conveying dismissal decision is dispatched to the student. The Office of the Registrar blocks the student from further registration. The student is ineligible to apply for readmission to the program from which he or she has been academically dismissed. However, the student is not excluded from applying to another academic program; this program has the right to review the student's academic records to form its decision on whether or not to admit the student.

Graduate Student Appeal Procedure

The Graduate Student Appeal procedure is to be used by graduate students with complaints about dismissal from graduate standing, placement on probationary status, denial of readmission, and other administrative or academic decisions that terminate or otherwise impede progress toward academic or professional degree goals. For graduate students, this procedure may also be used to resolve disputes over joint authorship of research in accordance with joint authorship policies of schools' departments. Through the Graduate Appeal Procedure, graduate students have the right to appeal academic or administrative decisions that have resulted in termination or have interfered with their progress toward a degree if the decision is alleged to have been based on the following criteria:

- Procedural error or violation of official policy by academic or administrative personnel;
- Judgments improperly based upon nonacademic criteria, including, but not limited to, discrimination or harassment on the basis of race, color, national origin, religion, sex, disability, age, medical condition (cancer related), ancestry, marital status, or citizenship;
- Special mitigating circumstances beyond the student's control not properly taken into account in a decision affecting the student's academic progress.

CONTINUOUS ENROLLMENT REQUIREMENTS

Deferral, Withdrawal, Interruption, Termination and Resumption of Studies

All registered graduate students must be continuously enrolled in their respective program of study from matriculation to graduation. Enrollment in any part of the academic semester fulfills this requirement. Upon completion of the coursework, all graduate students are expected to be actively enrolled in the appropriate thesis maintenance course (D899 – Master's or D999 – Doctorate) until the thesis or dissertation completion. Failure to maintain required active and continuous enrollment may result in de-registration of the student.

SGS Review of Student Progress

Schools in coordination with SGS are responsible for monitoring their students' overall progress toward graduate degrees. In fairness to students and to avoid problems later on, Schools, through the SGS, should let students know by written evaluations what the faculty considers to be satisfactory progress.

Doctoral Dissertation Progress Report

It is the requirement of the AUN School of Graduate Studies that doctoral students currently registered for dissertation credits must meet basic progress expectations to continue dissertation work. This can be evidenced by acceptable quality of ongoing work as collectively approved by the candidate's dissertation committee members, and signed by members and department chair.

Semester Deferral

The student may (after registering) drop all courses in a semester according to the following regulations:

- Apply to the chairperson of the department at least five weeks before the final exam period.
- Receive approval from Dean of the relevant school, and Dean of the School of Graduate Studies.
- Semester should not be part of the additional opportunity period.
- Semester counts as part of deferral period.
- Student shall be considered as having failed all courses he/she registered in (in the deferred semester) if not abiding by the above rules of deferral.

Admission Deferral

The University Registrar, School Deans and the Dean of the School of Graduate Studies may approve deferral of students' admission into a program for a maximum period of two semesters.

Registration Deferral

The Dean of School of Graduate Studies may approve deferral of students' registration under the following conditions:

- The student must have successfully completed at least one semester in the program or covered a substantial part of the thesis.
- The time limit of deferral should not exceed four semesters (two years of study).
- Requests for deferral should be submitted at least two weeks before the start of the semester.
- Deferral period will not be counted within the maximum time limit for obtaining the degree.

Withdrawal

A student who voluntarily withdraws from a master's program will be treated as a new applicant on deciding to rejoin. All updates of conditions will be applied to his/her case. Withdrawal becomes effective when accorded with the following regulations:

- The student should apply (for withdrawal) through their School to the SGS before commencement of final exams.
- The SGS shall notify the University Registrar of a student's withdrawal.

Medical Withdrawal Policy

When a student discontinues attending courses due to medical reasons, in certain cases, it may be possible for that student to receive a pro-rated refund of tuition. If a student is hospitalized due to an emergency (which renders him/her unable to withdraw from courses), the University Registrar can process an approved retroactive Medical Withdrawal based on the last date that the student attended class. For details of the process, refer to the Office of the University Registrar.

Study Interruption

Students shall be considered as dropouts and their records as closed in the following cases:

- If accepted in the program and did not register on time.
- If registered in the courses and did not attend them.
- Failure to be continuously enrolled for up to two (2) semesters.

Enrollment Termination

Student's enrollment in the graduate program will be terminated by a decision of the Graduate Studies Council (GSC) in the following cases:

- If accepted in the program and did not register during regular registration period.
- If failed to pass supplementary courses in accordance with the required conditions set out in the admission document and as set out by the Department Councils. The time limit allotted to such courses should not exceed three semesters.
- Failure to be continuously enrolled for up to two (2) semesters.

Study Resumption

A dropout or a terminated student who was impeded by personal obstacles, that both Department and School Councils excuse, may resume studying in a program on the subsequent recommendation of the Graduate Studies Council and the final approval of the University Senate. However, the following conditions should also be taken into account:

On the lapse of more than six semesters, a terminated student shall be treated as a new student regardless of the number of semesters completed in the program.

On return after six semesters or less, a terminated student may be asked to repeat some of the courses already covered. Courses should be specified by Department and School Councils and approved by the Graduate Studies Council; the courses studied earlier are to be counted within the cumulative grade point average after resuming study; the period spent in the program before termination is also to be counted within the maximum time limit for obtaining the degree.

Transferring students who get accepted in the University will be treated specially, in which their previous courses will be evaluated by assigned school(s). Credit transfer will be granted for approved courses and student will be assisted to register in next courses at AUN. Also, students who take courses in summer semester (after taking approvals from the Office of the University Registrar) will have their courses credited (if they maintain proper GPA in each course) and will be assisted to register in subsequent courses.

A student should be familiar with the registration policies and guidelines. Understanding fully all registration aspects will definitely help avoiding any mistakes or confusion which might cause aggravating results.

For registration dates and timelines, regularly each semester students can refer to the AUN academic calendar.

DEGREE

Academic Degree

On recommendations of Departments, School Councils and endorsement of the Graduate Studies Council and approved by the Senate, the University Governing Council grants the following degrees:

- Postgraduate Diplomas
- Master's Degrees
- Doctorate Degrees

MASTER'S DEGREES

The study for a master's degree at AUN follows the thesis option as per *NUC Guidelines*.

- Thesis option: master's students must take at least 30 credit hours of courses plus a thesis.

The duration for obtaining a master's degree is a minimum of four semesters (i.e. 2 years) and a maximum of eight semesters (i.e. 4 years)

The academic year has two semesters of at least fifteen weeks each. A summer session is minimally eight weeks

A graduate student at AUN must take at least 75% of the program's credit hours at the University

The same coursework cannot be used toward two different master's degrees unless it is part of an approved concurrent master's program. Schools/departments set their own subject requirements for degrees. If Schools/departments change requirements, they must obtain approval from the Graduate Studies Council (GSC). All affected students must be informed in writing. Schools/departments also must permit students who entered under the former requirements to elect to follow either the new or old rules.

Transfers of Credit Towards the Master's Degree

A master's student may transfer up to 6 semester credit hours or 6 quarter credit hours of coursework completed as a graduate student at another institution. The units must be equivalent to courses in the student's graduate program at AUN, and the student must have received at least a B in the course(s). However, students cannot use units from another institution to satisfy the minimum requirement courses or the minimum academic residence requirement. In addition, they may not present coursework previously used to satisfy requirements for another degree program at AUN or at another in another institution.

Thesis Committee: Roles and Responsibilities

A *Master's Advisory Committee* will be formed for each student. The committee will consist of two members with a faculty member as the main academic advisor/supervisor and Chair. The Chair of the Committee must have research and graduate student advising experience and should be an Associate or Full Professor.

In addition, there are two other members, one of whom may be from an organization outside of the University. The Committee will assist the student in the formulation and approval of the *Thesis Proposal*, and later advise the student in the execution of the research, the thesis write-up, and help the student to prepare for the oral defense. A faculty member may supervise a maximum of five (5) theses/dissertations only.

On completion of the student's thesis and approval by the Advisory Committee, the School's Graduate Programs Coordinator, upon the recommendation of the supervisor/major advisor, sends the manuscript to an *External Evaluator*. Once the External Evaluator approves the thesis, then the School's Graduate Programs Coordinator sets a date for the thesis defense. The Graduate Studies Council recommends the names of the proposed voting members of the *Thesis Examination Committee* to the SGS for approval.

A *Thesis Examination Committee* will consist of at least four members: a non-voting chair appointed by SGS and three voting members recommended by the School and approved by SGS, one of whom should be the Major Advisor, where another may be the *External Evaluator* from an outside University.

Changes in Master's Advisory Committee Membership

Before planning to file their theses, students who wish to change the membership of their Master's Advisory Committee must be sure that such a change has been approved by the School Graduate Committee and the Graduate Studies Council. A student may request a change in committee by submitting a written request to their Faculty Advisor. The Faculty Advisor should consult with any faculty members as appropriate to assure that they are aware of membership changes. However, the Faculty Advisor, rather than any committee member, has the final authority to recommend approval of the changes.

Thesis Defense

Once the thesis has been approved by the Master's Advisory Committee and the External Evaluator, the School's Graduate Programs Coordinator will convene the Thesis Examination Committee.

At the defense, the Chair is non-voting and is present to ensure that proper procedures are followed. The initial part of the defense is open to the public including a brief question period. Thesis presentation suggested being 15- 20 minutes followed by 5-10 minutes of questions from audience. After this, the public will be asked to leave by the Chairperson. The Thesis Examination Committee will continue asking questions for up to 30 minutes. The candidate is then asked to leave the room by the Chair. The Committee, after deliberation, decides by majority vote on one of four decisions: Pass, Pass with Minor Revisions (corrections to be confirmed by the Chair/Supervisor), Pass Pending Major Revisions (corrections to be confirmed by the Advisor & the Chair), Not Passed. Decisions will be based on a majority vote.

All Thesis Examination Committee Members sign a Thesis Report Form. The candidate is then asked to come back into the room and is informed of the decision. The Chair will submit the report to the Office of the Dean for Graduate Studies. The Chair may add a page of comments, if necessary.

Students whose theses are not passed may repeat the defense one more time but not earlier than two months after the first defense.

Completion of Coursework for the Degree

Master's students must finish all courses required for the degree by the last day of the semester in which they expect the degree to be conferred. After completion of requirements for the degree for which they were admitted, students may not register and enroll for a subsequent semester unless they have been previously approved for a new degree goal or a new major.

Time in Candidacy

The duration for obtaining a master's degree is a minimum of four semesters (i.e. 2 years) and a maximum of eight semesters (i.e. 4 years). If candidates are unable to complete the requirements as specified and highlighted herewith, their candidacy will lapse unless the Major Advisor/Supervisor request an extension of time from the Graduate Studies Council (GSC).



DOCTORAL DEGREES

Dissertation for Doctoral Degree

Doctoral programs consist of at least 30 credit hours of graduate courses required and 30 credit hours of dissertation research required.

A dissertation is required of each doctoral candidate in any department at AUN offering the doctoral degree. The dissertation topic must be approved by the department and filed with the dean of School of Graduate Studies (SGS) no later than one semester preceding that in which the candidate expects to receive the degree.

The School of Graduate Studies (SGS) has adopted a procedure for the preparation of a dissertation prospectus. This document will normally include an outline of the parameters of the projected dissertation topic with a statement of the problem to be undertaken, the procedure or methodology to be used in the research, a preliminary review of the literature substantiating the need for the study, and the principle sources of information for the dissertation. The prospectus must be in writing, but an oral presentation at a publicly scheduled defense of the dissertation is required.

Each doctoral candidate, upon admission to candidacy, must register for Dissertation (D999) for a total of 30 hours. It is expected that a doctoral candidate will continuously register for Dissertation research credits, and thereafter maintenance of matriculation- D999, each semester, until all requirements for the degree have been met. The In-Progress (IP) grade is used until the student completes the dissertation at which time all IP grades in dissertation are changed to Satisfactory (S) grades.

The dissertation must demonstrate that the student has acquired the ability to conduct research in a discriminating and original manner. The dissertation should make a

significant contribution to the field in which it is written with a requirement to evidence publication of at least four scholarly international peer reviewed articles- two (2) in peer reviewed International Journals and two (2) in peer reviewed International Conference Proceedings derived from the findings of the dissertation

After the dissertation, typed in legible form, is accepted by the dissertation advisor/supervisor, it will be read by the student's dissertation committee members, and any recommended revisions will be communicated to the student. Upon completion of the revisions, if any and upon evidence of this requirements, the student's thesis/dissertation will be approved by the Doctoral Dissertation Board for External Examination by scholars in the field of the dissertation and/or closely related.

The external examiners must be at the Associate or Full Professor rank and in the field of the dissertation and/or closely related and a full time academic at a reputable University. Further, two of the external examiners must be based at reputable Universities overseas and one external examiner must be based at a reputable university located in Nigeria. All the external examiners must be in the field of the dissertation and/or closely related.

Committee Roles and Responsibilities

Doctoral Advisory Committee: The Committee, which will be formed in consultation with the PhD candidate, will consist of three members: a full-time AUN faculty member as the main academic advisor/supervisor/chairperson, and two additional members. Further, in addition to Doctoral committee members from the Department, there will be an external committee member at an Associate or Full Professor Rank outside of the department and the school the candidate is pursuing his/her PhD research, but a full time faculty member at one of AUN's designated schools. And, one external member at the rank of Associate/Full Professor in the field of the dissertation and/or closely related and at a reputable University overseas.

The dissertation advisor/supervisor/chairperson must have research experiences in the area of the dissertation or closely related and graduate student advising experience and must be at the Associate or Full Professor Rank. The advisor/supervisor/chairperson has the prerogative to recommend a co-advisor/co-supervisor/co-chairperson who may be an experienced Assistant Professor in the area of the dissertation or closely related or of a higher rank and a full-time faculty member in the University, nationally or overseas. This must be acceptable to the student and cleared by the Dissertation Doctoral Board (DDB) and formally appointed.

Further, in addition to Doctoral committee members from the Department, there will be an external committee member at an Associate or Full Professor Rank outside of the department and School the candidate is pursuing his/her PhD research, but a full time faculty member at one of AUN's designated schools. And, one external member at the rank of Associate/Full Professor in the field of the dissertation and/or closely related and at a reputable University overseas.

The Dissertation Committee members will advise the PhD candidate in the formulation of the research proposal, theoretical and methodological guidance and engagement, adequate discussion and engagement of all literature relevant to the research questions and the dissertation and the execution of the research project, through to the preparation of the PhD public defense. A faculty member may supervise a maximum of five (5) PhD candidates only. Any addition must be cleared by the Doctoral Dissertation board and may not exceed 6 PhD candidates.

Doctoral Dissertation External Examiner Committee:

Upon successful results from the three external examiners, the PhD candidate will be required to defend publicly the findings before the three external examiners, the Graduate School Dissertation Doctoral Board, SGS graduate faculty members, including the candidate's doctoral dissertation committee, the Dean, HOD/Chairperson of the Department the PhD is pursued and the Public.

The responsibility for conducting the examination at the Public defense itself will be that of the three external examiners with one of them chairing. The defense of the dissertation is open to the university community and the public. Questioning is restricted to members of the Dissertation Doctoral Board, the graduate faculty, and the three external examiners and their vote will be conducted in private after the conclusion of the public defense and questioning.

After the candidate has passed the PhD defense, the doctoral candidates will submit their dissertation in electronic form and properly bounded hard copies (6 copies) signed by each committee member and external examiner. The dissertation will also include an abstract of no more than 350 words. Information on the process may be found on the AUN University Libraries' Guidelines for the Preparation of Electronic Theses and Dissertations website. Theses and dissertations must be prepared according to established guidelines. Guidelines for preparation and typing of theses and dissertations are available in the School of Graduate Studies office. It is the responsibility of the doctoral candidate to fulfill this requirement.

All dissertations must be published according to a plan provided by ProQuest Information and Learning, Ann Arbor, Michigan, for the purposes of archiving, indexing, and dissemination. All communications and relations between faculty or students and ProQuest shall be carried out only through the AUN University librarian. Publication of the complete dissertation or significant parts of it through other avenues is expected, but this is not to be used in lieu of the requirement stated herein.

Transfer of Graduate Credits Towards the Doctoral Degree:

A doctoral student may submit a request to the SGS Dean for a maximum of six (6) credit hours of course transfer in the course work from an accredited institution, provided such courses satisfy the program requirements as approved by their School's Graduate Programs Coordinator and Dean. The minimum grade requirement for transfer courses is a "B". However, all transferred courses will be reflected as "TR" in the student's transcript and will not be used in computing the final grade point average (GPA).

Doctoral Comprehensive Exam

In order to maintain the quality of the program, doctoral students will be required to take a comprehensive exam at the end of their doctoral coursework. Depending on the program, the comprehensive exam may be designed to assess a student's course knowledge, general knowledge in the field and knowledge of proposed research area. It shall have a written component. There is an oral component which may be optional to the individual degree program. The comprehensive exam will be administered by the Department/School Graduate Committee in coordination with SGS.

The related Department/School sets up a committee of at least three teaching staff (professors and associate professors) in the student's main specialization. The committee shall be responsible for preparing, evaluating and determining the outcome of the exam. The exam is graded as a unit (i.e. pass or fail). Students may have up to a total of two attempts to pass this exam. The comprehensive exam must be taken within the semester immediately, following coursework completion.

Oral Defense of Dissertation Proposal

Doctoral students will also be required to pass an oral exam at which they defend their research proposal before their Doctoral Advisory Committee. This should normally be done after the

Doctoral Comprehensive Exam is passed.

Time in Candidacy

Candidates for the Degree of Doctor of Philosophy (Ph.D) who are admitted on a full-time study, shall pursue the course of study for the maximum of ten (10) semesters (i.e 5 years), or fourteen (14) semesters (i.e 7 years) for the student admitted on a part-time study. In extenuating circumstances and upon application, candidacy can be extended by no more than additional two (2) semesters (i.e 1 year) to enable degree completion.

Eligibility for Certificate Award for Doctorate Degree Course Work Completion

Upon successful completion of the doctorate course work and comprehensive exam requirement (ABD status), and in the event the student is unable to continue to dissertation completion, the student shall be eligible to receive the American University of Nigeria's (*Advanced Graduate Certificate*) in the student's cognate area.

Paper/Article Publication Requirements

A student pursuing a Doctorate degree is expected to publish at least two (2) first-author peer-reviewed research publications and at least two (2) conference papers in a reputable journal/conference before the final dissertation defense is scheduled.

Public Seminar

Just before the Dissertation Defense, a student must give a public seminar on any aspect of the study. The main aim of such a presentation is to give the students some experience at presenting their research work to the scientific community as well as other students.

Dissertation Defense

Upon the student's completion of the dissertation write-up and obtaining the School's Doctoral Advisory Committee's approval, the dissertation will be forwarded to an External Evaluator for final review and approval. Once both the Committee and Evaluator approve the dissertation the School of Graduate Studies will convene the Dissertation Examination/Defense Committee. A typical defense, for example, will last from one to two hours and will consist of a brief presentation by the student of the significant results of the research project, followed by a question and answer period.

The Examination Committee will consist of at least four members: a non-voting Chair and three voting members, one of whom may be from the School Advisory Committee and another of whom may be the External Evaluator from an outside University. The Dean of Graduate Studies shall be in attendance. Membership of the Examination Committee will be limited to Associate and Full Professors. Decisions will be based on a majority vote.

OTHER POLICIES ON THESIS AND DISSERTATION SUBMISSIONS

Nullification of an oral examination

The Graduate School Council shall declare an oral examination/defense null and void for any

of the following reasons: (i) Examination panel was improperly constituted; (ii) External examiner(s) were not duly appointed by the Graduate Council. Where an oral examination is nullified, the Graduate School Council shall convey the decision to the School's Graduate Programs Coordinator, the School of Graduate Studies and the student, accordingly.

Preparation and Deposition of Completed Thesis and Dissertation

For each successfully completed thesis/dissertation, five (5) signed hard copies shall be deposited with the School of Graduate Studies. The Dean of School of Graduate Studies shall append his/her signature to these five copies as soon as the Graduate Council approves the result of the examination. Subsequently, the copies should be distributed to the following: University Library, School of Graduate Studies, Departmental Library, the Chair of Advisory Committee, the student.

Color for Thesis and Dissertation covers

PGD (Navy Blue), Master's (Navy Blue with yellow stripe), Doctorate (Black)

Effective Date of Award

The effective date of award of a diploma or degree to a successful candidate shall be the date the result is approved by the Graduate Studies Council and the AUN Senate.

Issuance of Certificate

No candidate shall be notified of his or her final result unless the School of Graduate Studies, on the advice of the Bursar and Registrar, certify that all fees are fully paid.

Use of Human and Animal Subjects

Students who plan research or development activities that involve human and animal subjects must also have their work reviewed and approved by the AUN *Institutional Review Board (IRB)* before they begin their research. Protocols involving human subjects must be filed with the School of Graduate Studies. The School of Graduate Studies will not accept dissertations or theses that include human or animal subject materials obtained or produced without IRB authorization.

Withholding a Thesis or Dissertation

Sometimes there are extraordinary situations under which a student may prefer that the manuscript not be published. These circumstances may involve the disclosure of patentable rights in the work before a patent can be granted, similar disclosure detrimental to the rights of the author, or disclosure of facts about persons or institutions before professional ethics would permit such disclosure. The Dean of the School of Graduate Studies may permit, with a supportive explanatory letter from the *Thesis or Dissertation Examination Committee* chair, the manuscript to be withheld from public access for a specified and limited period of time.

Copyright

The University does not provide a copyright service. Students may copyright their work independently.

Time Limits on Use of Courses for Degrees

Sometimes students return to the University after an absence and request to use courses that they completed in the past. A time limit of 4 years has been established for use of these courses.

Financial Support

Graduate Students Grants Program are available (nationals) for Master's and Doctoral student through various Federal Agencies such as the TETFund.

APPROVED POLICY GUIDELINES FOR DOCTORAL SUPERVISION AT AUN; DOCTORAL EXAMINATIONS (EXTERNAL EXAMINERS); COMMITTEE MEMBERSHIP

A. PhD Supervision at AUN

1. PhD main Supervisor/Chairperson must be a full time Faculty at the Full Professor/Associate Professor level at the department where the degree is being pursued. This assignment will not accrue any remuneration or honorarium. The PhD candidate will nominate faculty in their respective department who met the highlighted supervision criteria for consideration and approval by the Doctoral Dissertation Board. The approval of the Doctoral Dissertation Board will be formally communicated to the PhD candidate by the School of Graduate Studies.
2. The main supervisor may invite an advanced Assistant professor with a good research output as Co-supervisor in consultation with the PhD candidate and subject to the approval of the Doctoral Dissertation Board. The choice is the prerogative of the main supervisor.
3. In the event, the supervisor of choice of the student is an advanced Assistant professor with a good research output, the supervision must be Co-chaired with an Associate or Full Professor in the Department who will serve as the main Supervisor/Chairperson.

B. External Examination of Doctoral Dissertation

1. The total number of examiners per dissertation will be three and subject to recommendation by appropriate doctoral committee of the Graduate school and approved by the VPAA/Provost. Two of the external examiners must hold full time Faculty positions at the Associate or Full Professor rank at reputable international universities and the third must be an Associate or Full Professor from Nigeria and holds a full time Faculty position at a reputable accredited university in Nigeria.

C. Doctoral Dissertation Committee Members

1. Members of the doctoral committee will not be remunerated or given course releases.
2. Membership will be as follows: - two (2) full time faculty members with a minimum rank of Assistant Professor and above from the department the doctoral degree is being pursued; one full time faculty member with a rank of Associate and above outside the department the degree is being pursued and may be from other schools or faculty outside of the School the doctoral degree is housed.
3. One (1) External member outside of AUN and based nationally or internationally, with a high reputation and research/professional expertise in the discipline or research topic or closely related. The Doctoral Board will consider an additional external member (optional) based internationally at a reputable University and a researcher in the discipline or closely related
4. The doctoral candidate in consultation with his/her supervisor(s) will nominate their Doctoral Committee members as highlighted above, for consideration and approval by the Doctoral Dissertation Board. The approval of the Doctoral Dissertation Board will be formally communicated to the doctoral candidate by the School of Graduate Studies.

GENERAL DOCTORAL PROGRAM STRUCTURE

The Doctoral program requires a minimum of 60 credit units made up as follows:

Five (5) Research Methodology courses (3 credits each)	15 - 18 Credit hours
Four (4) Core requirement Courses (3 credits each)	12 Credit hours
Two (2) Specialized elective courses	6 Credit hours
Thesis done over four semesters (two years)	30 Credit hours
Total	60 Credit hours

Doctoral Program structure			
Year	Semester	Suggested	Program
		Credit Hours Load	
1	1	9	Coursework
	2	9	
2	3	6	
	4	6	
Comprehensive Examination			
3	5	9	PhD Proposal
	6	9	
4	7	6	PhD Dissertation
	8	6	
<p>*If student's research work exceeds the two (2) years allocated, such student will be required to notify University Registrar and School of Graduate studies. A student must apply for D999 (Maintenance of Full-time Status) along with 3 credit hours tuition, and mandatory fees payment will be charged each subsequent semester.</p>			

GRADUATE PROGRAM CURRICULUM

SCHOOL OF BUSINESS AND ENTREPRENEURSHIP (SBE)

The School of Business and Entrepreneurship (SBE) offers the following Graduate degree programs and provides each student the opportunity to concentrate/specialize in a specific area:

- PGDM
- MBA
- MSc Business Administration
- PhD Business Administration

PGDM Curriculum

The postgraduate diploma in management is designed for individuals with a non-business related academic background who intend to go into either office administration or general business management.

Philosophy

The philosophy of the postgraduate diploma in management program is to provide basic and remedial training in Management for the purpose of preparing students for higher studies as well as for managerial positions in the private and public sectors of the economy.

Objectives

The objectives of the program are to:

- (i) Develop the competency of students in understanding the basic principles and concepts in Management and utilizing them in practice; and
- (ii) Equip students with basic knowledge and techniques of managerial problem-solving and decision-making relevant to both the private and public sector organizations.

Course Structure

The PGDM program requires a minimum of 32 credit units made up as follows:

- | | |
|--|----------|
| • Fourteen core courses (2 credits each) | 28 units |
| • Research Project | 4 units |
| • Total | 32 units |

Core Courses

	Credit Units
PGD 701 - Business Mathematics	2
PGD 703 - Business Statistics	2
PGD 707 - Computers in Organizations	2
PGD 710 - Principles of Accounting	2
PGD 720 - Principles of Finance	2
PGD 730 - Principles of Management	2
PGD 740 - Fundamentals of Marketing	2
PGD 750 - Human Resource Management	2
PGD 760 - Introduction to Public Administration	2
PGD 770 - Principles of Macro Economics	2
PGD 773 - Principles of Micro Economics	2
PGD 775 - Nigerian Economy	2

PGD 777 - Global Economic Environment	2
PGD 790 - Research Methodology	2
PGD 799 - Research Project	4
(All courses are compulsory)	

Course Description

PGD Management (PGDM)

PGD 701 Business Mathematics

Topics in this include: Revision of basic algebra; set theory; permutations and combinations; annuity, cash flow; functions and functional relationship; analysis of marginal utility and integral calculus; partial and total derivatives. In discussing these topics, emphasis will be on their specific relevance to business/management contents.

PGD 703 Business Statistics

This course covers basic concepts in descriptive and inferential statistics and their use in empirical research.

PGD 707 Computers in Organizations

This course explains the why and how of computers, the use of computers in business and other organizations, data transmission, nature, speed and error detection. It also examines systems analysis and design, the programming process, problem definition, flow charting and decision table.

PGD 710 Principles of Accounting

This course deals with the underlying theory of double entry bookkeeping. Topics include: the nature, scope and purpose of accounting, theories and mechanics of double entry, bookkeeping statements, fixed accounts, funds flow statements, account of not-for-profit organizations, incomplete records.

PGD 720 Principles of Finance

This provides a systematic and vigorous examination of the theoretical framework of financial/investment management analysis. Main topics include: the economic theory of choice, investment decision and appraisal techniques, financial requirements planning, working capital management, financial ratio, dividend decision, cash budgeting, fixed assets and equity management funds flow statement, and emphasis on financial markets.

PGD 730 Principles of Management

The development of Management thought; theories and models of management; the manager and his environment; organization structure and relationships; leadership and motivation; organization development; the management functions and procedures; planning; organizing; directing; controlling, etc.

PGD 740 Fundamentals of Marketing

This course focuses on the appreciation of functions and channels of marketing and its role in the corporate environment. Major elements of marketing strategy in relation to product development; distribution channels; advertising, sales promotion and pricing are examined in detail.

PGD 750 Human Resource Management

Topics to be addressed in this course include nature and scope of HRM; strategies and management practices in manpower planning; staffing; human resource planning; human resource training and development; performance measurement and management; career planning and employee welfare; compensation designs and reward management.

PGD 760 Introduction to Public Administration

The course focuses on the emergence of public administration; problems of organization; the bureaucratic phenomenon and social change; the basics of public policy formulation and implementation processes by bureaucracies; accountability and efficiency in public administration.

PGD 770 Principles of Macroeconomics

Introduces the basic principles of macroeconomics, stressing national income, unemployment, inflation, economic growth, business cycles and open economies.

PGD 773 Principles of Microeconomics

Introduces the basic principles of microeconomics and their applications: supply and demand, operation of markets, consumer and enterprise behaviour, competition and monopoly, income distribution and international trade.

PGD 775 Nigerian Economy

This course provides a thorough exploration of the Nigerian economy.

PGD 777 Global Economic Environment

Topics to be treated include Nigeria and the global economy; the implications of the free market economy on business; governments, consumers, and labour; strategic aspects of international trade, globalization and international institutions; multilateral negotiations; lessons from the Asian tigers.

PGD 790 Research Methodology

The objective of this course is to introduce the students to scientific enquiry through gathering and analysis of relevant data.

PGD 799 Research Project

A research-based study and report on an acceptable management problem area approved by the supervisor and the Head of Department.

MBA PROGRAM

The AUN Master of Business Administration (MBA) full-time program is designed to suit the graduate students, working class, public officers and professional managers from any part of Nigeria. It comprises an intensive series of stimulating lectures, periodic seminars and small group assignments. The program will run for 24 calendar months (2 years). During the last year of the program, the MBA students are expected to carry out an approved project under thorough supervision.

It prepares professionals and executive managers for the challenging and demanding world of business and as well provides an excellent opportunity to take on a range of roles in management consultancy, banking, corporate finance and financial management. We offer broad training in management. As the program progresses, students have the opportunity to study specialized topics in management to match career interests.

The MBA program will equip students to think logically, laterally and independently, thereby preparing them adequately to tackle the challenges of the industry. Furthermore, it is ideal for people wishing to start their own business while it offers excellent prospects for future employment.

The MBA program outline			
Year	Semester	Suggested	Program
		Credit Hours Load	
1	1	12	Coursework
	2	12	
	3	12	
2	4	12	
	5	12	
	6	12	
Total		72	
<p><i>If a student's duration of study exceeds the 6th semester, it will be required to notify the University Registrar and the School of Graduate Studies.</i></p>			

Philosophy

The philosophy of the MBA program is anchored on AUN's value proposition as a Development University. Our MBA seeks to develop highly skilled professional managers and leaders for domestic government and industry, as well as for the global marketplace. Consequently, the AUN MBA degree maintains appropriate benchmarking processes for competitive rigor, and equips the graduate with the capability to become a problem solver.

Objectives of MBA Program

The Master of Business Administration Degree is aimed at:

- (i) Providing students with the knowledge and skills to enhance their performance and to enable them to assume broader responsibility in the rapidly changing environment faced by private and the public sectors
- (ii) Providing students with the knowledge required for understanding and practical analysis of problems related to management/and administration of public, private and international organizations
- (iii) Producing managers who are capable of applying appropriate management principles and techniques of problem solving in the Nigerian environment and the world at large.
- (iv) Producing socially responsible managers who are mindful of accepted norms and ethics.
- (v) Producing managers who are equipped with relevant ICT knowledge and skills.
- (vi) Producing managers with entrepreneurial skills and leadership qualities.
- (vii) Producing graduates with the necessary competencies and skills to function effectively as academics in Business Administration.

Delivery Mode: Face-To-Face and Supported Online Learning

With regard to delivery mode, the MBA program is a combination of face-to-face learning and supported online learning. Our MBA program is structured learning that leverages an intensive series of stimulating lectures, case studies, simulations, periodic seminars and small group assignments. The program will run for 2 years (24 months). An academic year of 12 months has three semesters. Each semester is equivalent to 12 weeks of lectures spread over 4 months.

Every month, there will be a week of intensive lectures of 27 contact hours. Therefore, the entire workload for a semester will be covered within four weeks of intensive face-to-face lectures. Face-to-face lectures will hold once in a month from Thursday to Saturday, while the supported online lectures (self-study) will complement as independent study (12 credit hours per course).

MBA Curriculum and Graduation Requirements

The total number of credit units that students must take to meet the minimum requirements for completion of the MBA program is 72 units. The 72 credit units made up as follows:

- | | |
|---------------------------------------|-----------------|
| • Twenty-two courses (3 credits each) | 66 Credit units |
| • Research Project | 6 Credit units |
| • Total | 72 Credit units |

Number of Courses to be Taken in MBA

Core course are taken by all students on the course. These eighteen (18) core MBA courses (3 credit units each) give students a solid grounding in management and prepare them to explore any topic of interest. Alongside the core courses, students can choose five elective courses (3 credit units each), a research project (6 units) to broaden their horizons in different areas of management. The courses (core and elective) are as listed below.

Core Courses	Credit Units
1. MBA 801 - Introduction to General Management	3
2. MBA 802 - Environment of Business	3
3. MBA 803 - Introduction to Accounting	3
4. MBA 804 - Marketing Management & Strategy	3
5. MBA 805 - Quantitative Methods for Managers	3
6. MBA 806 - Managerial Economics	3
7. MBA 807 - Corporate Finance	3
8. MBA 808 - ICT Management	3
9. MBA 809 - Business Law and Ethics	3
10. MBA 810 - Human Resources Management	3
11. MBA 811 - Corporate Strategy	3
12. MBA 812 - Entrepreneurship	3
13. MBA 813 - Research Methodology	3
14. MBA 814 - Operations Management	3
15. MBA 815 - Foreign Language	3
16. MBA 821 - Organizational Behavior	3
17. MBA 823 - MBA Seminar	3
18. MBA 899 - Research Project	6

Elective Options:

Students are required to select an additional 5 Elective MBA Courses from the list of elective courses above.

Elective Courses:**Credit units**

1. MBA 816 - Introduction to International Business	3
2. MBA 817 - Small Business Management	3
3. MBA 818 - Consumer Behavior	3
4. MBA 819 - Entrepreneurship Development	3
5. MBA 820 - International Law and Business	3
6. MBA 822 - Public Sector Accounting	3
7. MBA 890 - MBA Internship	3

MBA 2019/2020 ACADEMIC CALENDAR

MBA (4 Sessions per day on Intensive Week – Fridays & Weekends (24 credit hours))	
Orientation	August
First Semester	
1st Intensive week (on Campus) MBA 801 Introduction to General Management (3 units)	September
Online Discussions/ Webinars	Personal learning online (12 units)
2nd Intensive week (on Campus) MBA 802 Environment of Business (3 units)	October
Online Discussions/ Webinars	
3rd Intensive week (on Campus) MBA 803 Introduction to Accounting (3 units)	November
Online Discussions/ Webinars	Personal learning online (12 units)
4th Intensive week (on Campus) - MBA 804 Marketing Management & Strategy (3 units)	December,
Online Discussions/ Webinars	Personal learning online (12 units)

Examination	December
Second Semester	
1st Intensive week (on Campus) MBA 806 Managerial Economics (3 units)	January
Online Discussions/ Webinars	Personal learning online (12 units)
2nd Intensive week (on Campus) MBA 808 ICT Management (3 units)	February
Online Discussions/ Webinars	Personal learning online (12 units)
3rd Intensive week (on Campus)	March
MBA 805 Quantitative Methods for Manager (3 units)	
Online Discussions/ Webinars	
4th Intensive week (on Campus) MBA 809 Business Ethics (3 units)	April
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	May
Third Semester	
1st Intensive week (on Campus) MBA 810 Human Resources Mgt. (3 units)	May
Online Discussions/ Webinars	Personal learning online (12 units)
2nd Intensive week (on Campus) MBA 811 Corporate Strategy (3 units)	June
Online Discussions/ Webinars	Personal learning online (12 units)
3rd Intensive week (on Campus) MBA 812 Entrepreneurship (3 units)	July
Online Discussions/ Webinars	Personal learning online (12 units)
4th Intensive week (on Campus) MBA 813 Research Methodology (3 units)	August
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	August
Fourth Semester	
1st Intensive week (on Campus) MBA 814 Operations Management (3 units)	September
Online Discussions/ Webinars	Personal learning online (12 units)
2nd Intensive week (on Campus) MBA 822 Public Sector Accounting (3 units)	October
Online Discussions/ Webinars	Personal learning online (12 units)
3rd Intensive week (on Campus) MBA 821 Organisational Behaviour (3 units)	November

Online Discussions/ Webinars	Personal learning online (12 units)
4 th Intensive week (on Campus) MBA 816 Introduction to International Business (3 units)	December
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	December
Fifth Semester	
1 st Intensive week (on Campus) MBA 817 Small Business Management (3 units)	January
Online Discussions/ Webinars	Personal learning online (12 units)
2 nd Intensive week (on Campus) MBA 818 Consumer Behavior (3 units)	February
Online Discussions/ Webinars	Personal learning online (12 units)
3 rd Intensive week (on Campus) MBA 819 Entrepreneurship Development (3 units)	March
Online Discussions/ Webinars	Personal learning online (12 units)
4 th Intensive week (on Campus) MBA 807 Corporate Finance (3 units)	April
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	April
Sixth Semester	
1 st Intensive week (on Campus) MBA 815 Foreign Language (3 units)	May
Online Discussions/ Webinars	
2 nd Intensive week (on Campus) MBA 820 International Law and Business (3 units)	June
Online Discussions/ Webinars	
3 rd Intensive week (on Campus) MBA 890 MBA Internship (6 units)	July
Online Discussions/ Webinars	
Examination	August

MBA Core and Elective Courses

Below are descriptions of the twenty-four (24) courses that make up the core and elective requirements.

MBA 801- Introduction to General Management

This course follows the evolution of Management thought; functions and responsibility of general management; understanding global management; managing through processes; managerial values; managerial decision making; planning, organizing, directing and coordination; problems affecting the character and success of the enterprise; and the design and implementation of corporate strategy.

MBA 802 - Environment of Business

This is an introductory course which examines the nature and scope of business activities. Topics include: the concept of business administration and its distinction from public administration; functional areas of business – finance, production, marketing, etc.; source of financing business activities; retail outlets and marketing channels; commercial documents; bills of exchange; and entrepreneurial development. The course explores environmental elements that affects business, its impact, SWOT and PESTL analysis, type of business organizations and strategies for sustainable development.

MBA 803 - Introduction to Accounting

This course emphasizes the use of accounting information for internal planning and control purposes. This orientation contrasts with financial accounting where the focus is on accounting disclosures for parties external to the firm. This course is intended as an introduction for individuals who will make business decisions and evaluate the performance of business units using data obtained from the accounting system. The course will cover the basic vocabulary and mechanics of cost accounting, basic issues involved in the design of a cost accounting system, and the role of management accounting in decisions concerning resource allocation and performance evaluation.

MBA 804 - Marketing Management & Strategy

This course provides an overview of the role of marketing in organizations by acquainting students with the fundamental issues and decisions involved in planning and managing marketing activities in order to create value for customers. Further, marketing focuses on the long-run relationship of a company to its customers as well as on short-run sales. Thus, marketing is critical to the revenue and profit streams for a company. Attention is given to topics such as product policy, pricing, advertising and communications, marketing research, competitive analysis, valuation of brand, segmentation and target selection, and channels of distribution. Major emphasis is placed on understanding the underlying forces that influence marketing decisions, including customer behavior, competitive marketing activity, and organizational considerations.

MBA 805 - Quantitative Methods for Managers

This course covers basic tools that are useful in business. Inventory theory, queuing theory, the transportation problem, linear programming, the assignment problem, forecasting and other such quantitative procedures are covered. These will be taught and used with computer program

packages as found and employed by the professor.

MBA 806 - Managerial Economics

This course focuses on how to help managers make optimal decisions in different circumstances. This course considers how the actions of business firms, consumers, and the government - operating within a price system in a decentralized market economy - answer such basic resource allocation questions as what will be produced, how it will be produced, who will consume what is produced, and what resources to divert from present consumption to increase future consumption. The impact of various types of market structures (such as perfect competition, monopoly, and oligopoly) on economic efficiency will be discussed. The generality of the frameworks – combined with practical industry applications – will help one think about all the different kinds of markets you will encounter across different careers.

MBA 807 - Corporate Finance

This course focuses on the primary tasks of the corporate treasurer, showing students how to use ratio analysis to assess corporate performance and project financial statements and cash needs for both projects and whole companies. It introduces students to financial asset valuation models – specifically bonds and stocks. The trade-off between risk and returns in asset selection, investment decision, and other financial decision-making is introduced in this course. It devotes substantial time to the question of how much debt is optimal in a firm's capital structure. It then introduces discounted cash flow and shows how to estimate a weighted average cost of capital to use as a discount rate appropriate to a particular company or project. The course examines the sources of corporate finance and pros & cons of each source. By the end of the course, students have all the tools necessary to value a company by projecting its free cash flow and discounting it at an appropriate rate.

MBA 808 - ICT Management

The objectives of this course are to provide you with a comprehensive coverage of IS management practices and technology trends for advanced students and managers. It prepares you with the frameworks and tools, and develops your skill in the understanding and use of ICT in business. Management Information Systems are based on the use of the computer in business projects - database management, processing of information, data envelopment analysis, and the application of information and computer technology to rural and urban problems are covered.

MBA 809 - Business Law and Ethics

This course provides an overview of fundamental legal concepts and principles that affect business in a variety of functional and regulatory environments. This course is designed to provide students with an overview of various legal concepts and principles impacting business. It introduces students to a broad array of information and develops relevant skills encompassing the dynamic nature of the legal environment and its relationship to the transactional and functional aspects of business by incorporating unique instructional methodologies that combine theory with real life case examples of practical application and significance. Primary topics include the interplay among business, ethics, and law and between legal reasoning and research; the judicial system and conflict resolution, and torts and business crimes. This course relies on relevant case law evolved internationally and in Nigeria. Important global concepts are discussed.

MBA 810 - Human Resource Management

Labor force planning and recruitment, policy, compensation and industrial relations are all at part of this course. Performance appraisal, on the job training and safety are covered. Successful human resource management begins with orientation and continues through the employee's duration of employment at the business.

MBA 811 - Corporate Strategy

The course presents conceptual frameworks and models for the analysis of competitive situation and strategic dilemmas; insight into strategic management; analyses of external competitive environment, industry structure, value chain dynamics, etc. The course endeavors to craft various strategies using models like SWOT, PESTLE analysis, and Balanced Score Card.

MBA 812 - Entrepreneurship

Business plans, financing a firm, and running a business all are part of the entrepreneurial function. The course stresses innovation and the social and marketing aspects of business. The student learns from successful ventures which feature growth and philanthropy.

MBA 813 - Research Methodology

This course provides participants with a good understanding of business research, and equips them with the practical tools and skills to conduct business and applied economic research. The course equips students with the skills to identify and formulate research questions, formulate hypotheses, and critically write and evaluate research proposals. It also aims to improve the student's critical approach to gathering data through surveys, and secondary sources, as well as to testing validity, reliability, and accuracy.

MBA 814 - Operations Management

Operations management involves the scheduling of production and uses tools like Critical Path Management and materials resource planning. It is an outgrowth of the old productions management course. Computer usage is an important part of the course.

MBA 815 - Foreign Language

Nigeria is surrounded by Franco-ponic nations. The strong Islamic presence also suggests the value of instruction in Arabic. The student is strongly recommended to take at least a year's worth of study in one of these three languages: French, Arabic, or Spanish.

MBA 821 - Organizational Behavior

This course introduces students to many of the basic principles of human behavior that effective managers use when managing individuals and groups in organizations. These include theories relating to individual differences in abilities and attitudes, attribution, motivation, group dynamics, employee empowerment, teamwork, power and politics, leadership, negotiation, conflict resolution, organizational culture, and organizational structure and design.

MBA 823 - MBA Seminar

Examination of current issues in any area of specialization in consultation with the supervisor

Results of such examinations shall be presented at the Departmental or Faculty seminars. The seminar shall be at the recommendation of the supervisor and the approval of the faculty Graduate School committee.

Elective Courses

MBA 816 - Introduction to International Business

Students will be introduced to the language and terminology of international business and major international, political and economic international businesses. Special attention is given to fundamental concepts of international finance, accounting, law, management and marketing.

MBA 817 - Small Business Management

The objective of course is to encourage effective and successful management of small business and provides training for future managers who will have contact small firms either as bankers, consultants, investors or government officials. The course outline includes: small firm characteristics and trends; start-up situations and development of business plans; venture and expansion capital, cost and benefits of sources of finance; problems and prospects of small business generally and of small-scale industries in particular, and case studies of entrepreneurs and small businessman (Owners/Managers). This course examines policies in Nigeria that are applicable to small, medium and micro industries.

MBA 818 - Consumer Behavior

Basic factors influencing consumer behavior, with emphasis on managerial use of consumer decision-making models; buyers behavior modeling from both economics and behavioral sciences; consumer information processing, stochastic brand device models; risk taking and market segmentation.

MBA 819 - Entrepreneurship Development

This is a follow up to the Entrepreneurship (MBA 812) course. This course covers the historical development of Entrepreneurship and its progress in a wide range of business environments and multicultural contexts. The course presents a practical approach to the study of entrepreneurship in the MBA program.

MBA 820 - International Law and Business

This course surveys trends and Practices that are part of the proceeds of adjudication across national boundaries. Students will study the interrelationships among countries as these affect individuals and business organizations attempting to operate internationally. Course content focuses on transnational business activities. The course sensitizes students on various international treaties and role of international institutes like UNO, WTO etc.

MBA 822 - Public Sector Accounting

This course covers in-depth study of the structure and concepts of government accounting, the treasury, audit department, consolidated revenue fund, capital and development fund, financial accounting and analysis – use of self-accounting system, fund accounting system and standardized uniforms for transactions. It also deals with decision making and planning and

control of public funds, application of costing methods, budgeting processes, accounting for local government, educational and health institutions, budgeting systems, the effect of restructuring sectors and the implication of membership in regional bodies and international organizations.

MBA 890 - MBA Internship

An approved internship program experience designed and supervised by faculty of the School of Business and Entrepreneurship.

MSC BUSINESS ADMINISTRATION

Our MSc Business Administration program provides sound academic nurturing for academics, professionals and executive managers planning to pursue a PhD as well as providing an excellent opportunity for graduates to enhance their career progression in academic and research institutes. AUN's MSc degree will give students the technical training in business administration required to undertake a career in research institutes, government, consulting firms, international organizations and the private sector. The course will provide a broad analysis of management thoughts and will contain a mix of theory, policy and empirical evidence in management. After the coursework, each student is allocated a supervisor for the dissertation. The topic of the dissertation is associated with either a core subject or a specialist subject, and must be formally approved by the faculty.

MSc Business Administration Program Outline				
Year	Semester	Suggested	Program	
		Credit Hours Load		
1	1	6	Coursework	
	2	6		
	3	6		
2	4	6		
	5	8		Coursework and Research Project
	6	4		Coursework
Total		36		
<i>If a student's duration of study exceeds the 6th semester, it will be required to notify the University Registrar and School of Graduate Studies.</i>				

Philosophy

The philosophy of the MSc program is to provide graduate education and training in business administration, which broadens the intellectual exposure of students in the discipline, develops their capacity to undertake rigorous and quality research in the core areas of the discipline and to apply theoretical understanding and research results to practical management situations and problems.

Objectives

The objectives of the program are to:

- (i) Develop the students' skills in critical thinking and analysis, logical reasoning and research methodologies to improve their capacity in undertaking rigorous and quality research, and formulating business management policies and strategies at the organizational and national levels;
- (ii) Develop the students' expertise in the functional areas of business administration so that they may advance the frontiers of management theory and practice and enhance the contributions that management could make to the larger society; and
- (iii) Provide critical manpower in the area of Management needed for national development.

Delivery Mode: Face-To-Face and Supported Online Learning

With regard to delivery mode, the MSc program is a combination of face-to-face learning and supported online learning. It is a structured learning that leverages an intensive series of stimulating lectures, case studies, simulations, periodic seminars and small group assignments. The program will run for 2 years (24 months). An academic year of 12 months has three semesters. Each semester is equivalent to 12 weeks of lectures spread over 4 months. Every month, there will be a week of intensive lectures of 27 contact hours. Therefore, the entire workloads for a semester will be covered within four weeks of intensive face-to-face lectures. Face-to-face lectures will hold once in a month from Thursday to Saturday, while the supported online lectures (self-study) will complement as independent study (12 credit hours per course).

MSc Business Administration Curriculum and Graduation Requirements

The MSc Business Administration program requires a minimum of 36 credit units made up as follows:

Thirteen core courses (2 Credit Units)	26 Credit units
Two courses from area of concentration (2 Credit Units)	4 Credit units
Thesis (done over two semesters)	6 Credit units
Total	36 Credit units

Number of Courses to be Taken in MSc Business Administration

Core course are taken by all students on the course. These thirteen (13) core MSc. Business Administration courses (2 credit units each) give students a solid grounding in management and prepare them to explore any topic of interest. Alongside the core courses, students can choose two (2) elective courses (2 credit units each) and a research project (6 units) to broaden their horizons in different areas of management. In all 16 courses must be taken and passed to merit

graduation. The courses are as listed below.

Core Courses	Credit Units
1. MGT 801 Management Principles & Theory	2
2. MGT 802 Research Methodology	2
3. MGT 803 Quantitative Analysis	2
4. MGT 804 Diversity and Conflict Management	2
5. MGT 805 Rewards and Compensation Management	2
6. MGT 806 Strategic Management	2
7. MGT 807 Global Economic Environment	2
8. MGT 808 Economic Analysis & Theory	2
9. MGT 809 Strategy and Structure	2
10. MGT 810 Comparative Management	2
11. MGT 811 Organization Behaviour	2
12. MGT 812 Management Information System	2
13. MGT 818 MSc Seminars	2
14. MGT 899 Research Project	6

Electives

Choose any two (2) courses from the list below:

1. MGT 813 Business Policy	2
2. MGT 814 Industry & Competitive Analysis	2
3. MGT 8XX Supply Chain & Logistics Management	2
4. MGT 815 Operations Management	2
5. MGT 816 Business Law	2
6. MGT 817 Corporate Finance	2
7. MGT 819 International Business Management	2
8. MGT 820 Marketing Principles & Theory	2
9. MGT 8XX Principles of Accounting	2
10. MGT 8XX Principles of Finance	2

MSC ACADEMIC CALENDAR

MSc (4 Sessions per day on Intensive Week – Fridays & Weekends (24 credit hours)	
Orientation	August
First Semester	
1st Intensive week (on Campus) MGT 801 Management Theory (2 unit)	September

Online Discussions/ Webinars	Personal learning online (12 units)
2 nd Intensive week (on Campus) MGT 807 Global Economic Environment (2 units)	October
3 rd Intensive week (on Campus) MGT 809 Strategy & Structure (2 units)	November
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	December
Second Semester	
1 st Intensive week (on Campus) MGT 811 Organizational Behavior (2 units)	January
Online Discussions/ Webinars	Personal learning online (12 units)
2 nd Intensive week (on Campus) MGT 818 MSc Seminar (2 units)	February
Online Discussions/ Webinars	Personal learning online (12 units)
3 rd Intensive week (on Campus) MGT 813 Business Policy (2 units)	March
Online Discussions/ Webinars	
Examination	May
Third Semester	
1 st Intensive week (on Campus) MGT 802 Research Methodology (2 units)	May
Online Discussions/ Webinars	Personal learning online (12 units)
2 nd Intensive week (on Campus) MGT 803 Quantitative Analysis (2 units)	June
Online Discussions/ Webinars	Personal learning online (12 units)
3 rd Intensive week (on Campus) MGT 814 Economy and Industry Analysis (2 units)	July
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	August
Fourth Semester	
1 st Intensive week (on Campus) MGT 804 Diversity & Conflict Mgt. (2 units)	September
Online Discussions/ Webinars	Personal learning online (12 units)

2nd Intensive week (on Campus)MGT 805 Rewards & Compensation Mgt. (2 units)	October
Online Discussions/ Webinars	Personal learning online (12 units)
3rd Intensive week (on Campus)MGT 815 Operations Management (2 units) OR MGT 816 Business Law (2 units)	November
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	December
Fifth Semester	
1st Intensive week (on Campus) MGT 806 Strategic Management (2 units)	January
Online Discussions/ Webinars	Personal learning online (12 units)
2nd Intensive week (on Campus) MGT 812 Management Information Systems (2 units)	February
Online Discussions/ Webinars	Personal learning online (12 units)
3rd Intensive week (on Campus) MGT 899 Research Projects (6 units)	March
Online Discussions/ Webinars	Personal learning online (12 units)
Examination	April
Sixth Semester	
1st Intensive week (on Campus)MGT 817 Corporate Finance (2 units)	May
Online Discussions/ Webinars	
2nd Intensive week (on Campus) MGT 810 Comparative Management (2 units)	June
Online Discussions/ Webinars	
3rd Intensive week (on Campus) MGT 817 Corporate Finance (2 units) OR MGT 819 International Business Mgt. (2 units)	July
Online Discussions/ Webinars	
Examination	August

Course Description

Core Courses

MGT 801 - Management Theory

The intent of this course is to expose the students to basic issues and theories with regards to the practice of management in contemporary organizations. It examines the introduction and integration of the evolution and the development of theories and concepts, and their application in the field of management. Students are expected to critically analyse the different perspectives within the field of Management. Development of Management models (Rational goals, internal process, human relations and open systems models): organizational effectiveness, environments, technology design and performance; images of organizations and implications for research and practice; organizational ecology; institutional theories; organizational culture and climate; organizational learning and globalization of organization theory. The intent is to build a theoretical foundation for the understanding of Management issues, and provide guidance for research activities in the program.

Pre-requisite:

Co-requisite:

MGT 802 - Research Methodology

This course is designed to sharpen the students' skills and appreciation of organized enquiry. Topics to be covered include the following: Meaning and nature of research; comparison between research, common sense and science; Types of research; the research cycle; selecting research topics, problem and hypotheses formulation, Research design; research instruments and Data collection, Data Analysis and interpretation; research report, Research and the issue of relevance; ethical issues in research.

Pre-requisite:

Co-requisite:

MGT 803 - Quantitative Analysis

Analytical tool is very vital to acquisition and development of managerial skill. Hence, there is the need to expose students to basic quantitative analysis and reasoning, and its application to management decision making. Topics to be covered shall include set theory; basic concepts in probability; probability distributions; decision theory; forecasting models and techniques, linear programming (graphic and simplex methods); introduction to operation research; network models and simulation.

Pre-requisite:

Co-requisite:

MGT - 804 Diversity and Conflict Management

This course deals with managing and resolving workplace conflicts and examines dispute resolution and conflict management in both various and non-various settings. The course covers two related topics: (1) third-party dispute resolution, including alternative dispute resolution (ADR). It focuses primarily on the use of mediation and arbitration but also deals with other dispute resolution techniques, such as fact –finding, facilitation, mini-trials, early neutral

evaluation peer review, and the ombuds function; (2) conflict management in organizations, including the recent development of conflict management systems. The course reviews the factors that have caused the growth reviews the factors that have caused the growth of ADR and conflict management systems, and it provides instruction on the design, implementation and evaluation of such systems.

Pre-requisite:

Co-requisite:

MGT 805 - Rewards and Compensation Management

The course introduces students to the theoretical and practical dimensions of wage and salary administration; industry compensation policy; compensation structure; incentive schemes and payment-by-results (PBR); performance linked compensation; benefits and services; managerial remuneration; tax planning; voluntary retirement schemes; international compensation and compensation strategies.

Pre-requisite:

Co-requisite:

MGT 806 - Strategic Management

This course deals with theoretical and practical aspects of strategy formulation and implementation. Attention is placed on the art of strategic thinking leading to creativity and innovation as well as the rational strategic planning process. Among the topics covered are the following: Analyzing industry structures and dynamics; assessing positions, actions and reactions of competitors; processes of strategic planning, technology strategy and e-business, process re-engineering and corporate turnaround. Case writing and analysis are fundamental to this course.

Pre-requisite:

Co-requisite:

MGT 807 - Global Economic Environment

This situates Nigerian Economy within the broader global economy. It examines the implementation of the movement towards free market economy on stakeholders including business, government, consumers, labour and public. The course takes a multidisciplinary approach drawing from international politics, economy, finance, cross-cultural and business management. Topics to be covered include Strategic aspects of international trade, globalization / international institutions, industrialization strategies, determinants of economic growth and poverty reduction in Africa; global power and wealth distribution; lessons from Asian and Mexican financial crises; multilateral negotiations, global culture and information technology, exchange rates / inflation/interest rates.

Pre-requisite:

Co-requisite:

MGT 808 - Economic Theory

This course provides students with an overview of such economic theories as national income determination, national income accounting, fiscal and monetary policies and investment function, products, money market, and their general equilibrium, consumer behavior, theory of the firm,

welfare economics, and market organization. Upon completion of this course, the students will understand: international income transmission, balance of payments, national growth and development, inflation, employment, and macroeconomic policies including the theories of capital, interest, and production.

Pre-requisite:

Co-requisite:

MGT 809 - Strategy and Structure

The course will build on a base of the study of organizations and focus on the ways organizations are structured to suit the evolving strategies and the mutual impact of strategy and structure.

Pre-requisite:

Co-requisite:

MGT 810 - Comparative Management

The course focuses on the international dimension of business, including trade, financial and foreign investment patterns, and problems and policies at the corporate and national levels. It covers theoretical, institutional and case analyses of major issues, including the impact of international codes and organizations on corporate policies in home and host countries, the effect of changing governmental policies on strategies for managing international operations. Using a wide range of data sources, cases, and other empirical studies, each student will prepare an individual study of a specific company and country.

Pre-requisite:

Co-requisite:

MGT 811 - Organizational Behaviour

This course is designed to aid students in understanding organizations both at the Micro and Macro levels. Specifically, this course examines rigorously the structure, function, and people in organizations and society. Topics include organizational dynamics – micro and macro perspectives; organizations and the systems concept; organizational entry, motivation and job satisfaction; bases of individual attitudes and behaviours in organizational settings; individual and their relationships in organizations; group and inter-group behaviours; organizational structures; typology/taxonomy of organizations; organizational efficiency and effectiveness; organizational politics; organizational change and development; technology and organizational structure; organizations and environment; and organizational design.

Pre-requisite:

Co-requisite:

MGT 812 - Management Information System (MIS)

This course is designed to expose students to the practical application of computers to management information processing. The course provides the steps followed in the utilization of electronic data processing (EDP) system in producing financial and management information, in feasibility studies, system analysis, system design and system implementation for computerized accounting system. Among other things, the course will examine the following issues: Elements of computing mechanical and electronic, types of computers and their applications, computer

programming using either COBOL or FORTRAN, data processing manual and mechanized systems, system analysis and design, evaluation and administration of MIS with emphases on computer based systems, meaning of information technology and its application in business finance and management.

Pre-requisite:

Co-requisite:

MGT 818 - MSc Seminars

This seminar introduces students to the most recent research in the area of business administration, management and organizational analysis, examining current issues and trends. Students have an opportunity to present and discuss their own research and actively engage in the analysis and discussion of the work of others. Each student is expected to make at least one presentation during the course, focusing on the formulation, design, execution, and results of his or her research.

Pre-requisite:

Co-requisite:

MGT 899 - Thesis/ Research Project

The research project is designed to provide students with the opportunity to undertake independent research of an industrial and labour relation issue and to develop the ability to express their ideas in an organized form. This is normally done over two semesters.

Pre-requisite:

Co-requisite:

Elective Courses

MGT 813 - Business Policy

This course deals with the corporate management of the business enterprise. The first part of this course focuses on the nature and dynamics of business policy, the strategy concept, missions and objectives. The rest of the course covers the strategic planning process, stakeholder or management, techniques for strategic appraisal, SWOT, industry and competitive analysis, portfolio analysis, development of strategic options, turn over and recovery strategies, mergers, acquisitions and divestment.

Pre-requisite:

Co-requisite:

MGT 814 - Economy and Industry Analysis

The basis of formulating strategy is the assessment of the environment in all its dimensions. The course will focus on the study use of concepts and techniques used in environmental and industry analysis and in identifying trends and changes in the environment. These will include, economic, social and technological forecasting, Delphi methods, Scenario.

Pre-requisite:

Co-requisite:

MGT 815 - Operations Management

Topics include aggregate planning methods with emphasis on the mathematical model; seasonal production planning and work force planning. Integration of planning and scheduling levels in hierarchical systems. Determination of capacity in services systems; services design and services mix problems. Concepts, models and theories relevant to the management of the processes involved to provide goods and/or services to consumers in both the public and private sectors; production, inventory and distribution functions, scheduling of services or manufacturing activities; facilities planning and device of technology.

Pre-requisite:

Co-requisite:

MGT 816 - Business Law

This course provides an overview of various laws – Nigerian as well as other International laws; the hierarchy of laws and courts; as well as contracts, negotiable instruments and Uniform Commercial Code. This course reviews the different types of business associations; as well as such other doctrines and business legal terminologies like doctrine of ultra vires, piercing of corporate veil; corporate dissolution, mergers and takeovers, as well as memorandum and articles of associations, prospectus, shares, share capital, debenture.

Pre-requisite:

Co-requisite:

MGT 817- Corporate Finance

This course is designed to introduce students to an advanced treatment of theories and its three decision areas of financing, investment and dividend. The course therefore examines the effects of various corporate financial policy decisions (e.g. capital structure, working capital, and capital budgeting and dividend policies) on the values of the firm. Issues to be thus examined include:- Financial structure, capital structure, market valuation of risky assets under uncertainty, risk and uncertainty management strategies, capital budgeting, operation of capital market and money market, analysis for investment in securities, portfolio theories and the concept of diversification, efficient market theory, cost of capital, dividend policy, corporate financial problems e.g. leasing, mergers, and of new securities, the institution of Zakat, the insurance debate and the non-interest banking and financial system.

Pre-requisite:

Co-requisite:

MGT 819 - International Business Management

The course focuses on the international dimension of business, including trade, financial and foreign investment patterns, and problems and policies at the corporate and national levels. It covers theoretical, institutional and case analyses of major issues, including the impact of international codes and organizations on corporate policies in home and host countries, the effect of changing governmental policies on strategies for managing international operations. Using a wide range of data sources, cases, and other empirical studies, each student will prepare an individual study of a specific company and country.

Pre-requisite:

Co-requisite:

MGT 820 - Marketing Theory

The course seeks to expose MSc students to traditional and contemporary marketing thoughts, in addition to their associated controversies. Specifically, students are to be exposed to relatively advanced theories and controversies in marketing thoughts in such major marketing areas as definitions and meaning of marketing, scope of marketing, science and art in marketing, qualitative and quantitative methods in marketing research, marketing-mix elements, relationship marketing environment, the service domain controversy, strategic marketing management, and market orientation, marketing & information Technology, and Big Data & marketing, and Marketing & social responsibility, among others. Students are to be exposed (via reading, replications and presentations) to scholarly works in journals and textbooks utilizing relatively advanced marketing theories and methods of investigation.

Pre-requisite:

Co-requisite:

DOCTORAL RESEARCH METHODOLOGY REQUIREMENTS

9XX – Probability & Statistics Theory I

9XX – Regression & Multivariate Data Analysis

9XX – Introduction to Qualitative Research Design & Methods

9XX – Advanced Qualitative Research Design & Methods

9XX – Advanced Research Methodology

9XX – Design of Experiments

Probability & Statistics Theory I

Modern Data Mining: Statistics or Data Science has been evolving rapidly to keep up with the modern world. While classical multiple regression and logistic regression technique continue to be the major tools we go beyond to include methods built on top of linear models such as LASSO and Ridge regression. Contemporary methods such as KNN (K nearest neighbor), Random Forest, Support Vector Machines, Principal Component Analyses (PCA), the bootstrap and others are also covered. Text mining especially through PCA is another topic of the course. While learning all the techniques, we keep in mind that our goal is to tackle real problems. Not only do we go through a large collection of interesting, challenging real-life data sets but we also learn how to use the free, powerful software "R" in connection with each of the methods exposed in the class.

Pre-requisite:

Co-requisite:

Regression & Multivariate Data Analysis

This course will equip you to be able to choose an appropriate multivariate analysis to address research questions of interest; interpret the results of multivariate analysis and present the results as they would be presented in a scholarly journal; be an informed consumer of research reports in which the results of multivariate analyses have been presented. Also the student will be exposed to the basic techniques of multivariate analysis, emphasizing the rationale and applications to psychological research. Includes multiple regression, principal component analysis, and factor analysis

Pre-requisite:

Co-requisite:

Introduction To Qualitative Research Design & Methods

This course is designed to introduce students to qualitative research methods. The course will use a combination of didactic, interactive and applied techniques to teach knowledge and skills relevant to qualitative research. Through the course, students will be expected to conduct their own qualitative study. Students will work individually to collect data through in-depth interviews. Students work in small groups to analyze the data, and present the results of the analysis. Students will submit their interview guides and interview transcripts for evaluation. Students will also learn the basic steps of qualitative data analysis.

Pre-requisite:

Co-requisite:

Advanced Qualitative Research Design & Methods

The objective of this course is to equip students with advanced knowledge and skills to understand, conceptualize, design, conduct and critically appraise qualitative health research. It is suitable for students wishing to develop their knowledge of qualitative research methods in preparation for their own research at master's or doctoral level. The emphasis is on:

a) Exploring the relationships between a set of techniques designed to gather particular kinds of data and the broader epistemological and theoretical questions underpinning qualitative health research.

b) Developing key qualitative research skills (qualitative interviewing, data analysis and writing up) and to reflect on the ethical, theoretical and practical issues that arise in conducting qualitative research in health settings.

Pre-requisite:

Co-requisite:

Advanced Research Methodology

This course aims to equip research students with the necessary foundations and skills to evaluate and perform qualitative research at a postgraduate level. Course Description: Three semester hours. This course offers "An overview of research methodology including basic concepts employed in quantitative and qualitative research methods. Includes computer applications for research.

Pre-requisite:

Co-requisite:

Design of Experiments & Design Science

This course will equip you with the necessary foundations and skills to design research experiments as well as design Science by exploring the concepts related to the design, conduct, and analysis of experiments in information science and allied domains of research. The course will examine how to design experiments, carry them out, and analyze the data they yield. The course will also equip you with the necessary skills to perform design science research in IS at a postgraduate level.

Pre-requisite:

Co-requisite:

PHD BUSINESS ADMINISTRATION

Philosophy

The philosophy of the program is to provide graduate education and training in business administration, which develop and deepen the spirit of enquiry and responsibility in the students, to take on teaching, research in higher institutions, as well as management responsibilities in public and private sectors of the national and global economies.

Objectives

The objectives of the program are to provide training in business administration research for those whose future careers lie in teaching and research at the University and other tertiary institutions and for those who may have to operate in research and development environments; in core and specialized areas of business administration that would equip graduates to provide quality consultancy services to both local and international clientele; and aimed at providing critical manpower in the area of business administration needed for national development.

Course Structure

The PhD Business Administration program requires a minimum of 60 credit units made up as follows:

Five (5) Research Methodology courses (3 credits each)	15 Credit hours
Four (4) Core requirement Courses (3 credits each)	12 Credit hours
Two (2) Specialized elective courses	6 Credit hours
Comprehensive Examination	0 Credit hours
Thesis done over four semesters (two years)	30 Credit hours
Total	60 Credit hours

Semester 1 (9 Credit hours)

9XX – Advanced Research Methodology (Program Requirement)
9XX - Management Thoughts and Philosophy (Core Requirement)
9XX - PhD Seminar

Semester 2 (9 Credit hours)

9XX – Probability and Statistics Theory 1 (Program Requirement)
9XX – Advanced Quantitative Techniques (Program Requirement)
9XX – Seminars in Strategic Management and Entrepreneurship (Core Requirement)

Semester 3 (9 Credit hours)

9XX – Regression & Multivariate Data Analysis
9XX – Advanced Qualitative Research Design & Methods (Program Requirement)
9XX – Globalization and Development (Core Requirement)

Semester 4 (9 Credit hours)

9XX – (Core Requirement)
9XX – (Elective)
9XX – (Elective)

BUS PhD Core Course Requirements (12 Credit Hours)

- 9XX – Management Thoughts and Philosophy
- 9XX – Seminar in Strategic Management and Entrepreneurship
- 9XX – PhD Seminar
- 9XX – Globalization & Development

BUS Elective Requirements (6 Credit Hours)

- 9XX – Consumer Behavior: Judgment and Decision-making (Marketing)
- 9XX – Marketing Strategy (Marketing)
- 9XX – Accounting Theory Research (Accounting)
- 9XX – Advanced Corporate Finance (Finance)
- 9XX – Empirical Asset Pricing (Finance)
- 9XX – Entrepreneurship: Managing Creativity and Innovation (Entrepreneurship)
- 9XX – Social Enterprises and Entrepreneurship (Entrepreneurship)
- 9XX – Corporate Strategy (Management)
- 9XX – Personnel Management (Management)
- 9XX – Global Business Strategy (International Business)

Course Description**Core Course Requirements****Management Thought and Philosophy**

This course examines the idea and evolution of management as a field of endeavour.

Seminar in Strategic Management and Entrepreneurship

Students will gain a well-developed understanding of business enterprises and the entrepreneurial and strategic thinking that drives them in a dynamic, competitive regional, national, and global economy. Students will learn to apply entrepreneurial and strategic management practices (e.g., using case analysis) to organizations of varying sizes. An integral component, futures studies, shall involve an introduction into thinking about the future, the foundation of the field, its methodologies, link to planning, decision-making, strategy and public policy. The relationship between core competences (at the company level) and key success factors at the industry shall be examined. The students are expected to present seminar work on sector, industry and company strategies.

PhD Seminar

This seminar introduces students to the most recent research in the area of business administration, management and organizational analysis, examining current issues and trends. Students have an opportunity to present and discuss their own research and actively engage in the analysis and discussion of the work of others. Each student is expected to make at least one presentation during the course, focusing on the formulation, design, execution, and results of his or her research.

Globalization & Development

Globalization Overview: Why has the global economy grown so rapidly? How is it affecting the environment, local economics, and social and cultural customs throughout the world? Questioning Free Trade: What are the positive and negative impacts of free trade? Economic globalization and technological changes: these processes are examined in relation to the national development or under-development. It also examines multinational companies, their histories, the reasons for these companies' spatial mobility and the impact on developing world; Globalization and the Environment; Social Equity. Is social equity relevant to trade issues? What is gained and lost through the gradual homogenization and distortion of cultures as a result of globalization? The course examines impact of globalization on Nigeria, particularly using various relevant global socio-economic indices.

PhD Business Administration Elective Requirements

Consumer Behavior: Judgment and Decision-making (Marketing)

The course explores and explains the behavioral tendencies of consumers, customers, clients and relevant audience using relevant and advanced concepts, principles, theories and methodologies. The general purpose of the course is to study and understand, using advanced tools and techniques, relevant consumer behavior issues relating to the process of consumer buying decisions, determinants of consumer behavior, models of consumer behavior, consumer behavior research and some psychological concepts and theories relating to consumer behavior, among others. Such behavioral understanding of relevant consumer behavior issues will assist marketing decision makers in designing efficient and effective marketing policies and strategies for their target markets of interest, in addition to expanding the frontiers of knowledge in marketing, in general, and consumer psychology, in particular.

Marketing Strategy (Marketing)

An in-depth view of strategic marketing tools and how they are deployed to identify, analyze and resolve today's marketing problems, including ethical considerations moderating these decisions. Emphasis is on case analysis, concepts applications based on identifiable controllable and uncontrollable forces, the integration and synergy of marketing programs.

Accounting Research (Accounting)

This course aims to introduce you to accounting research. At the end of this course you should have (1) an understanding of how to critically review research in accounting; (2) an understanding of the basic steps to design a study for testing specific hypotheses; (3) an overview of different accounting research streams in the areas of financial accounting, management accounting, taxation, and auditing. Topics to be covered in this course include: audit quality, earnings management, market efficiency, Positive Accounting Theory, Signaling and Market Failures, agency theory, voluntary disclosure, analysts' behavior and behavioral research in financial accounting.

Advanced Corporate Finance (Finance)

This course provides a theoretical, conceptual and empirical introduction to Corporate Finance at a research-oriented level. The objective of this course is to provide a detailed framework of conceptual and practical knowledge of finance. At the end of this course you should have an understanding of (1) the concept of time value of money; (2) market efficiency; (3) Modigliani-Miller irrelevance theorems; (4) signaling and agency theory. Topics to be covered in this course includes performance, executive compensation and incentive design, corporate valuation, capital structure and cost of capital, corporate governance, corporate restructuring, and financial distress. This course primarily focuses on finance for corporations.

Empirical Asset Pricing (Finance)

One of the basic questions in finance is how investors should select portfolios. This course examines how individuals make choices among risky alternatives. This course reviews how the optimizing actions of individuals have implications for how securities are priced in the market. The course examines the relations between expected return and risk and provide insights into how assets are priced. Basic finance and economic intuition and related concepts will be used to discuss practical real-world examples. Topics to be covered in this course include: Expected Utility, Risk aversion, Demand for risky assets, Portfolio selection and Mean Variance Analysis, Capital Asset Pricing Model, Single period and Multiperiod consumption investment models, and No arbitrage and contingent claims pricing.

Entrepreneurship: Managing Creativity and Innovation (Entrepreneurship)

The course provides experiential learning and exposure to learners about individual and group creativity and innovation through creative scenarios. It educates students on the barriers to creativity and innovation, recommends pragmatic approaches for overcoming the barriers; it discusses methods for generating or recognizing ideas; alternatives or possibilities to solve commercial or operational problems; turning creativity into innovation that benefits the customer and the business venture and the society at large; bringing creativity and innovation into the commercial and social enterprises and building an environment that support creative cum innovative activities.

Social Enterprises and Entrepreneurship (Entrepreneurship)

The course is designed to impact the ideals and best practices in social entrepreneurship to learners in order to provide them with innovative models and tools for finding new ways to tackle the world's greatest socio-economic challenges of poverty, illiteracy, unemployment, chronic diseases, climate change, communal conflicts, waste/environmental degradation and host of others that cut across public, private, non-profit sectors. The course enhances learners' knowledge on how to conceptualize social problems, develop innovative social enterprise model and sustainable management of social enterprises, appointment and serving on a board of social enterprises, and new ways of supporting social entrepreneurs for sustainable development.

Corporate Strategy (Management)

Corporate Strategy focuses on offering insights on the nature of management efforts required to manage various types of business entities owned by one parent organization. It entails proactively managing expectations and purposes of business firms operating in diverse industries such that they all achieve and sustain competitive advantages respectively. In addition, it involves deployment of corporate resources among different businesses as corporate strategies are

crafted. Suitable analytical tools are explored in order to determine the appropriate goals/objectives the business units that make up the corporate portfolio should strive towards, the likely strategies to pursue, and the quantum of corporate resources each deserves in the face of the competitive realities of their industries. Directions for development, management of strategic change, international strategy, etcetera, are considered, among other topics. It equips students with insight into strategic management, analyses of external competitive environment, industry structure, value chain dynamics, etc.

Personnel Management (Management)

This courses introduces students to thematic issues in personnel management, the transition from personnel management to human resources management, functions/roles, activities and responsibilities of personnel management/human resources management, different areas of personnel management, the important duties that HR/personnel management managers and industrial relations, theories of personnel management and the challenges imposed by globalization on personnel management.

Global Business Strategy (International Business)

The global management models course is designed to provide graduate business students with advanced understanding of contemporary global business environment issues, and how businesses can formulate global and context-specific strategies and solutions to fit. It discusses all major topics of strategic management within varying multinational contexts. Students are expected to leverage their previous course experiences in International Business while addressing variety of strategic options and directions relevant to organizations performance and competitiveness.

Elective Courses

MGT 906 - Seminar in Business Environment

This seminar introduces students to the most recent research in the area of HRM, examining current issues and trends. Students have an opportunity to present and discuss their own research and actively engage in the analysis and discussion of the work of others. Each student is expected to make at least one presentation during the course, focusing on the formulation, design, execution, and results of his/her research

MGT 907 - Management of Change

Management of change is designed to acquaint participants with the issues, techniques, and strategies for the management of change. The first part of the course concentrates on developing expertise in predicting relevant changes in the organization's task environment and making sure that change initiatives are in harmony with environment. Techniques for environmental scanning and task forecasting will be explored and useful models analyzed. Students will also discuss and make presentations on current issues such as employee ownership, team-based management, mergers and acquisitions, and organizational renewal, etc. By course end, participants will understand the techniques for creating a change, managing resistance, and applying change models to various industries and situations.

MGT 908 - Government Business & Society

This course examines the area of government business and business-society relations as one of the critical areas where the general manager spends a considerable amount of time. The responsibilities of the firm in these areas, the role of the general manager, the skills needed and ethical and philosophical issues will be discussed.

MGT 909 - Seminar in Public Enterprise Management

Students will gain a well-developed understanding of business enterprises and the entrepreneurial and strategic thinking that drives them in a dynamic, competitive regional, national, and global economy. Students will learn to apply entrepreneurial and strategic management practices (e.g., using case analysis) to organizations of varying sizes. An integral component, futures studies, shall involve an introduction into thinking about the future, the foundation of the field, its methodologies, link to planning, decision-making, strategy and public policy. The relationship between core competences (at the company level) and key success factors at the industry shall be examined. The students are expected to present seminar work on Nigerian public sector companies.

MGT 910 - Multinational Enterprises

This course covers Strategies adopted by multinational enterprises to exploit opportunities created by globalization, technological advancement and the World Trade Organization (WTO) and multilateral trade agreements. The course will present an overview of the WTO and then focus on multilateral trade negotiations. Multilateral trade agreements shall be studied in four parts: trade in goods, trade in services, trade-related aspects of intellectual property rights and institutional issues. Agreements on trade in goods are further divided in to three subcategories: market access, customs-related issues and trade rules. Lastly, this course will look at the future challenges facing the current multilateral trading system. Although this course deals with trade agreements, it will put more emphases on economic interpretation rather than the legal aspects. For this course, outside scholars and experts from policy, academic, and private sectors may be invited as special guest lecturers.

MGT 911 - Advanced Conflict Management

This course is designed to provide an understanding of intercultural management useful for international management and trade negotiations. Participants are expected to study the different ways various cultures think, communicate and behave, particularly within business contexts, in order to develop a necessary level of cross-cultural competency. Today's global business implies co-operating, coordinating, negotiating and supervising, using management processes appropriate to the cultural context. The student will explore cultural implications in those management processes, as well as its impact on teambuilding, ethics, conflict resolution and creative problem-solving. Students will also study their own culturally-based perceptions, patterns of thinking and behavior, communication styles, values and how they can be adapted to an intercultural context. Although the course will primarily deal with cultural differences in national culture context, it will also address cultural differences in gender and in organizational level as long as they affect the global business environment. Foundations and Theories of Conflict: Theories of Conflict Resolution - An interdisciplinary approach to examination of conflict and conflict resolution theory;

Responses to Conflict - An examination of the different approaches to conflict resolution represented by two party negotiation, facilitative processes such as mediation, the various evaluative processes, adjudicative processes such as litigation and binding arbitration, and the various hybrid processes; **Negotiation; Mediation Skills Clinic** - A basic introduction to mediation skills, theory, and ethics; **Interpersonal and Intergroup Conflict** - An in depth study of the dynamics of interpersonal and intergroup conflict.

Organizational and Community Conflict - An exploration of the dynamics of conflict in organizations and the community; **International and Cross-Cultural Conflict** - an examination of the practical negotiation skills central to the resolution of situation-specific international and intercultural conflict.

Methodology of Conflict Resolution Research - an introduction to a range of qualitative data collection methods with particular focus on techniques used in research on conflict and conflict resolution, including participant observation, content analysis, behavioral mapping, and nonintrusive measures, as well as a review of relevant research literature in the field.

MGT 912 - Advanced Marketing Theory

The course seeks to expose PhD, students to traditional and contemporary marketing thoughts, in addition to their associated controversies. Specifically, students are to be exposed to advanced theories and controversies in traditional and modern marketing thoughts in such major marketing areas as scope of marketing, definitions and meaning of marketing, science and art in marketing, qualitative and quantitative methods in marketing research, marketing-mix elements, relationship marketing environment, the service domain controversy, strategic marketing management, and market orientation, Marketing & Information Technology, and Big Data & marketing, and Marketing & social responsibility, among others. Students are to be exposed (via reading, replications and presentations) to scholarly works in journals and textbooks focusing on advanced marketing theories and methods of investigation.



GRADUATE PROGRAM CURRICULUM

SCHOOL OF INFORMATION TECHNOLOGY AND COMPUTING (SITC)

The School of Information Technology and Computing offers the following Graduate programs:

- MSc: Computer Science
- MSc: Information Systems
- MSc: Data Science and Analytics
- PhD: Computer Science
- PhD: Information Systems
- MICS: Master of Information and Communication Science
- MTWT: Master of Telecommunications and Wireless Tech

MSC COMPUTER SCIENCE

Philosophy

Our Philosophy is to produce world-class professionals and academics with advanced degrees in Computer Science who can: (1) Fill the widening pool of careers in this area (including leading the creation of new ones), both in academia and the emerging IT industry in Nigeria and the entire sub-Saharan Africa region, (2) Lead the charge of leveraging IT as a catalyst for Development, and (3) Contribute to research and practice in computer science relevant to the needs of the region.

MSc Computer Science program outline			
Year	Semester	Suggested	Program
		Credit Hours Load	
1	1	12	Coursework
	2	12	
2	3	12	Completion of Coursework & Beginning of Thesis
	4	Complete Thesis and Defense	
Total		36	
<i>If a student's research work exceeds the 4th semester, it will be required to notify University Registrar and School of Graduate Studies.</i>			

Aims / Objectives

- To provide a technically oriented and scientific postgraduate education to individuals who are motivated either to extend their computer science expertise and education or to acquire new technical and scientific skills in the computer science discipline in line with changes in the field.
- To offer students opportunities to study the philosophical and theoretical foundations underlying the discipline.

- To offer students a solid background in core areas and exposure to cutting-edge research and practice in computer science adapted to the needs of Nigeria and Sub-Saharan Africa.
- To provide students with the tools needed to compete in any marketplace.
- To develop students' creative ability to solve complex computing problems.
- To expose students to cutting edge IT and develop an ability to adapt IT to solve societal problems and as a catalyst for development.

The Master of Science in Computer Science program requires a minimum of 36 credit units made up as follows:

8 core courses (3 credit units each)	24 Credit units
2 elective courses (3 credit units each)	6 Credit units
Thesis (done over two semesters)	6 Credit units
Total	36 Credit units

Core Courses

Credit units

1. CIE 802 Research Directions and Methodology	3
2. CSC 803 Advanced Computer Algorithms	3
3. CSC 804 Software Engineering Principles & Practices	3
4. CSC 847 Advanced Computer Architecture	3
5. CSC 849 Cloud and Distributed Computing	3
6. CSC 852 Advanced Programming Language Principles I	3
7. CIE 856 Topics in Artificial Intelligence	3
8. CSC 867 Topics in Database Systems	3
9. CSC 8xx Elective	3
10. CSC 8xx Elective	3
11. CSC 899 Research Project (Done over two semesters)	6

Core Courses

CIE 802 - Research Directions and Methodology

This course will provide an opportunity for graduate students to advance their understanding of research through critical exploration of scholarly writing, ethics, and research approaches. This course will prepare students for advanced research by examining how to plan, conduct and report on empirical investigations. The course will cover techniques applicable to each of the steps of a research project, including formulating research questions, theory building, data analysis, assessing validity, and publishing.

Pre-requisite:

Co-requisite:

CSC 803 - Advanced Computer Algorithms

This course encapsulates the theoretical and practical aspects of design and analysis of algorithms including the functional descriptions of various parallel models of computations and the interconnection networks for multi-computers. The topics covered in this course includes flows in networks, linear programming, and NP-complete problems, coping with NP-completeness, randomized algorithms, probabilistic arguments, dynamic programming,

approximation algorithms, content distribution, and support vector machines.

Pre-requisite:

Co-requisite:

CSC 804 - Software Engineering Principles & Practices

This course will cover the leading-edge techniques needed for analysing, designing, implementing and maintaining complex mission-control software systems. This course includes several advanced concepts, including techniques, methods and methodologies appropriate for the development of large-scale object-oriented software applications and systems. The topics covered in this course include the conceptual foundations of the object-oriented approach, design patterns, design heuristics, software quality, testing and verification in safety-critical systems, and software development for mobile devices.

Pre-requisite:

Co-requisite:

CSC 847 - Advanced Computer Architecture

This course focuses on the underlying design principles of computer architecture and the impact of these principles on computer performance. This course covers several advanced computer architecture concepts including the architecture and organization of high performance computers, principles of instruction sets, instruction level parallelism and multi-processors. The topics covered in this course include processor design, control design, memory organization, system organization, parallel processing, symmetric shared-memory architectures, multiprocessor cache coherence, and advanced optimizations to achieve cache performance. .

Pre-requisite:

Co-requisite:

CSC 849 - Cloud and Distributed Computing

The course covers the underlying principles of distributed and cloud computing, from applications and administration to programming and infrastructure. The key focus of this course is on parallel programming techniques for cloud computing and large scale distributed systems that form the cloud infrastructure. The topics covered in this course include cloud systems, parallel processing in the cloud, distributed storage systems, virtualization, load balancing, caching, distributed transactions, identity and authorization management, security in the cloud, and multicore operating systems. This course includes a project using open-source implementations of highly available clustering computational environments to build very powerful and efficient applications.

Pre-requisite:

Co-requisite:

CSC 852 - Advanced Programming Language Principles 1

This graduate-level course is designed to allow graduate students to critically examine and explore the design, implementation, and compilation of programming languages. This course is designed to broadly explore three areas: semantics, type systems, and research applications. This course will cover several topics including the complexity of an algorithm, methods on how to compute the running time of algorithms, syntax specification and informal semantic models, program control structures, including recursion, co-routines, backtracking, and concurrency, and data abstraction and structuring methods. The course introduces programming paradigms, such as functional and logic programming, that contrast with more conventional languages

Pre-requisite:

Co-requisite:

CIE 856 - Topics in Artificial Intelligence

This course aims to provide graduate students with the ability to develop a systematic understanding of the artificial intelligence domain and the associated research skills. The course includes advanced topics that will allow the students to plan, design and implement appropriate AI solutions in practical scenarios. This course includes advanced topics in artificial intelligence techniques, natural language processing, machine learning, stochastic algorithms, game theory, automated theorem proving, computer vision, and human-like computation.

Pre-requisite:

Co-requisite:

CSC 867 - Topics in Database Systems

This graduate-level course focuses on the state-of-the-art data systems and data management techniques. This course covers advanced topics including approximate query processing, transactions, data exploration, visualization, distributed databases, big data analysis, time series data and anomaly detection and exploration in time series data.

Pre-requisite:

Co-requisite:

Elective Courses

CSC 801 - Advanced Operating Systems

This course covers advanced issues of design and implementation of advanced modern operating systems. The focus of this course is on issues that are critical to the applications of distributed systems and computer networks, which include inter-process communication, distributed processing, sharing and replication of data and files. The topics covered in this course include the recent developments in operating systems research, advanced operating systems design, virtual memory management, virtualization, concurrency and synchronization, file systems, cloud systems, heterogeneity, and security.

Pre-requisite:

Co-requisite:

CSC 805 - Computer Communications and Network

This course covers the advanced topics in computer communications and networking domains. Some of the advanced topics covered in this course include data center operating systems, adaptation and dynamic control, self-managing/autonomic systems, energy-aware computing, trusted computing platforms, virtual machines, virtualization and hardware/software interface, network storage services and distributed data, scalable Internet services and cluster computing, and Infrastructure-as-a-Service (IaaS)

Pre-requisite:

Co-requisite:

CSC 835 - User Interface Design

This graduate-level course focuses on the industry-standard theory and methods for developing successful user interfaces. This course includes advanced topics including prototyping and evaluation techniques necessary for creating intuitive interfaces that facilitate good user

experiences, low-fidelity prototyping techniques, design patterns, action analysis, walkthroughs, and heuristic evaluation. This course will also include user testing, including learning from a series of advanced usability tests carried out in a usability lab.

Pre-requisite:

Co-requisite:

CSC 865 - Cryptography and Computer Security

This graduate-level course includes advanced topics in the domains of computer security and cryptography. The topics covered in this course include secret key cryptography, public-key cryptography, protocols, symmetric cryptography, digital signatures, cryptographic security, side-channel attacks, authentication mechanisms, authorization techniques, security models, trusted computing, network architecture security, operating system security, cryptography, database security, physical security, Web security and network security protocols.

Pre-requisite:

Co-requisite:

CSC 874 - Topics in XML and Web Intelligence

The course investigates research topics related to advanced topics in web intelligence. The topics covered in this course include advanced web technologies, network infrastructures, web-based business models, agents, extended mark-up language, web mining, security, web information filtering and retrieval, and intelligent information systems. The graduate students in this course will have the opportunity to critically evaluate and discuss the research areas in web intelligence

Pre-requisite:

Co-requisite:

PHD COMPUTER SCIENCE

Course Structure

The Doctoral program requires a minimum of 60 credit units made up as follows:

Six (6) Research Methodology courses (3 credits each)	15-18 Credit hours
Four (4) Core requirement Courses (3 credits each)	12 Credit hours
Two (2) Specialized elective courses	6 Credit hours
Comprehensive Examination	0 Credit hours
Dissertation/Research Project done over four semesters (two years)	30 Credit hours
Total	60 Credit hours

Semester 1 (9 Credit hours)

CIE 902 – Research Directions and Methodology (Program Requirement)

CIE 952 – Advanced Statistical Methods (Program Requirement)

CIE 956 – Topics in Artificial Intelligence (Core Requirement)

Semester 2 (9 Credit hours)

CSC 903 – Advanced Computer Algorithms II (Core Requirement)

CSC 947 – Advanced Computer Architecture (Core Requirement)

CSC 950 – Regression & Multivariate Data Analysis (Program Requirement)

Semester 3 (9 Credit hours)

CIE 951 – Probability and Statistics Theory (Program Requirement)

CSC 967 – Advanced Topics in Database Systems (Core Requirement)

CSC 952 – Advanced Programming Language Principles II (Core Requirement)

Semester 4 (9 Credit hours)

CSC 958 – Optimization for Machine Learning (Core Requirement)

CSC 951 – Applied Cryptography (Secondary Areas)

CSC 949 – Cloud and Distributed Computing (Secondary Areas)

Course Descriptions

CIE 902 – Research Directions and Methodology (Program Requirement)

This research methodology course provides a macro-perspective of the methods associated with conducting scholarly research in computer science to doctoral learners. The content covered in this course ranges from the principles of experiment design, statistics, to various aspects of reading, writing, evaluating papers, and presenting scholarly research. This course will help doctoral learners develop research skills required for planning and executing research projects, including conducting a literature review, articulating research questions, justifying a research approach and methodology, designing a study and selecting specific methods and techniques appropriate for answering the questions, and presenting research results

Pre-requisite:

Co-requisite:

CSC 903 – Advanced Computer Algorithms II (Core Requirement)

The design and analysis of algorithms is a key part of computer science. This course introduces students to advanced techniques for the design and complexity analysis of the algorithms. These algorithms will be evaluated and explored using a wide range of applications. Some of the key topics covered in this course include but are not limited to hashing, Markov chains, machine learning algorithms, load balancing, probabilistic analysis, linear programming, amortization, randomization, fingerprinting, word-level parallelism, bit scaling, and dynamic programming .

Pre-requisite:

Co-requisite:

CSC 947 – Advanced Computer Architecture (Core Requirement)

The emphasis of this course is on multicore and modern parallel processing computer systems. The topics covered in this course include memory system organization, principles for multiprocessor systems, memory, and cache coherence, multiprocessor architecture, computer architectures for servers and workstations, digital signal processors, architectures, GPU and non-volatile memory architectures, low-power architectures, application-specific processors, and system on chip architectures. Research areas and trends in the design of modern parallel processing architecture will be explored in this course.

Pre-requisite:

Co-requisite:

CSC 950 – Regression & Multivariate Data Analysis (Program Requirement)

This course explores a wide range of advanced statistical techniques. Some of the topics covered in this course, include least squares estimation, hypothesis testing, interpretation of regression coefficients, multivariate normal distribution, partial and multiple correlation, Bartlett's decomposition, various likelihood ratio tests, discriminant analysis, principal components, logistic regression, modelling dichotomous outcome variables, multiple linear regression, model selection, and handling of categorical explanatory variables. A research-oriented approach will be adopted throughout this course.

Pre-requisite:

Co-requisite:

CIE 951 – Probability and Statistics Theory (Program Requirement)

This course will explore several advanced topics in probability and statistics theory. Some of the topics covered in this course include conditional probability, independence, distributed random variables, conditional distributions, independent random variables, central limit theorems for independent and non-identically distributed random variables, stable and infinitely divisible distributions, discrete time martingales and applications. The focus of this course will be on discussing ongoing research, as well as important results that have recently appeared in the literature.

Pre-requisite:

Co-requisite:

CIE 952 – Advanced Statistical Methods (Program Requirement)

This course will cover advanced statistical topics including confirmatory factor analysis, structural equations models, generalized linear models, multilevel methods, social network analysis, support vector machines, and correspondence analysis. This course will cover the various experimental

and observational research designs and address more advanced designs, such as nested designs, quasi-experimental, and cross-over designs. Students will evaluate the statistical methods adopted in several articles published in high impact journals in the domain of computer science.

Pre-requisite:

Co-requisite:

CSC 967 – Advanced Topics in Database Systems (Core Requirement)

This research-oriented course will explore the key issues of current database theory and practice, identifying current trends in the field of modern database theory and application. Some of the topics covered in this course, include deductive databases, semantic query processing, intelligent and cooperative query languages, distributed databases, multimedia databases, high-velocity transaction processing, stream processing, real time analytics, and high-volume data processing. The discussions will focus on several realworld application domains, including Internet advertising, health care, and social network analysis.

Pre-requisite:

Co-requisite:

CSC 952 – Advanced Programming Language Principles II (Core Requirement)

This course will explore the advanced concepts in various programming paradigms, such as functional, object-oriented, and logic programming. The emphasis of this course will be on ideas and techniques most relevant to practitioners, apart from including foundations crucial for intellectual rigor. Some of the topics covered in this course include abstract syntax, lambda calculus, type systems, dynamic semantics, formal models for specifying languages, design goals, run-time structures, and implementation techniques, along with a survey of principal programming language paradigms.

Pre-requisite:

Co-requisite:

CIE 956 - Topics in Artificial Intelligence (Core Requirement)

Introduction to topics in artificial intelligence such as problem-solving methods, game playing, understanding natural languages, pattern recognition, computer vision and the general problem of representing knowledge. Students will be expected to use LISP. This will provide the foundations of Artificial Intelligence, including: Representing intelligent behavior in terms of agent, Searching a space of answers for a solution to a problem in practical time, Representing problems in terms of logic and deduction, Automated creation of complex plans in complex and unknown environments, Logical representations of uncertainty, and rational decision making in uncertain environments, Automated creation of new knowledge from examples and previous knowledge. To provide an overview of the state-of-art algorithms used in AI.

Pre-requisite:

Co-requisite:

CSC 958 – Optimization for Machine Learning (Core Requirement)

Optimization is an important area of machine learning. Optimization allows machine learning methods to flexibly incorporate domain knowledge in applications such as computer vision and natural language processing. The topics covered in this course include deep learning, automatic differentiation, non-convex optimization, probabilistic modeling, stochastic variations, compressibility, probabilistic inference, generative models, adversarial robustness, reinforcement

learning, and statistical learning theory. The course focuses mainly on the formulation and solution of convex optimization problems. These general concepts will also be illustrated through applications in statistics, machine learning, artificial intelligence, computer vision, and robotics
Pre-requisite: Co-requisite:

CSC 951 – Applied Cryptography (Secondary Areas)

This is an applied course on advanced cryptography with a focus on the advances in modern cryptography techniques in various domains. The topics covered in this course include secret key cryptography, public-key cryptography, protocols, symmetric cryptography, digital signatures, cryptographic security, side-channel attacks, magical crypto tricks, zero-knowledge proofs, as well as research topics from scholarly research published in the last five years in high-impact journals

Pre-requisite:

Co-requisite:

CSC 949 – Cloud and Distributed Computing (Secondary Areas)

Distributed systems and cloud computing allow the use of multiple computers and service-oriented architecture to build bigger and better systems. The topics covered in this course include the principles of distributed systems such as communication, naming, synchronization, fault tolerance, quorums, replicated state machines, atomic commit, and peer-to-peer systems. This is a research-oriented course with students demonstrating critical reflection on the progress that has been made on organizing distributed systems, and new topics such as peer-to-peer computing, sensor networks, web services, grid computing, virtualization, and cloud computing..

Pre-requisite:

Co-requisite:

MSC AND PHD INFORMATION SYSTEMS

The MSc/PhD degree in Information Systems (IS) with concentrations is designed to prepare students for challenging careers involving the design, analysis, implementation and operation of computer-based information systems. IS involves the application of computers in organizations functional areas of management.

The Master's and PhD degree programs provide students with a foundation in three areas:

1. The application of IT to solve business problems and business processes and the strategic needs of the organization;
2. Enterprise data management; and
3. Analysis of business processes for redesign and development.

Philosophy

Our philosophy is to produce world-class professionals and academics with advanced degrees in Computer Science who can: (1) Fill the widening pool of careers in this area (including leading the creation of new ones), both in academia and the emerging IT industry in Nigeria and the entire Sub-Saharan Africa region, (2) Lead the charge of leveraging IT as a catalyst for Development, and (3) Contribute to research and practice in computer science relevant to the needs of the region.

MSc Information Systems program outline			
Year	Semester	Suggested	Program
		Credit Hours Load	
1	1	12	Coursework
	2	12	
2	3	12	Completion of Coursework & Beginning of Thesis
	4	Complete Thesis and Defense	
Total		36	
<i>If a student's research work exceeds the 4th semester, will be required to notify the University Registrar and School of Graduate Studies.</i>			

Aims / Objectives

- To provide a technically oriented and scientific postgraduate education to individuals who are motivated either to extend their information system expertise and education or to acquire new technical and scientific skills in the information technology discipline in line with changes in the field.
- To offer students opportunities to study the philosophical and theoretical foundations underlying the discipline.

- To offer students a solid background in core areas and exposure to cutting-edge research and practice in information system adapted to the needs of Nigeria and Sub-Saharan Africa.
- To provide students with the tools needed to compete in any marketplace.
- To develop student's creative ability to solve complex computer system problems.
- To expose students to cutting edge IT and develop an ability to adapt IT to solve societal problems and as a catalyst for development.

MSC INFORMATION SYSTEMS

The Master of Science in Information Systems program requires a minimum of 36 credit units made up as follows:

8 core courses (3 credit units each)	24 Credits units
2 elective courses (3 credit units each)	6 Credits units
Thesis (done over two semesters)	6 Credits units
Total	36 Credits units

Core Courses

Credit units

1. CIE 802 Research Directions and Methodology	3
2. INF 804 Disaster Recovery and Planning	3
3. INF 806 Security Policy Standards & Management	3
4. INF 822 TCP/IP Security	3
5. INF 834 Systems Development & Project Management	3
6. INF 841 Management Accounting	3
7. INF 850 IT and Business Analytics	3
8. INF 853 Risk Management and Analysis	3
9. INF 8xx	3
10. INF 8xx	3
11. INF 899 Research Project (Done over two semesters)	6

Core Courses

CIE 802 - Research Directions and Methodology

This course aims to equip research students with the necessary foundations and skills to evaluate and perform qualitative research at a postgraduate level. Course Description: Three semester hours. This course offers "An overview of research methodology including basic concepts employed in quantitative and qualitative research methods includes computer applications for research.

Pre-requisite:

Co-requisite:

INF 804 - Disaster Recovery and Planning

An in-depth coverage of disaster recovery planning including, techniques to prevent, detect, and recover from loss of information availability. Students are instructed in ways to formulate a

disaster and recovery plan, and test and implement the plan in a simulated lab environment.

Pre-requisite:

Co-requisite:

INF 806 - Security Policies, Standards and Management

This course provides students with the standards for creating an enterprise-wide security policy. Topics include: security management principles; defining security requirements; planning and documenting security policies; asset identification and control; system access control; and Internet security. Students also learn how to formulate, administer, manage and evaluate security policies and standards based on best standards for information systems security (ISO 17799), best practices for security auditing (COBIT) and the protection of private information.

Pre-requisite:

Co-requisite:

INF 822 - TCP/IP Security

A deep review of the TCP/IP protocol suite, with a focus on protocol analysis, and supplemented with various issues relevant to network security professionals, such as ARP cache poisoning, IP source address spoofing, DNS cache poisoning, and many others. Students will gain practical experience constructing internetworks and implementing servers for various application layer protocols. Students will also engage in exercises intended to illustrate many of the network security issues covered in the course.

Pre-requisite:

Co-requisite:

INF 834 - Systems Development and Project Management

An in-depth study of the concepts and techniques for designing, developing and/or revising software using a planned approach. Both the software development life-cycle model and project management approach are presented. Students apply project management concepts in this course to group and individual projects.

Pre-requisite:

Co-requisite:

INF 841 - Management Accounting

Financial management theory and financial statement analysis. Students use rate-of-return, break-even, scenario analysis, and other methods to evaluate projects and organizational performance. Students also learn how to make financial proposals for new equipment needed for an information security enhancement. To a more limited degree, IT security auditing is also discussed along with the importance of IT auditing to the enterprise.

Pre-requisite:

Co-requisite:

INF 850 - IT & Business Analytics

The objective of this course is to use modern Information technology in analytics using data and models to explain the performance of a business and how it can be improved.

Pre-requisite:

Co-requisite:

INF 853 - Risk Management and Analysis

The principles and techniques applied to security risk analysis and the role of risk management in the business enterprise. Topics covered include how to conduct vulnerability assessments, the use of risk assessment tools and how to establish a cost benefit analysis for specific safeguards to ensure that information is confidential, available and has integrity. Emerging trends in risk management are also explored. Students use standard tools to assess network weaknesses such as UNIX-based NMAP and Nessus.

Pre-requisite:

Co-requisite:

Elective Courses

CIE 800 – Model Thinking

The objective of this course is first to introduce the general concept of models. What are models? Are there different types of models? Who uses models? Why are models useful? This introduction to models also serves to discuss the concept of system, complexity, simulation and optimization. Also addressed is the role of models as tools to understand system behavior and decipher complexity. The second purpose of the course is to present and illustrate with examples of applications the main categories of models: statistical models, agent-based models, simulation models, game theory and optimization models. The third and last objective is to select one or two specific model types and practice both model building and use with real life examples of applications.

Pre-requisite:

Co-requisite:

INF 803 - Business Data Communications and Networking

The objective of this course is to provide a basic understanding of the technical and management aspects of business data communications and networking.

INF 805 - Business Foundations for IT (IT Strategy)

This course will explore necessary management actions, which will ensure that information is available, correct, protected, and archived in proper forms and can also be manipulated. All levels of management have the burden of insuring that appropriate information systems are in place to bring about a productive profitable organization. Management is accountable. The objective of this course is to meet the challenges which are seemingly unending.

Pre-requisite:

Co-requisite:

INF 810 - Introduction to Enterprise Computing Environments

Enterprise Resource Planning (ERP) systems represent an integrated strategy for management of information among organizations, suppliers and customers. Graduate-level requirements include completion of a group project on an advanced complementary or enabling technology using ERP. Students' projects include implementation or demonstration and presentation to class.

Pre-requisite:

Co-requisite:

INF 812 - Data Mining for Business Intelligence

The course will provide an introduction to concepts behind data mining, text mining, and web mining. Lectures and real-world examples will be used to explain the fundamental principles, uses, and some technical details of data mining techniques. The emphasis primarily is on understanding the business application of data mining techniques, and secondarily on the variety of techniques. Data mining and investigation is a key goal behind any data warehouse effort.

Pre-requisite:

Co-requisite:

INF 816 - Advanced Operating Systems

This course has two components: a theory component to teach the concepts and principles that underlie modern operating systems, and a practice component to relate theoretical principles with operating system implementation. In the theory component, you will learn about processes and processor management, concurrency and synchronization, memory management schemes, file system and secondary storage management, security and protection, etc. The practice component will complement the theory component through some specific assignments illustrating the use and implementation of these concepts.

Pre-requisite:

Co-requisite:

INF 820 - Data Mining and Data Warehouse

Data mining and investigation is a key goal behind any data warehouse effort. The course will provide an in-depth coverage of advanced concepts on data warehousing, data mining, text mining, and web mining. Lectures and real-world examples will be used to explain the fundamental principles, uses, and some technical details of data mining techniques. The emphasis primarily is on understanding the business application of data mining techniques, and secondarily on the variety of techniques.

Pre-requisite:

Co-requisite:

INF 831 - Database Management

This course focuses on the general concepts and methodologies in file and database management systems-data representation, data modeling and file organization. Additional focus will be on the movement of data to related database systems within and outside the user organization. Students are required to understand the architecture of and start implementing simple database applications using commercially available packages such as MS-ACCESS, and ORACLE.

Pre-requisite:

Co-requisite:

INF 832 - Supply Chain and Logistics

This course focuses on the strategic principles necessary for the successful management of firms that rely heavily on logistics and supply chains.

Pre-requisite:

Co-requisite:

INF 855 - Organizational Behavior

Organizational behavior integrates content from several fields including psychology, sociology, economics, organization theory, statistics, and others. This material is then applied to organizations to explain the motivation of people and how the potential of the human side of business is best harnessed. This content is a crucial area of knowledge in information systems security because of the constantly changing security environment and the changing importance of the roles of security officers. Topics such as work motivation, work attitudes, socialization, leadership, decision making, and management of change will all help prepare students for the challenges faced as a security professional or manager.

INF 862 - Information Security in Public and Private Sectors

This course exposes the student to a broad range of computer systems and information security topics. It is designed to provide a general knowledge of measures to insure confidentiality, availability, and integrity of information systems.

Pre-requisite:

Co-requisite:

PHD INFORMATION SYSTEMS

Course Structure

The Doctoral program requires a minimum of 60 credit units made up as follows:

Six (6) Research Methodology courses (3 credits each)	15-18 Credit hours
Four (4) Core requirement Courses (3 credits each)	12 Credit hours
Two (2) Specialized elective courses	6 Credit hours
Comprehensive Examination	0 Credit hours
Dissertation/Research Project done over four semesters (two years)	30 Credit hours
Total	60 Credit hours

Semester 1 (9 Credit hours)

- 9XX – Probability & Statistics Theory I (Program Requirement)
- 9XX – Design of Experiments (Program Requirement)
- 9XX – Theoretical Foundations of Information Systems (Core Requirement)

Semester 2 (9 Credit hours)

- 9XX – Regression & Multivariate Data Analysis (Program Requirement)
- 9XX – Introduction to Qualitative Research Design & Methods (Program Requirement)
- 9XX – Advanced Systems Analysis & Design Science (Core Requirement)

Semester 3 (9 Credit hours)

- 9XX – Advanced Research Methodology (Program Requirement)
- 9XX – Advanced Qualitative Research Design & Methods (Program Requirement)
- 9XX – Advanced Database Management Systems & Web Technologies (Core Requirement)

Semester 4 (9 Credit hours)

- 9XX - IS Theory Development & Philosophy (Core Requirement)
- 9XX - Information Security & Network Technologies (Elective Areas)
- 9XX - Big Data Analytics and Digital Platforms (Elective Areas)

IS PhD Core Course Requirements (12 Credit Hours)

- 9XX – Theoretical Foundations of Information Systems
- 9XX – Advanced Systems Analysis & Design Science
- 9XX - Advanced Database Management Systems & Web Technologies
- 9XX - IS Theory Development & Philosophy

IS Elective Requirements (6 Credit Hours)

- 9XX - Information Security & Network Technologies
- 9XX - Big Data Analytics and Digital Platforms

Core Courses

Theoretical Foundations of Information Systems

The objective of this course is to provide a theoretical foundation for research in information systems. The course will introduce students to the major influential theories and current research

streams in the field of information systems. The course will provide participants with understanding of the micro and macro perspectives on the utilization of information technology and information systems, and the mutual relationship between information systems, organizations, society and social structure, and agency behaviors when interacting with information systems. For students to maximized the opportunities provided by this course, it is organized as a seminar, and not as a series of lectures. This approach assumes that the lecturers and students can work together in a collaborative fashion. The role of the lecturers in this environment is to establish a framework and put together a set of materials for discussion, and to create the conditions suitable for learning. The underlying assumption is that we are all co-producers in learning. Running the course as a seminar means that all students are expected to participate and contribute equally to the discussion. It is assumed that students will have read and thought about the assigned materials before class and come prepared to contribute to the class discussion. The classes are intended to be a forum for critically reviewing and discussing the set readings; students are expected to participate fully in this process. Papers will be assigned to a student team who will lead the discussion. The student will be responsible for handing in a two-page summary and discussion questions at the start of class and will have overall responsibility for facilitating the discussion of this article.

Pre-requisite:

Co-requisite:

Advanced Systems Analysis & Design Science

Methods of information systems analysis and design for service organizations with data-processing needs are studied and applied. System feasibility; requirements analysis; database utilization; Unified Modeling Language; software system architecture, design, and implementation, management; project control; and systems-level testing

Pre-requisite:

Co-requisite:

Advanced Database Management Systems & Web Technologies

This course focuses on the general concepts and methodologies in file and database management systems-data representation, data modeling and file organization. Additional focus will be on the movement of data to related database systems within and outside the user organization. Students are required to understand the architecture of and start implementing simple database applications using commercially available packages such as MS-ACCESS, and ORACLE.

Pre-requisite:

Co-requisite:

IS Theory Development & Philosophy

Students develop an understanding about the philosophy of science guiding information systems discipline and its application to research. They should also develop an understanding about developing theory and about its critical role in surfacing a theoretical and practical contribution. Since all theories have an implicit or explicit philosophical assumptions, student should understand how philosophy of science is applied to theory development. They understand how to formulate problems to develop compelling research questions. They learn about the key elements of a theory and the approaches to build a theory. They understand the distinctions between systems, process and variance models and between different types of systems, process and variance models. They learn how to achieve correspondence between logical arguments and the specification of the different elements of a model including constructs, measures, functional

forms of relationships, assumptions, and boundary conditions. They develop an understanding about how to leverage context and time in the theory building process, and also about the roles of multi-dimensional constructs and multi-level models in theory development. Cumulatively, they develop the skills and understanding to formulate a problem and specify research questions, synthesize the relevant literatures, build a theory, and specify a model and to achieve correspondence between these essential elements.

Pre-requisite:

Co-requisite:

Elective Courses

Information Security & Network Technologies

This course covers the technical as well as administrative aspects of security in modern digital enterprises from a total systems point of view instead of concentrating on one issue (e.g., networks security, host security, data security, cryptography). The course starts with a comprehensive overview of security principles and practice that are needed to satisfy the IS systems integrity, confidentiality and availability requirements. The course also examines the use of various standards, guidelines, laws and methods which are used in information systems audits for IS security. This discussion serves both to set the governance framework the information systems audit works within and the choices for specific courses of action to meet the requirements of the audit

Pre-requisite:

Co-requisite:

Big Data Analytics and Digital Platforms

This course requires students to demonstrate mastery of data collection, processing, analysis, retrieval, mining, visualization, and prediction. Students synthesize methods from information retrieval, statistical data analysis, data mining, machine learning, and other big-data related fields. They work on semester-long projects that deal with industry-scale data sets and solve real-world problems. Aligned with best industry practices, students are expected to work in a fast-paced, collaborative environment and to demonstrate independence and leadership. Students must be able to create and use tools to handle very large transactional, text, network, behavioral, and/or multimedia data sets. There is growing awareness related to Digital Platforms on the economic benefits that innovative user-oriented services can bring to nations and organisations.

The United States is home to the leading multinational companies in this arena, such as Apple and Google. The latter's Google Search, Google Maps and YouTube are illustrative of how intrinsic to our daily lives innovative media services have become. The service sector in China, which is still in the midst of such a transformation, is increasing in economic importance. Tencent's WeChat, a digital application of this Chinese premier Internet service portal, supports location-based social plug-ins, allowing users to befriend and chat with nearby strangers using the service through a simple shake of their smartphones. These companies' service systems did not exist in the pre-digital era. User experience innovations, in particular, are fundamentally changing the way in which product and service systems are designed and operated. This course introduces you to the emerging trends related to information, engagement and entertainment of user experience design, and teaches the basic practical capacities required to visualise the flow of a user-oriented service innovation.

Pre-requisite:

Co-requisite:

INF 910 - IT Project Management Fundamentals

This course is a study of modern methods of defining, planning and managing large IT and other business projects. Computer software and network modeling are used to support the efficient scheduling of interdependent activities. **CASE tools will be employed in this hands-on project-based individualized course.**

Pre-requisite:

Co-requisite:

CIE 912 - E-Commerce

Electronic commerce is the use of computer networks to improve organizational performance. This course focuses on the study of current management issues associated with electronic commerce strategies. Emerging technologies and approaches are studied.

Pre-requisite:

Co-requisite:

CIE 956 - Topics in Artificial Intelligence

Introduction to topics in artificial intelligence such as problem-solving methods, game playing, understanding natural languages, pattern recognition, computer vision and the general problem of representing knowledge. Students will be expected to use LISP. This will provide the foundations of Artificial Intelligence, including: Representing intelligent behavior in terms of agent, Searching a space of answers for a solution to a problem in practical time, Representing problems in terms of logic and deduction, Automated creation of complex plans in complex and unknown environments, Logical representations of uncertainty, and rational decision making in uncertain environments, Automated creation of new knowledge from examples and previous knowledge. To provide an overview of the state-of-art algorithms used in AI.

Pre-requisite:

Co-requisite:

INF 914 - Human Computer Interaction

The importance of the human-computer interface in the design and development of things that people use is the focus of this course. Topical areas include an in-depth study of the perceptual, cognitive, and social characteristics of people, as well as methods for learning more about the people you wish to use your systems (analyzing the tasks they perform, the way they perform them, the way they think and feel about what they do, etc.).

Pre-requisite:

Co-requisite:

INF 916 - Advanced Operating Systems

Focus of this course is on design and implementation of modern operating systems. Topics include: operating system design, virtual memory management, virtual machines, OS interaction with the hardware architecture, synchronization and communication, file systems, protection, and security.

Pre-requisite:

Co-requisite:

INF 920 – Data Mining and Data Warehouse

Data mining and investigation is a key goal behind any data warehouse effort. The course will provide an in-depth coverage of advanced concepts on data warehousing, data mining, text mining, and web mining. Lectures and real-world examples will be used to explain the fundamental principles, uses, and some technical details of data mining techniques. The emphasis primarily is on understanding the business application of data mining techniques, and secondarily on the variety of techniques.

Pre-requisite:

Co-requisite:

MSC DATA SCIENCE AND ANALYTICS

Philosophy

Our philosophy is to produce the best data science and analytics professionals and academics for positions within Nigeria and Africa where the demands for Data Scientists greatly exceeds their supply. Moreover, there exists a wide variety of jobs in Nigeria, in multi-national companies, non-governmental organizations, and government parastatals etc. where our trained professionals can easily fit in.

MSc Data Science and Analytics program outline			
Year	Semester	Suggested	Program
		Credit Hours Load	
1	1	12	Coursework
	2	12	
2	3	12	Completion of Coursework & Beginning of Thesis
	4	Complete Thesis and Defense	
Total		36	
<p><i>If a student's research work exceeds the 4th semester, it will be required to notify University Registrar and School of Graduate Studies.</i></p>			

Aims / Objectives

- To produce graduates with specialist, advanced skills in data science methods and analytics including other relevant application areas.
- To produce graduates that have practical experience and a thorough theoretical understanding of the data science and analytics field, making them attractive to a wide range of employers or preparing them for further academic study.
- To establish a career as a data scientist who possesses analytical tools for extracting knowledge from data originating from any source.
- To thoroughly analyze complex data sets in various domains and effectively communicate the results to domain specialists in solving real world problems.
- To adhere to high standards of conduct, practice, and qualifications of the data science and analytics profession for national and international standards.

Course Structure

The Master of Science in Data Science and Analytics program requires a minimum of 36 creditunits made up as follows:

8 core courses (3 credit units each)	24 Credits units
2 elective courses (3 credit units each)	6 Credits units
Thesis (done over two semesters)	6 Credits units
Total	36 Credits units

Core Courses

Credit units

1. DSC 801 Programming and Data Analytics with Python and R	3
2. DSC 802 Enterprise Database Management	3
3. DSC 803 Statistics and Time Series Analysis	3
4. DSC 804 Data Science and Analytics	3
5. DSC 805 Machine Learning	3
6. DSC 806 Data Visualization	3
7. DSC 807 Data Science Research Methods	3
8. DSC 808 Data Science Project	3
9. DSC 8xx	3
10. DSC 8xx	3
11. DSC 899 Research Project (Done over two semesters)	6

Core Courses

DSC 801 Programming and Data Analytics with Python and R

Python, as well as R, are excellent options for working with data analytics. This course covers the fundamentals of data analytics and core python/R programming concepts. Students will also use Python/R to apply fundamental data visualization and data analysis concepts using NumPy and Pandas libraries. This course introduces Python and its applications as a data analytics tool, and it assumes no prior Python knowledge. It starts with Python's fundamental concepts: data types, functions, and objects. Students will be exposed to the fundamental tools in Python's data science toolkit: the Pandas package for data wrangling and the matplotlib module for visualization.

Pre-requisite:

Co-requisite:

DSC 802 Enterprise Database Management

This course covers relational, key-value, object-relational, distributed database management, and document store database architectures and replication and cloud-based instances for scaling out, integrating, and implementing database systems. Advanced database management topics covered include normalization and denormalization, query optimization, distributed databases, data warehousing, and big data. There is a substantial covering of Structured Query Language (SQL) and database instance tuning and hands-on practice. Students work on a term project in which they investigate an advanced database technology of their choice.

Pre-requisite:

Co-requisite:

DSC 803 Statistics and Time Series Analysis

This course will cover key topics in statistics and time series analysis. The topics covered in this course include time series regression and exploratory data analysis, model identification/estimation/linear operators, Fourier analysis, spectral estimation, and state-space models. The analysis will be performed using R. Other topics include descriptive statistics, ANOVA, correlations, spectra, wavelets, etc. This will allow students to perform typical analysis that underlies most modern data science questions.

Pre-requisite:

Co-requisite:

DSC 804 Data Science and Analytics

Data science is a fascinating, lucrative, and fast-growing field. The optimum use of data science in business has encouraged better customer service, inventory management, targeted advertising, and many other profitable business decisions. Data science uses data to uncover patterns, relationships, and behavior that impact business decisions. Data scientists' structure and analyze large volumes of data, discover patterns, and make predictions. This course includes a considerable portion of math, statistics, coding, domain expertise, machine learning algorithms, and data analysis. Domain expertise translates to developing expertise in your area of work. Topics to be covered include data collection, integration, management, modeling, analysis, visualization, prediction, informed decision making, and data security and data privacy introductory course is integrative across the core disciplines. This course includes several critical topics in data science, including databases, data warehousing, statistics, data mining, data visualization, high-performance computing, cloud computing, and business intelligence. Professional skills, such as communication, presentation, and storytelling with data, will be fostered. Students will acquire a working knowledge of data science through hands-on projects and case studies in various business, engineering, social sciences, or life sciences domains.

Pre-requisite:

Co-requisite:

DSC 805 Machine Learning

This course aims to educate students on the mathematical and theoretical underpinnings of machine learning. The machine learning principles will be covered first, followed by an examination of various key machine learning ideas and algorithms, such as classification, regression, ranking, dimensionality reduction, deep learning, ensemble methods, and reinforcement learning, among others. Advanced machine learning concepts such as transfer learning, meta-learning, and others will be covered in this course.

Pre-requisite:

Co-requisite:

DSC 806 Data Visualization

Visualizing the outcome of data analysis is critical to communicating the results. Presenting and visualizing data and reporting on the analysis result is a crucial skill when making sense of data. This course will treat standard and cutting-edge visualization techniques to make sense of data and present it in a compelling, narrative-focused story. Students will study the importance of visualization, specific techniques in information and scientific visualization, and how to apply visualization techniques best.

Pre-requisite:

Co-requisite:

DSC 807 Data Science Research Methods

This course will prepare the students on how to construct, analyze, and interpret big data datasets using fundamental data science tools and approaches. This course covers several parts of the data science process, such as data collecting, wrangling, cleaning, exploratory data analysis, visualization, statistical inference, and model construction, as well as their implications for real-world applications. Students will learn how to scrape data from the internet, create and test hypotheses, reduce dimensionality using principal component analysis (PCA), generate actionable plans, and present their findings. Students will use NumPy, SciPy, PANDAS, and SCIKIT-Learn, as well as their Python programming skills, to employ a variety of core standard Python libraries/toolkits for data scientists.

Pre-requisite:

Co-requisite:

DSC 808 Data Science Project

This serves as a capstone project course for the MSc in data science. Students will be given a data science project, which two faculty members will supervise. The project will involve a typical data science workflow, from data collection and cleaning to analyzing and visualizing the results. The students will have to deliver a presentation and hand in a report about the results.

Pre-requisite:

Co-requisite:

Electives Courses

DSC 810 Business Intelligence

This course covers the business value of data, planning and business needs, architecture, data design, implementation, business intelligence, deployment, data integration, and new issues in business intelligence. This course focuses on data warehouse (DW) and business intelligence (BI) system architecture and management. Students will be able to comprehend and apply the technology and tools that makeup business intelligence (e.g., data warehousing, data reporting, and OLAP). The design of the technology architecture that underpins BI systems is also covered in this course.

Pre-requisite:

Co-requisite:

DSC 811 Data Science Algorithms

This course addresses essential algorithm creation and analysis methodologies and problem-solving skills, which are indispensable to all data science programs. The topics covered in this course include advanced data structures for data science (tree structures, disjoint set data structures), algorithm analysis and computational complexity, recurrence relations, big-O notation, introduction to complexity classes, data transformations, design paradigms, and graph algorithms.

Pre-requisite:

Co-requisite:

DSC 812 Artificial Intelligence & Artificial Intelligence Programming

Artificial intelligence (AI) is increasingly essential in business and society. This course will cover basic artificial intelligence tools and techniques using the Python programming language, such as scientific computing and data analysis. Students will learn how to develop various classic AI algorithms and utilize them as modules in extensive AI systems to perform speech and picture processing tasks. Moreover, students will gain an in-depth understanding of state-of-the-art AI programming techniques that will be well suited for real world applications.

Pre-requisite:

Co-requisite:

DSC 813 Natural Language Processing

This course will demonstrate some of the latest advances in the Natural Language Processing domain and get students up to speed with current research. It will provide the necessary skills to enable students to build models for solving various problems, such as document classification, translation, and conversation agents. The students will learn how to build NLP pipelines for preparing training data and

choosing appropriate algorithms and techniques to build such models. Although traditional linguistic methods will be mentioned, particular emphasis will be put on the state-of-the-art deep learning algorithms and transfer learning methods for building efficient machine learning-based NLP solutions.
Pre-requisite: Co-requisite:

DSC 814 Information Security Management

This course covers the most critical aspects of information security management, focusing on data science and analytics. Network security, database management, and security, risk management, cybersecurity intelligence, security governance and policies, cloud security, and security protocols are among the subjects covered in this course. The course examines security from a managerial and technical standpoint in design, implementation, maintenance, and disaster recovery.
Pre-requisite: Co-requisite:

DSC 815 Cloud Computing & Big Data

The need for computational power and data storage continues to drive the demand for more intelligent systems. Highly data-intensive applications demand fast access to terabytes, petabytes, or even exabytes of storage; processor-intensive applications require access to various types of processors in multiple configurations. Such applications are increasingly being developed in scientific and industrial contexts and need to be variously scalable and supportable for large numbers of geographically distributed users. This module will provide insights into how cloud computing attempts to meet the varying needs of such applications.
Pre-requisite: Co-requisite:

DSC 816 Computational Intelligence

This course provides an up-to-date description of the fundamental technologies of computational intelligence, including evolutionary computation, neural computing, and their applications. Main streams of evolutionary algorithms and meta-heuristics will be taught, including genetic algorithms, evolution strategies, genetic programming, and particle swarm optimization. Basic neural network models and learning algorithms will be introduced. In this course, the interactions between evolution and learning, real-world applications to optimization, and robotics, as well as recent advances, will also be discussed.
Pre-requisite: Co-requisite:

DSC 817 Advanced Statistics and Special Applications

Advanced and cutting-edge statistical methods and approaches are covered in this course. Likelihood, advanced hypothesis testing, outlier identification, data imputation, bootstrap, nonparametric regression, and mixed-effect models are some of the topics addressed in this course. This course will also address linear models for data science, starting with a basic grasp of least squares from a linear algebraic and mathematical standpoint and progressing to statistical linear models, such as multivariate regression, using the R programming language.
Pre-requisite: Co-requisite:

DSC 818 Case Studies in Data Science

This course combines all aspects of data science, from gathering data to analysis and visualization, by exploring real-world applications of data science. There will be a discussion of some significant achievements of data science when applied to various areas, from fundamental business practices to physics. Students will then use these skills in a group project.

Pre-requisite:

Co-requisite:

DSC 819 Audio, Image, and Video Analysis

This course introduces the tools needed to analyze audio recordings, images, and videos. It will contain aspects of image enhancements, content detection, segmentation analysis (e.g., detecting tumors in medical imaging data), handwritten character recognition, subtitle analysis, and many other techniques.

Pre-requisite:

Co-requisite:

DSC 899 Thesis

The thesis consists of a substantial written report completed by the student towards the end of their program of studies. This report is based on significant work that involves applying material encountered in the taught component of the degree, and extending that knowledge with the student's contribution, under the guidance of a supervisor. The thesis lasts the whole year and usually involves software development, experimental or theoretical research, or a substantial literature survey on a specific topic.

MASTER OF INFORMATION AND COMMUNICATION SCIENCE

Information and Communications Technology are the fastest growing sectors in developing nations especially within Sub-Saharan Africa. They remain major drivers for businesses in the world and together serve as major catalysts for development.

Philosophy

Our philosophy is that with the right skillsets and professionals, IT offers a springboard for Nigeria and the Sub-Saharan African region to leapfrog the developments in this area and become competitive in the global economy. For this to happen, a stronger tie with industry is required. This program offers one opportunity to forge stronger ties with industry to that end.

Aims / Objectives

The broad aim of our Executive Master's Program in ICS is to provide an opportunity to the large and growing pool of busy professionals in Nigeria to gain relevant knowledge and capabilities on the fast-changing IT industry which has become all-pervasive across diverse organizations today.

Some objectives of the program include:

- Explain and apply appropriate information technologies and employ appropriate methodologies to help an individual or organization achieve its goals and objectives;
- Function as a user advocate;
- Manage the information technology resources of an individual or organization;
- Anticipate the changing direction of information technology and evaluate and communicate the likely utility of new technologies to an individual or organization;
- Understand and, in some cases, contribute to the scientific, mathematical and theoretical foundations on which information technologies are built;
- Live and work as a contributing, well-rounded member of society.

Course Structure

The Master of Information and Communication Science program requires a minimum of 36 credit units made up as follows:

10 core courses (3 credits each)	30 Credits units
Thesis (done over two semesters)	6 Credits units
Total	36 Credits units

Core courses

Credit Units

ICT 501 System Dynamics	3
ICT 503 Management Information System (MIS), Decision Support System (DSS), Enterprise Resource Planning (ERP), Business Intelligence and Strategic Enterprise	3
ICT 505 Operating system Concepts (Windows, Linux, virtual machines)	3
ICT 507 Internet Protocol (IP) Networking	3
ICT 509 IT Project Management	3
ICT 602 Web Application Development and E-Commerce	3
ICT 604 Enterprise Database Management	3
ICT606 IT Security and Computer Forensics	3

ICT 608 System Analysis and design - Object Oriented method Unified Modeling Language (UML)	3
ICT 612 Emerging Technology (Cloud computing, Architecture)	3
ICT 690 Thesis	6

Course Descriptions

The course is designed to equip students with a detailed knowledge of Information and Communication Science and its application to real life systems.

ICT 501 - System Dynamics

The increasing complexity of human-activity (socio-technical) systems that surround us today calls for a new approach to problem view and intervention. Systems dynamics represents a new paradigm (holistic rather than linear) to understanding complex problem situations providing a set of graphical modeling tools for discerning the underlying structures of such systems. It adopts a methodology based on computer simulation for building management flight simulators that permit to experiment with various policy choices to find leverage points or changes that affect the desired outcomes or design new policies through restructuring. The course is designed to develop skills in the creation and use of computer simulation models for policy analysis and formulation of business strategy. A principal focus of the course is the significance of information feedback and circular causality in the behavior of sociotechnical systems.

Pre-requisite:

Co-requisite:

ICT 503 - Management Information System (MIS), Decision Support System (DSS), Enterprise Resource Planning (ERP), Business Intelligence and Strategic Enterprise

An MIS is a system to convert data from internal and external sources into information and to communicate that information, in an appropriate form, to managers at all levels in all functions to

enable them to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible. The MIS & DSS course emphasizes the value chain of information in modern organizations and business in defining its policy structure and dynamic behavior; how information derives from data, the important role and function of information and communication technologies, organizational structures and processes, principles of feedback and feed forward, management functions at all levels and management decision support tools at all levels.

Pre-requisite:

Co-requisite:

ICT 505 - Operating system Concepts (Windows, Linux, virtual machines)

Object Oriented Application Development and Implementation

This course will be taught using Java, C# or C++.

Pre-requisite:

Co-requisite:

ICT 507 - Internet Protocol (IP) Networking

The course will overview and explain IP and its Applications in Modern Networks. It will examine the various aspects of IP network design and its application in various areas of information

technology.
Pre-requisite:

Co-requisite:

ICT 509 - IT Project Management

This course will introduce modern project management. The course begins with an overview of the nuts and bolts of project management. From here it expands into Adaptive and Extreme project management. The focus of the course then shifts to the individual skills required to be an effective project manager, such as time management, leadership, and motivation. Once skills of the individual have been addressed, the course looks at social networks and how they could impact project management.

Pre-requisite:

Co-requisite:

ICT 602 - Web Application Development and E-Commerce

The program is designed to prepare graduates with the knowledge they need to take advantage of electronic commerce opportunities in commercial and enterprise management in the new economy. Students will be able to understand management, public policy, and information technology concepts, and effectively integrate these into developing electronic commerce solutions in a wide variety of specialized applications from electronic government, to electronic banking, to tele-health. More importantly, they will respond to the demand for professionals to work in a wide variety of capacities in digital age organizations in Nigeria and around the world.

Pre-requisite:

Co-requisite:

ICT 604 - Enterprise Database Management

This course will reveal the fundamentals of database technology and database management systems. It will cover a wide range of topics including: uses of databases, database architectures, design, real world implementations, security topics, integrity issues, Structured Query Language (SQL), performance concepts, and storage issues. The emphasis of the course will be on practical applied database technology for enterprise systems. Course will cover logical and physical database design, query languages, and database programming, and will examine commercial systems. The course will also focus on technologies and industry standards for accessing and manipulating persistent data that are suitable for web enterprise application systems.

Pre-requisite:

Co-requisite:

ICT606 - IT Security and Computer Forensics

This course will include the following topics: Network security, hacker attacks, virus attacks, web security, e-mail security, e-commerce security, systems and operation environment security, database security, algorithms for making data communications secure; encryption and coding techniques and IP security. Issues such as organizational security policy, legal and ethical issues in security, standards and methodologies for security evaluation will also be covered. Pre-requisite:

Co-requisite:

ICT 608 - System Analysis and design - Object Oriented method Unified Modeling Language (UML)

This course will focus on the application of the systems approach to the analysis and design of information systems. Topics covered include object-oriented analysis models and tools; use cases, system modeling using UML; requirements specification development; other techniques for information requirement analysis, systems analysis issues, design theory, design techniques, system development life cycle and project management issues and a term project.

Pre-requisite:

Co-requisite:

ICT 612 - Emerging Technology (Cloud computing, Architecture)

The course will present the state of the art in cloud computing technologies and applications. The course will explore potential research directions, as well as the technologies that will facilitate the creation of global marketplace for cloud computing services that support scientific, industrial, business, and consumer applications. Topics will include: telecommunications needs; architectural models for cloud computing; cloud computing platforms and services; security, privacy, and trust management; resource allocation and quality of service; cloud economics and business models; pricing and risk management; interoperability and internetworking; legal issues; and novel applications. Course projects will expose students to different tools and technologies used to build and utilize clouds and the related security, privacy and trust management issues.

Pre-requisite:

Co-requisite:

ICT 610 - Technical Writing and Presentation

This course will explore and show students reasons for good technical writing matters. It will introduce the technical writing process and uses class group writing workshops to task/encourage students to prepare technical documents in selected topics of the ITC field. Writing workshops and assignments will cover the technical areas of Information Technology and Communications, IT Project Management, Systems Analysis, System Design and implementation documentations. Writing assignments are drawn. The course will use practical methods and workshops to improve students' presentation and public speaking skills. Students will be able to measure their improvements.

Pre-requisite:

Co-requisite:

ICT 690 – Thesis

This is a supervised component of the master's program. The thesis is a stimulating and challenging part of the master's program. It provides the opportunity to apply the knowledge acquired in the taught component of the course and also to specialize in one aspect, developing the students' deep understanding and expertise in their preferred areas of concentration. Students may carry out their projects wholly within the University, but industry-based projects are also encouraged. For company-sponsored students, projects should be related to the company's present and strategic goals. Industrial projects often lead to recruitment of the student by the collaborating company. At the end of this, students will be able to conduct independent research, which can stimulate their interest to further studies. This is normally done over two semesters.

Pre-requisite:

Co-requisite:

MASTER OF TELECOMMUNICATION AND WIRELESS TECHNOLOGY

Telecommunications and ICT are the fastest growing sectors in developing nations especially within Sub-Saharan Africa. They remain major drivers for businesses in the world and together serve as major catalysts for development.

Philosophy

The Telecommunication and Wireless Technology program provides an ideal blend of technology and management courses that will propel the candidate into senior management position with the knowledge to help grow their company, effectively helping communication companies in Nigeria keep up with companies from the developed world, compete in an even playing field and support the growing demand in the region for mobile communication.

Aims / Objectives

The broad aim of our Executive Master's Program in Telecommunication and Wireless Technology is to provide an opportunity to the large and growing pool of busy professionals in Nigeria to gain relevant knowledge and capabilities on the fast-changing Telecom & Mobile industry which has become all-pervasive across diverse organizations today.

Some objectives of the program include:

- Possess the ability to design computer networks and embedded systems that include both hardware and software to solve novel engineering problems, subject to trade-offs involving a set of competing goals and constraints. In this context, "design" refers to a level of ability beyond "assembling" or "configuring" systems.
- Have a breadth of knowledge in mathematics and engineering sciences, associated with the broader scope of telecommunications and beyond that are required for the field.
- Acquire project planning, organization & management.
- Acquire experience in methods and techniques for products and process improvement.
- Acquire commercial awareness.
- Develop personal qualities such as creativity, imagination, initiative & maturity.

Course Structure

The Master of Telecommunication and Wireless Technology program requires a minimum of 36 credit units made up as follows:

10 core courses (3 credits each)	30 Credit units
Thesis (done over two semesters)	6 Credit units
Total	36 Credit units

Core courses

Credit Units

ICT 517 Advanced Programming in C++ and Python etc.	3
TEL 501 Principles of data communications, Signaling, Transmission and Switching	3
TEL 503 Broadband and Access Technology	3
TEL 505 Voice Over IP and MPLS	3
TEL 507 Telecommunications Policy, Licensing, Price Regulation and Regulatory Economics	3
TEL 602 Broadcast Networks	3

TEL 604 Real time DSP for Wireless communications	3
TEL 606 NGN and WiMAX	3
TEL 608 Advanced Mobile systems and Wireless	3
TEL 610 Telecommunications Markets, Business Cases, Strategy, Product, Marketing and Pricing	3
TEL 690 Thesis	6

Course Descriptions

This course is designed to equip students with detailed knowledge of Telecommunications and Wireless Technology and its application to real life situations.

ICT 517 - Advanced Programming in C++ and Python etc.

Basic Objects and Classes, Function and Operator Overloading, Inheritance and Polymorphism, Input and Output, Memory Management, Templates, Exception handling. The Standard API & Library. The ANSI/ISO Standard. Development Environments: Debuggers, Profilers, Browsers, Object Oriented Methodologies (one in detail e.g. OMT/UML). Reverse engineering, Case Study and Project in the area of Software Design for Advanced Communication Systems, Software Reuse.

Pre-requisite:

Co-requisite:

TEL 501 - Telecommunications System Foundations; - Principles of data communications, Signaling, Transmission and Switching

The course provides a broad technical overview of telecommunication fundamentals, focusing on the principles of Data Communications, Signaling, Transmission and Switching. This course would allow participants to understand wired and wireless communications principles and standards. This is the fundamentals of Telecommunications systems which is necessary for understanding data communications, transmission and access systems.

Pre-requisite:

Co-requisite:

TEL 503 - Broadband and Access Technology

The evolution of broadband and access technologies requires that managers and other staff members to be sufficiently aware of some of the pressing technical and business issues to be resolved. Understanding of fundamental technological developments, regulatory framework and commercial requirements are essential for the deployment of a successful broadband access strategy. The course will cover wide range of technological choices to provide comprehensive understanding of the key issues in broadband and access technologies.

Pre-requisite:

Co-requisite:

TEL 505 - Voice Over IP and MPLS

The objective of this course is to provide delegates with a technical and practical overview of Voice over IP (VoIP) and MPLS. The course will introduce VOIP which lays the foundation for gaining skills and significant understanding of packet telephony by presenting the technologies that are common for both Enterprise and Service Provider delegates. The course will also provide an overview of basic MPLS, the component of an MPLS network and the Architecture.

Pre-requisite:

Co-requisite:

TEL 507 - Telecommunications Policy, Licensing, Price Regulation and Regulatory Economics

On-going advances in telecommunications engineered by the convergence of traditional telecommunications systems, broadcasting, computing and networking and the emergence of smart-working have been imposing severe strains on many regulatory institutions, testing their core and delivery capabilities to the limit. The regulatory role is becoming increasingly challenging due to its unique and central position in the *two sided-market* surrounded by a complex mix of high-interest stakeholders all demanding higher and satisfying quality of service. This course introduces the key principles and debates and also provides in-dept understanding of key interconnection and regulatory issues. The course is design around a blended learning approach involving lecturers, case studies and hands on application of key concepts to enhance the learning experience of delegates.

Pre-requisite:

Co-requisite:

TEL 602 - Broadcast Networks

In 2006 countries in ITU region 1 committed to a transition to digital television by the year 2015. After this year, digital TV broadcasters have no obligation to protect continuing analogue broadcasts from interference. This course first explains the fundamentals of television broadcast systems and then explores the advantages of digital TV both for production and transmission. A substantial part of the course then explores in detail the four main digital TV standards highlighting in each case the technological and economic advantages. The course highlights the value of a national digital plan that has to involve all stakes holder in any successful transition from analogue to digital TV before going on to illustrate analogue to digital switch over with a couple of specific case studies. The course concludes with a review of second-generation digital TV standards exploring their advantages over the older first-generation standards.

Pre-requisite:

Co-requisite:

TEL 604 - Real time DSP for Wireless communications

This module provides the students with the confidence and capability to successfully map DSP algorithms used in wireless communication systems to an advanced DSP system. Students will first learn the principle of real-time DSP especially the issues related to analogue signal sampling, digital representation, digitization effects on analogue signals and real-time processing constraints. Subsequently, students will learn the latest and advanced Texas Instrument (TI) TMS320C6000 DSP family, in particular, TMS320C6416T. Issues related to the processor architecture, its peripherals and operation, software development tools and real-time DSP programming will be covered. Students will be able to design real time embedded systems for wireless communications using different design methodologies and advanced arithmetic techniques suitable for DSP implementation. A range of DSP algorithms for wireless communication applications will be studied and analyzed for example, digital filter (FIR), adaptive filter, modulation techniques (PAM, PSK, QAM), phase-lock loop (costas-loop), FFT, CDMA, spectrum analysis etc.

Pre-requisite:

Co-requisite:

TEL 608 - Advanced Mobile systems and Wireless

This module covers the fundamental principles of mobile communication systems and provides the knowledge and a practical understanding of the evolution and up-to-date technologies in mobile systems. It includes GSM/GPRS/UMTS/4G, multiple access technologies, cellular systems, multipath fading, QoS management and control, radio resource management and mobility and security management. Topics also includes Wireless access technologies, wireless LAN, mobile IP mobile transport layer and wireless multimedia applications

Pre-requisite:

Co-requisite:

Tel 610 - Telecommunications Markets, Business Cases, Strategy, Product, Marketing and Pricing

The emergence of increasingly complex and intelligent next generation telecommunication networks (NGN) driven by customers' desire for ubiquitous and real time access to multi-media information has come with uphill challenges to regulators and other policymakers within the context of managing regulatory expectations in general, and, marketing in particular. It is therefore crucial that key players within the regulatory environment understand the shifting marketing dynamics within the industry whereby regulators are not only increasingly adopting entrepreneurial approaches to regulation but also have the responsibility of understanding how NGN technologies can be marketed to meet the expectations of increasingly fragmented consumers. This course would allow participants to understand both traditional and emerging marketing concepts/frameworks applied to NGNs within the regulatory space.

Pre-requisite:

Co-requisite:

TEL 690 - Thesis

This is a supervised component of the master's program. The thesis is a stimulating and challenging part of the master's program. It provides the opportunity to apply the knowledge acquired in the taught component of the course and also to specialize in one aspect, developing the students' deep understanding and expertise in their preferred areas of concentration. Students may carry out their project wholly within the University, but industry-based projects are also encouraged. For company-sponsored students, projects should be related to the company's present and strategic goals. Industrial projects often lead to recruitment of the student by the collaborating company. At the end of this, students will be able to conduct independent research, which can stimulate their interest to further studies. This is normally done over two semesters.

Pre-requisite:

Co-requisite:



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GLOSSARY OF TERMS

This section explains commonly used terms in Graduate studies.

Academic Standing: Students are normally in good academic standing if they are making adequate progress toward the completion of degree requirements; have a cumulative grade-point average of at least 3.0; and do not have an excessive number of incomplete grades on their records.

All-But-Dissertation (ABD): A doctoral candidate who has completed all requirements for a doctoral degree except for the writing of a dissertation.

Appointments: Graduate Appointments on the AUN campus are assigned the following titles: Graduate Student Teaching Assistant (TA) and Graduate Student Research Assistant (RA).

Comprehensive Exam: An exam given to doctoral graduate students. Schools/departments decide the content and format of the comprehensive exam. The examining committee should be composed of at least two (and preferably three) regular faculty members to conduct the exam, which should cover the knowledge and skills reasonably expected of a graduate degree recipient in the field. The exam may be written, oral, or a combination of the two.

Designated Emphasis: A designated emphasis is a specialization, such as a new method of inquiry or an important field of application, which is relevant to two or more existing doctoral degree programs. Faculty members who wish to offer a designated emphasis must form a Graduate Group to administer the program. Approval by the Graduate Council is required.

Dissertation: Doctoral candidates are required to complete an extensive, original work based on independent research. The dissertation must be approved by a *Doctoral Advisory Committee* and be filed with the School of Graduate Studies.

Dissertation Examination Committee: This Doctoral examination committee will consist of four members: a non-voting Chair, and three other members, one of whom may be from the Doctoral Advisory Committee and another may be the External Evaluator.

Doctoral Advisory Committee: The Doctoral Advisory Committee facilitates the student's exams, guides the research and writing, and administers the doctoral defense (if required). The Doctoral Committee typically must be made up of three faculty members, and must include a faculty member from outside the department.

Doctoral Degree: A doctoral degree is awarded in recognition of a student's knowledge of a broad field of learning and for distinguished accomplishment in that field through an original contribution of significant knowledge and ideas. To be eligible to receive the doctoral degree, the student must complete a minimum of two years of academic residence, pass a qualifying examination administered by their committee, and submit an approved thesis project proposal (i.e. dissertation) completed under the guidance of AUN faculty members.

Faculty Advisor: Faculty Advisors are nominated by School Deans or Department Chairs and appointed by the Dean of School of Graduate Studies, who acts on behalf of the Graduate Studies Council. They provide guidance for entering and continuing students concerning the various steps necessary to earn their degrees.

Filing a Dissertation: Doctoral degrees are awarded at the end of semesters. The deadline to file a dissertation is the last working day of the semester.

Full-time Students: Students who are taking the maximum load of course in the semester

Graduate Group: A graduate group is an academic unit, comprised of a core faculty from two or more existing schools/departments, which offers a doctoral degree in a new method of inquiry or new field of study that has been approved by the Graduate Council. An established school/department is designated to host the graduate group since the group

has no funding of its own or administrative support.

Major Advisor: Also called Thesis or Dissertation Advisor, a Major Advisor is usually chosen by the student in consultation with the Faculty Advisor. The Major Advisor guides a student's thesis or dissertation research and writing.

Master's Advisory Committee: The Master's Advisory Committee, selected by the student in conjunction with the Faculty Advisor, guides the research and writing of the master's thesis. The committee is made up of three faculty members, at least two of whom must be from the student's home school/department. Typically, the committee chair is the student's research advisor.

Part-time Students: Students who are not taking the maximum load of course in the semester

Probation: Students who are not in good academic standing are considered to be on academic probation or subject to dismissal. Students may also be placed on probation for not meeting Student Affairs requirements or expectations. Probation is intended to provide students whose performance is less than satisfactory with a period of time in which to correct the deficiencies and to raise their performance to a level consistent with the minimum standards set by the University Registrar/School of Graduate Studies. Students on probationary status may register, but they may not hold academic appointments, receive graduate scholarships, or be awarded advanced degrees.

Program (also known as a track or plan): A program is a sequence of course work and supervised study leading to a degree, normally within a department of instruction. The term is used synonymously with field or subfield and also to refer to a subspecialty in which undergraduates or graduates may concentrate their study.

Public Seminar: Toward the end of the Master's Thesis project or Doctoral Dissertation and just before the Oral Defense, a student gives a public seminar on the study.

Qualifying Examination: The Qualifying Examination is an oral examination for doctoral candidates and is conducted by four or five faculty members (this varies by major). Students, in consultation with the Faculty Advisor, select the three subject areas for the exam as well as the committee members. The exam is usually between two and three hours in length. The purpose of the exam is to ascertain the breadth of a student's knowledge and preparation. Faculty examiners will judge whether students have the ability to think incisively and critically about both the theoretical and the practical aspects of their major. Some programs expect students to present a topic for the dissertation as part of the Qualifying Exam (although the exam must not be limited to such a topic). Others do not. In those programs that do, students may be expected to have in mind one or two areas from which the dissertation might be developed and to answer questions on its potential significance and possible design. In either case, the examiners should satisfy themselves, by unanimous vote, that students have mastered their subject areas and can, in all likelihood, design and produce acceptable dissertations.

Researcher Assistant (RA): A Research Assistant (RA) is a graduate student at AUN who is engaged in research projects related to his or her dissertation under faculty supervision. There are no specific eligibility requirements regarding level of skills or previous experience, which permits schools/departments and organized research units to make RA appointments at levels appropriate to resources and recruitment needs.

Graduate Studies Council: (GSC) The Graduate Studies Council is a committee of AUN faculty. Composed of faculty members, the Council is responsible for all academic matters related to graduate education on campus. One of the major duties of the Council is to conduct periodic reviews of all graduate programs to make sure they are functioning at the highest possible level, and to plan for the future.

School of Graduate Studies (SGS): The School of Graduate Studies serves as the administrative arm of the Graduate Council by overseeing graduate students' progress from admission to completion of their degree programs. The School of Graduate Studies

Monitors students' administration and regulations to guide students through the various steps required for the degree.

Teaching Assistant (TA): A TA must have fulfilled the necessary academic, English language proficiency, and registration and enrollment requirements for appointment. Chosen for excellent scholarship and promise as a teacher, a TA serves as an apprentice under the active supervision of the instructor in charge of the course. An appointment as a TA is for one academic year or less. TA appointments may not exceed half time.

Thesis: Students completing a Thesis Track master's degree are expected to write a report, referred to as a thesis, on the results of an original investigation, in conjunction with the Master's Advisory Committee. Length and style of the thesis vary by school. All theses are filed with the School of Graduate Studies.

Thesis Examination Committee: This master's level examination committee will consist of four members: a non-voting Chair, and three other members, one of whom may be from the Master's Advisory Committee and another may be the External Evaluator.

Tutor: A tutor provides training to individuals or small groups of students who require additional teaching help. Tutors at AUN work under the direct supervision of a faculty member holding an appropriate instructional title.

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- The *Unified Bylaws for Graduate Studies of the Council of Higher Education in Saudi Arabia*.
- American University, Washington DC, USA
- American University of Sharjah, UAE

APPENDIX

