

DENNIS OSADEBAY UNIVERSITY
ASABA, NIGERIA
FACULTY OF COMPUTING
DEPARTMENT OF INFORMATION TECHNOLOGY



HANDBOOK
FOR
BACHELOR OF SCIENCE (B.Sc.)
IN
INFORMATION TECHNOLOGY
2024 – 2029

PREFACE

The University environment is diverse and dynamic, requiring students to be familiar with the rules and procedures of both the University and their Department. This handbook provides essential information on the Department of Information Technology, including programme structure, courses offered, grading system, graduation requirements, staff details, and other guidelines to support students throughout their academic journey.

The B.Sc. Information Technology programme was established in 2023 as one of the new programmes in the Faculty of Computing. It aims to foster excellence, critical thinking, and professionalism in teaching, research, and service. The programme equips students with the mathematical knowledge and skills needed to excel in their fields and prepares them for careers in industry, government, and further studies.

Students are encouraged to keep this handbook as a guide, especially during their first year.

I welcome you to the Department of Information Technology and wish you a successful and rewarding studentship.

Prof Boniface Ekechukwu

Lecturer-in-Charge, 2024

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SECTION 1.0

PREAMBLES

The overall challenges in our educational system and the underlying moral values have become a major concern to the nation. This situation has created a moral obligation on the part of the Government, which underpins the establishment of Dennis Osadebay University, Asaba, to leverage education as a tool for social transformation.

Dennis Osadebay University (DOU), Asaba is one of the three new universities established by the Delta State government and approved by the National Universities Commission (NUC) in 2021. The university was established during the second tenure of then Delta State Governor, Senator (Dr.) Arthur Ifeanyi Okowa and located at the former campus of Delta State University, Asaba, the Delta State capital. Dennis Osadebay University started the 2021-2022 academic session with six faculties: Agriculture, Science, Arts, Environmental Sciences, Management and Social Sciences, and Computing, and with forty-six programmes.

SECTION 2.0

UNIVERSITY ORGANISATION AND ADMINISTRATION

The administrative structure of Dennis Osadebay University is patterned towards the existing Universities in Nigeria in the following order;

a. Visitor

The visitor to the Dennis Osadebay University, Asaba is the Executive Governor of the State. The visitor ensures adequate financial base and support for the optimized performance and management of the University.

b. Chancellor

The Chancellor of the Dennis Osadebay University, Asaba is appointed by the Visitor and is the highest Principal Officer of the University. The Chancellor, in relation to the University, take precedence before all other members of the University held for conferring degrees, diplomas and certificates, and other awards. The Chancellor is often a distinguished person in society who is also visibly committed to the ideals of the University.

c. Pro-Chancellor

The Pro-Chancellor is appointed by the Visitor of the Dennis Osadebay University. The Pro-Chancellor take precedence before all members of the University except the Chancellor and except the Vice Chancellor when acting as chairman of Convocation.

d. Governing Council

The Council is the governing body empowered with the management of the affairs of the University and in particular, the control of the property and expenditure of the University.

e. The Vice-Chancellor

The Vice-Chancellor is the Chief Executive Officer and Academic Head of the University, and Chairman of Senate and Congregation.

f. Senate

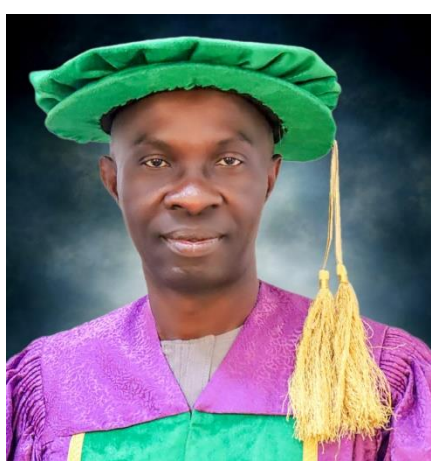
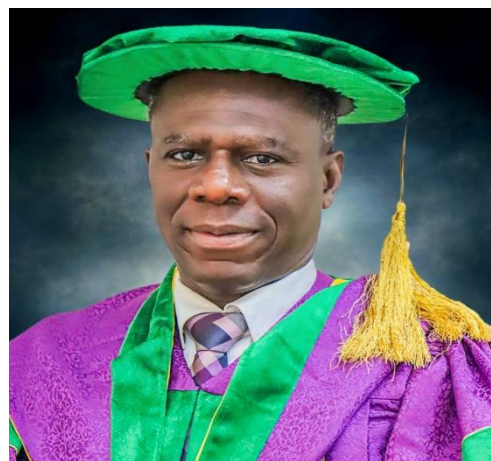
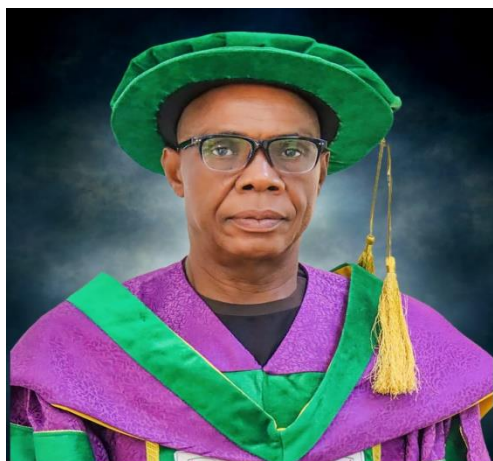
The Senate formulates academic policies including the organization and control of all academic activities of the University. It is the function of the Senate to organize and control teaching,

students' admission, and discipline of students and to promote research within the University.
The member of the University Senate is comprising of:

i. Vice Chancellor	Chairman
ii. Deputy Vice-Chancellors	Member
iii. Deans of Faculties	Member
iv. Directors	Member
v. Heads of Academic Departments (HoDs)	Member
vi. Professors	Member
vii. University Librarian	Member
viii. Six Representatives of Congregation	Member
ix. Registrar	Secretary

SECTION 3.0

PRINCIPAL OFFICERS OF THE UNIVERSITY



The day-day administration of the university is managed by the principal officers:

Vice-Chancellor

Professor Ben Emukofia Akpoyomare OGHOFOR

B.Sc. (UNILAG)

M.Sc. (UNILAG)

Ph.D. (UNILAG)

Deputy Vice Chancellor, Administration

Prof. Christopher Okeleke CHUKWUJI

B. Agriculture (UNN)

M.Sc (UNN)

PhD. (DELSU)

Deputy Vice Chancellor, Academics

Prof. Robert Oghenedoro DODE

B.Sc. (UNIUYO)

M.Sc. (UNIUYO)

PhD. (UNIPORT)

Registrar

Mrs. Genevieve Isioma OBADAN

B.Sc. (UNIBEN)

PGD (UNIBEN)

M.Sc. (UNIBEN)

Bursar

Mr. Okolo Emmanuel OKOLO (FCA)

B.Sc. (UNN)

MBA. (DELSU)

University Librarian

Dr. Nelson EDEWOR

B.Sc. (DELSU)

M.Sc. (DELSU)

PhD. (UNN)

Location of the University

Dennis Osadebay University, Asaba, Delta State, Nigeria

SECTION 4.0

VISION AND MISSION OF THE UNIVERSITY

- a. **Vision:** To be a leading transformational University for the empowerment of stakeholders by leveraging technology.
- b. **Mission:** To provide a tradition of excellence in teaching, research, innovation, entrepreneurial skills, and competence endeavours towards meeting societal needs.

SECTION 5.0

FACULTY OF COMPUTING

The Faculty of Computing (FOC) at Dennis Osadebay University in Asaba, Nigeria, is one of the university's pioneering and prominent faculties. The FOC, established at the inception of the university, has played a critical role in furthering science, technology, research, and innovation in the region.

At the inception, FOC consists of two different departments (Computer Science and Cyber Security), each dedicated to a specific scientific discipline, fostering a comprehensive and diverse environment for scientific exploration and learning. The faculty has grown to include other departments: Data Science, Information Technology and Software Engineering. It serves as a hub for scientific exploration, technological innovation, and collaboration, making significant contributions to the digital, academic and scientific landscape in Asaba, Nigeria, and beyond.

History of the Programme

In the rapidly evolving landscape of the digital age, the field of Information Technology (IT) stands as the cornerstone of innovation and progress. However, a widespread shortage of IT professionals with knowledge of how to develop software, networking, database management, and cybersecurity persists in this country. This challenge amongst others is one of the reasons the Delta State Government approved the establishment of the Dennis Osadebay University.

As Dennis Osadebay University embarks on the journey to address the highlighted challenges, the aim is to cultivate the next generation of IT professionals by designing this curriculum with an emphasis on key competencies in information technology (IT) that encompass a broad range of skills and knowledge areas that are essential for success in the field. These competencies are crucial for IT professionals to effectively navigate the ever-evolving world of technology, solve complex problems, and drive innovation.

Vision Statement

The Department of Information Technology has the vision to empower students to be a center of excellence in information technology education, research and innovations through cutting-edge technologies as well as empowering graduates with the knowledge, skills and ethical values to drive digital literacy, transformation, and provide solutions to global challenges.

Mission

Our mission is to provide high quality education, cutting-edge research and innovative solutions that prepare students to become skilled professionals, critical thinkers and ethical leaders in the world.

B.Sc Information Technology

Philosophy

The programme is largely driven by the need to facilitate, through adequate theoretical and practical training, the emergence of competent professionals in the area of design and implementation of Computing and Information Technology with regard to organisational development and sustainability. The program is designed to provide students with a deep understanding of the knowledge underpinnings IT, encouraging critical thinking and reflection on the role of technology in individuals, organisations and society at large.

Aim

The programme aims to produce graduates who are technically competent, ethically responsible, and adaptable professionals capable of making meaningful contributions to the IT industry and society as a whole.

Objectives

The objectives of the Bachelor of Science in Information Technology Programme are to:

- a) provide students with a broad and balanced foundation of Information Technology knowledge and practical skills;
- b) equip students with the necessary professional skills to practice as successful IT professionals and compete effectively in a world of rapid technological change;
- c) develop in students a range of transferable skills of Information Technology in all aspects of human endeavour;
- d) develop students for the purpose of self-employment and job placement in the government and industries serving the needs of the local and global community; and
- e) develop skills for career development and life-long learning.

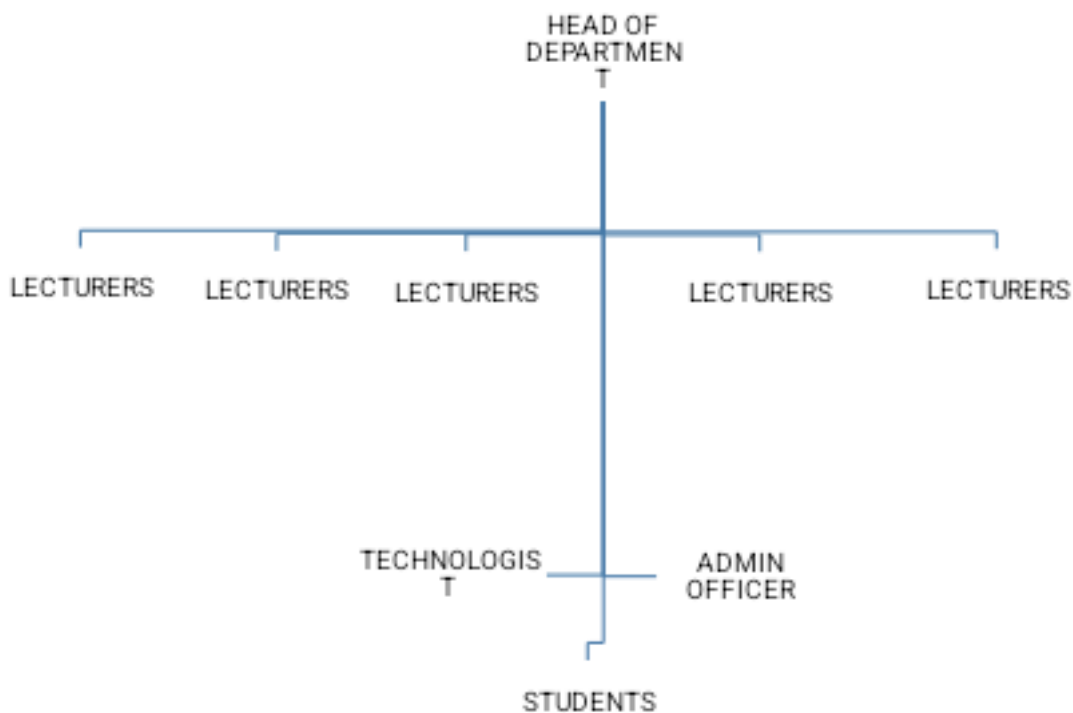
Information Technology Laboratory

The Information Technology laboratory is equipped with computer facility for Staff and Students which consists of both hardware, network and software. More so, programming and software applications are being taught to the students in the laboratory with hands-on on design and implementation of systems.

Course Adviser

The Head of Department appoints for each level a Course Adviser, who is a member of Academic Staff. The course adviser approves students' registration forms, advises students individually and ensures right choice in line with the regulations and requirements for the award of degree.

Departmental Organizational Structure / Board of Studies



The Department has both academic and non-academic staff with the Head of Department at the apex of the department's organizational chart. The organizational structure allows members of staff to interact freely with the Head of Department. Besides departmental management meetings, Committees are set up to handle some matters arising in the department.

Departmental Committees

The department has several Committees that oversee different arms, each committee with a Coordinator and some staff serving as members. The following is the list of the departmental committees whose members are roles/objectives are likewise presented: Administrative; Level Advisers; Curriculum Committee; Academic Standards & Quality Assurance Committee; Examinations/Time table Committee; Staff Welfare Committee; Accreditation; and Laboratory and Instrumentation Committee.

SN	Information Technology Departmental Committee
A.	Level Advisers
B.	Curriculum Committee
C.	Academic Standards & Quality Assurance Committee
D.	Examinations/Time Table Committee
E.	Staff Welfare Committee
F.	Accreditation Committee
G.	Laboratory and Instrumentation Committee
H.	Library Committee

The Objectives/Roles of the Departmental Committee

(A): Level Advisers Committee (Objectives/Roles)

- I. To guide students on selection of course for registration and document them or students' signature
- II. To properly register student
- III. To collect for the department copies of registration form for the files
- IV. To have good information on each student under them
- V. To have proper documentation on any of the assigned students going out of the university on any academic field trip, by counter signing and making recommendation for approval or otherwise on any application by the students
- VI. To prepare monthly information on students' registration from the beginning to the end of each semester, this should be submitted to the coordinator
- VII. Two copies of all communications on students must be collected by the special level advisers, one for the Department and the other for the adviser
- VIII. To open a black or red file on students who are to be watched or monitored especially for alignment with department/University requirement
- IX. To have more direct relationship with the students than the coordinator
- X. To link up with the level representative/deputy in order to obtain information about each student when required.

(B): Curriculum Committee (Objectives/Roles)

The objectives of the Curriculum Committee are:

- I. To develop, review, and update academic programs and curricula to ensure they remain current, relevant, and aligned with the university's mission and educational goals.
- II. To maintain and enhance the quality of education by setting standards, benchmarks, and best practices for curriculum design.
- III. To focus on promoting innovation in teaching and learning. It explores emerging trends in education and recommends the integration of new teaching methods, technologies, and interdisciplinary approaches into the curriculum.
- IV. To serve as a liaison between different departments and faculties within the university, and ensure that programs are coordinated to avoid redundancy and to encourage cross-disciplinary collaboration.
- V. To ensure that the curriculum meets accreditation standards and guidelines, which is crucial for the university's reputation and the recognition of degrees awarded.

(C): Academic Standards & Quality Assurance Committee (Objectives/Roles)

The objectives of the Academic Standards & Quality Assurance Committee are:

- I. To assess the quality, relevance, and alignment of academic programs and curricula with the university's mission and goals. It reviews and recommends changes to ensure that programs meet established standards and benchmarks.
- II. To ensure that the university maintains compliance with accreditation standards and requirements.
- III. To develop and implement quality assurance processes to monitor and evaluate the effectiveness of teaching and learning.
- IV. To formulate and update academic policies and procedures to uphold and improve academic standards.
- V. To promote a culture of continuous improvement within the institution.
- VI. To facilitate processes for gathering student feedback on their academic experiences and incorporating this feedback into quality improvement initiatives.

(D): Examinations/Timetable Committee (Objectives/Roles)

The responsibilities of the exam office committee are as follows:

- (i) Collation of examination questions and marking guides from course lecturers
- (ii) Printing and keeping custody of examination materials before and after examination
- (iii) Preparation of examination invigilation schedule and monitoring the compliance level of invigilators and time-table preparation
- (iv) Liaising with the HOD to ensure that final year questions are sent out on time to approved external examiners for vetting, and correction where necessary.
- (v) Liaising with college examination office to ensure smooth conduct of examinations in the department
- (vi) Ensuring that only legible students are allowed to write examinations in the department
- (vii) Collection of result spreadsheet and making required number of copies for the College Board meetings
- (viii) Participation in College Board meetings for approval of results at the end of the semesters
- (ix) Liaising with the CSIS to effect necessary corrections on student's result as the occasion demands
- (x) To maintain constant touch with lecturers in other departments to teach our students to ensure that our students results are made available to the department as at when due, and
- (xi) Liaising with the CSIS to ensure that any students who have met the graduation requirement of the department is cleared and subsequently graduated.

(E): Departmental Staff Welfare Committee (Objectives/Roles)

The objectives of the Departmental Staff Welfare Committee are:

- I. To assess the unique (social) needs and concerns of staff within the department
- II. To promote the overall well-being of departmental staff by addressing their needs and concerns.
- III. To facilitate opportunities for staff within the department to enhance their skills and knowledge through training, workshops, and other professional development activities that are specific to their roles and responsibilities.
- IV. To foster open and transparent communication within the department.
- V. To develop and implement programs to recognize and reward the contributions and achievements of departmental staff.

(F): Departmental Accreditation Committee (Objectives/Roles)

The objectives of the Departmental Accreditation Committee are:

- I. To ensure that the department adheres to the specific accreditation standards and criteria established for the mathematics discipline/programme.
- II. To continuously monitor and enhance the quality of the department's educational programs, faculty, research, and resources to meet or exceed the accreditation standards.
- III. To maintain comprehensive records and documentation related to the department's compliance with accreditation standards.
- IV. To facilitate the self-assessment process within the department.
- V. To develop and implement strategies and action plans to address areas in need of improvement as identified through the accreditation process.
- VI. To ensure that all communication and documentation are in line with accreditation requirements.
- VII. Oversee the preparation of self-study reports which evaluate the department's compliance with accreditation standards.
- VIII. To stay informed about changes in accreditation standards and guidelines specific to the department's field of study. Make recommendations for policy or program adjustments to maintain compliance

(G): The Laboratory and Instrumentation Committee are to:

- I. ensure that all laboratory equipment and instruments are properly maintained and calibrated;
- II. oversee and enforce safety standards and protocols within the laboratories;

- III. assess the needs of the department/units and researchers within the university and make recommendations for the acquisition of new equipment or the upgrade of existing instruments to enhance research capabilities;
- IV. develop and manage the budget for laboratory and instrumentation needs. This includes allocating funds for equipment purchases, maintenance, and safety improvements; and
- V. provide support to researchers and faculty members by facilitating access to advanced instrumentation and laboratory resources.

(H): Library Committee (Objectives/Roles)

The objectives of the Departmental Library Committee are:

- I. To assess the specific information and research needs of the department and recommend the acquisition of relevant library resources, including books, journals, databases, and digital materials.
- II. To enhance library services tailored to the needs of the department.
- III. To assist in managing the department's library budget.
- IV. To encourage staff and students within the department to utilize the library's resources effectively for research, teaching, and learning.
- V. To advocate for the department's specific library requirements and communicate them to the university's library administration.

SECTION 6.0

Admission Requirements

- (i) All candidates for admission into the B.Sc. (Hons.) degree in Information Technology must possess five (5) senior school certificate examinations (SSCE) or its equivalent O-level credit passes in English Language, Mathematics, Physics and any other relevant Science subjects in not more than two (2) sittings
- (ii) The Unified Tertiary Matriculation Examination (UTME) subjects are English Language, Mathematics, Physics and any other relevant Science subjects
- (iii) Direct Entry candidates to 200 level must possess A Level pass in Mathematics and one in Physics. In addition to O-level subjects indicated in (i) above, candidates with the same subjects as A-level or its equivalence are also eligible.
- (iv) 3 Year Degree Programme - Direct Entry: A minimum of a credit at the University/National Diploma or NCE with other five Senior Secondary Certificate (SSC) credit passes in relevant Science subjects three of which must be in English Language, Mathematics, Physics.

Graduation Requirements

To be eligible for the award of the Bachelor degree in Information Technology Science, a student must have:

1. passed all the core courses, university and faculty/school required courses and electives;
2. accumulated a minimum of 120 course units for students admitted through UTME and 90 course units for students admitted to 200 level; and
3. attain a minimum CGPA of 1.00.

To graduate, a student must be found worthy in character throughout the period of his/her studentship and must accumulate the total units prescribed for the programme from Core, Faculty and General Studies courses as well as SIWES, Seminar and Final Year Project.

Academic Advisers

Every student is attached to an Academic Adviser who is a member of the academic staff of the department and who will advise him/her on academic affairs as well as on personal matters where necessary. Academic Advisors are expected to follow their student's academic progress and provide counselling to them. It is the duty of the Head of the Department to assign an Academic Adviser to each student at the beginning of each academic session.

Minimum Duration

The minimum duration of the B.Sc. Information Technology is four academic sessions (8 semesters) for candidates who entered through the UTME Mode. Direct entry candidates admitted into 200 level, of the programme will spend a minimum of three academic sessions (6 semesters). The maximum sessions allowed for the programme are six academic sessions (12 semesters) for the 4-year degree programme through UTME and five academic sessions (10 semesters) for students admitted through the direct entry mode.

Continuous Assessment

During the semester, students are given take-home assignments, quizzes and tests in each course. These constitute continuous assessment. The continuous assessment scores are recorded and form part of the final score in the given course. The CA forms 30% of the marks, while the exams are 70% making a total of 100%.

Semester Examinations

At the end of each semester, students are given an organized examination in each course. The score obtained in the examination together with the continuous assessment score form the course final score.

External examiners' system

The involvement of external examiners from other universities is a crucial quality assurance requirement for all courses in the Nigerian University system. In this regard, external examiner is appointed by the management as recommended by the department head and/or dean of the faculty. The external examiner moderates the final year examination question papers to the scope and depth of the respective course vis-à-vis the curricular expectation. The external examiner also examines the student's final project work orally. Here, the student is expected to defend his/her written/practical before the external examiner.

Grading System

Examination grades are reported with the following designations:

Mark/Score (%)	Grade	Grade Point
70-100	A	5.00
60-69	B	4.00
50-59	C	3.00
45-49	D	2.00
40-44	E	1.00
0-39	F	0.00

Degree Classification

The determination of the class of degree shall be based on the Cumulative Grade Point Average (CGPA) earned at the end of the programme. The CGPA shall be used in the determination of the class of degree as summarised in Table below. It is important to note that the CGPA shall be calculated and expressed correctly to two decimal places.

Classes and Ranges

Degree Class	CGPA Range
First class	4.50 - 5.00
Second class upper	3.50 - 4.49
Second class lower	2.40 - 3.49
Third class	1.50 - 2.39
Pass	1.00 – 1.49

Probation

A student whose cumulative Grade Point Average is below 1.00 at the end of a particular session, earns a period of probation for one academic session.

Withdrawal

A candidate whose cumulative Grade Point Average is below 1.00 at the end of a particular year of probation shall withdraw from the university. However, in order to minimize the waste of human

resources, consideration shall be given to withdrawal from the programme and possible transfer to other programmes within the university as recommended.

HOW TO CALCULATE GRADE POINT AND GRADE POINT AVERAGE

A **Grade Point (GP)** is the product of the Course Credit Unit (CU) and the Point Score (PS) for each course. The formula is:

$$\text{GP} = \text{CU} \times \text{PS}$$

The sum of all Grade Points for a semester is called the **Total Grade Point (TGP)**, calculated as:

$$\text{TGP} = \sum \text{GP}$$

The **Grade Point Average (GPA)** is then calculated by dividing the TGP by the **Total Credit Units (TCU)**:

$$\text{GPA} = \text{TGP} / \text{TCU}$$

Example: A student registered for five courses and received the following marks in the Examination:

Table 3.2: Course Grades and Points Calculation

Course	Credit Unit (CU)	Score (%)	Grade	Point Score (PS)	Grade Point (GP)
DOU-IFT 111	6	62	B	4.0	24
DOU-IFT 112	3	48	D	2.0	6
DOU-IFT 113	3	54	C	3.0	9
DOU-IFT 114	6	72	A	5.0	30
DOU-IFT 112	2	60	B	4.0	8
TOTAL	20				77

To calculate the GPA:

- $\text{TGP} = (6 \times 4) + (3 \times 2) + (3 \times 3) + (6 \times 5) + (2 \times 4) = 77$
- $\text{TCU} = 6 + 3 + 3 + 6 + 2 = 20$
- $\text{GPA} = \text{TGP} / \text{TCU} = 77 / 20 = 3.85$

The **GPA** scale ranges from **0** to **5**, with **5.0** being the highest possible GPA.

The **Cumulative Grade Point Average (CGPA)** is calculated by adding the TGP for all semesters and dividing it by the sum of the TCU for those semesters. Like the GPA, the CGPA also ranges from **0** to **5**. It is calculated for all courses taken from the first semester (Alpha Semester) of the first year (100 level) to the current semester.

The final degree classification is based on the cumulative GPA. A candidate must have an overall **GPA of 1.00** or higher to be awarded an Honours Degree.

Senate Regulations Governing Conduct of Examinations

The following rules and regulations shall govern the conduct of examinations at Dennis Osadebay University. Any contravention of the under-listed rules and regulations shall constitute an examination misconduct:

- (i) A registered student must earn 75% class attendance to be allowed to write the end of semester examination.

- (ii) Attendance sheets for examination are generated from the list of registered students.
- (iii) Any student who has not paid fees will not have his/her name on the list of registered students which will be published two weeks before the commencement of each semester's examination for the purpose of cross-checking.
- (iv) Students not duly registered by their departments as having fulfilled the prescribed conditions for course registration will not be admitted into the examination hall
- (v) Students shall report at the stipulated examination halls 30 minutes before the start of examinations
- (vi) No student shall be allowed into the examination hall after 30 minutes of the start of the examination.
- (vii) No student shall be allowed to withdraw from the examination within 30 minutes of the commencement of the examination.
- (viii) Students may go to the toilet, etc., during examination provided that they are accompanied throughout the period of absence by an authorized University staff. Such absence must not be unreasonably prolonged and the student shall not be allowed any extra time by reason of such absence.
- (ix) Students shall not be allowed to bring into the examination hall any answer sheet/booklet used or unused.
- (x) Students shall not walk out of the examination hall with any answer sheet/ booklet used or unused.
- (xi) Students shall comply with any instructions given by the invigilators as to the submission of their answer booklet after the examination.
- (xii) Faculties and Departments shall provide security checks by ensuring that examination booklets are duly stamped and signed before the start of examinations.
- (xiii) It shall be the responsibility of each student to ensure that his/her examination booklet is duly stamped and signed.
- (xiv) Students shall not talk to one another, give or receive from one another any form of assistance such as pens, erasers, pencils, rulers, calculators etc.
- (xv) All questions pertaining to the examination must be directed to the invigilators.
- (xvi) Invigilators shall report any examination misconduct formally to the HOD or Dean of the appropriate Department or Faculty as specified by the Senate.
- (xvii) Invigilators shall inform the students of the exact time to start an examination and thereafter inform them of the time left at reasonable intervals until the end of the examination.
- (xviii) Examination question papers must contain marks allotted for the examination and marks allotted for each question.
- (xix) Invigilators shall ensure that personal effects such as bags, textbooks, scrap notes, handsets, MP3 players, earphones, unauthorized calculators and logbooks, smart watches, organizers, hotspots gadgets and any other incriminating materials etc., are not brought into the examination hall by students.
- (xx) Silence shall be maintained throughout the duration of examinations.
- (xxi) Invigilators shall ensure that all students sign the attendance register
- (xxii) No one is permitted to enter an examination hall earlier than 30 minutes before the start of an examination
- (xxiii) Upon entry into the examination hall, students should sit at the desk that has been assigned to them.
- (xxiv) Students will be required to process and present examination dockets from their departments before examinations. Evidence of Faculty, Department dues and School fee payments shall be verified during the week of revision.
- (xxv) All rough work must be done in the answer booklets provided.
- (xxvi) Students are not allowed to eat or drink during the examination
- (xxvii) At the end of the examination, students must stop writing and remain seated until they hand in their answer booklets in an orderly manner
- (xxviii) Any student caught committing an examination misconduct should be issued an examination misconduct form to fill out and be allowed to continue with the examination.

Penalties for Examination Misconduct

A student may be penalized based on the established case of examination misconduct or any action likely to cause a breach of peace during examinations. Such a student will however have the opportunity to defend him/herself before the Students' Examination Misconduct Committee. Once a student is expelled from the University on grounds of examination misconduct he/she has no opportunity of being re-admitted to the University.

Prescribed Penalties for various forms of Examination Misconducts

S/N	Examination Misconducts	Penalty
1.	Impersonation or Fake identity	Expulsion
2.	Smuggling and Possession of Answer Booklet	Expulsion
3.	Destruction of unauthorized materials when caught	Expulsion
4.	Attacking or threatening Invigilators	Expulsion
5.	Plagiarism of content	Expulsion
6.	Tendering unauthentic (fake) document	Expulsion
7.	Auto Coding Software and use of Team Viewer software to take control of students' computers remotely	Expulsion
8.	Hacking of the question bank/system, resulting in content leakage of questions	Expulsion
9.	Screen sharing/Mirroring to other devices/Projectors of friends/classmates/family/experts to cheat	Rustication: two (2) semesters
10.	Cheating with Technological Devices/ High-Tech Equipment e.g. micro Bluetooth powered devices buds, augmented reality glasses, invisible smart watches, hard drives, USB among other things	Rustication: two (2) semesters
11.	Use of Smartphones/Smart Devices and Mobile Education apps, to retrieve automated recommended answers	Rustication: two (2) semesters
12.	Deliberate obstruction of Proctoring Device	Rustication: two (2) semesters
13.	Presence of Family/Friends in the Examination Room	Rustication: two (2) semesters
14.	Indecent Dressing (Dressing that does not conform to the University Dress Code)/Nudity	Rustication: two (2) semesters
15.	Smoking, eating or drinking during the examination	Rustication: two (2) semesters, and Referral to the student Disciplinary Board for Drugs and Drug related offences
16.	Failure to submit answer scripts	Rustication: two (2) semesters
17.	Possession and copying from jottings of relevant materials on body parts/devices	Rustication: two (2) semesters
18.	Possession and Copying from unauthorized/written materials	Rustication: two (2) semesters
19.	Aiding and Abetting others to copy	Rustication: two (2) semesters
20.	Refusal to submit offending materials	Rustication: two (2) semesters
21.	Collaborative copying	Rustication: two (2) semesters
22.	Refusal to complete examination Misconduct Forms	Rustication: two (2) semesters
23.	Unauthorized communication	1 st Timer: Warning 2 nd Timer: Rustication: One (1) Semester
24.	Disruptive Behaviour in the examination hall	1 st Timer: Warning 2 nd Timer: Rustication: One (1) Semester
25.	Influencing Examination Official	1 st Timer: Warning

		2 nd Timer: Rustication: One (1) Semester
26.	Unauthorized Changing of Sitting position	1 st Timer: Warning 2 nd Timer: Rustication: One (1) Semester
27.	Possession of mobile telephone(s) and other device in the examination hall, either in use or not	Rustication: two (2) semesters
28.	Taking examination in an environment that does not conform to the University guidelines for Virtual Examination (For example: Writing Examinations in public/private transport, noisy areas etc.....)	Rustication: two (2) semesters
29.	Disobeying Examination Instructions	1 st Timer: Warning 2 nd Timer: Rustication: One (1) Semester
30	31 Recidivism	Expulsion (Except cases listed in 25-28 above)
32.	Failure to appear before the Misconduct Panel	Suspension for 2 semesters after which non-appearance leads to expulsion
33.	Other related acts of Examination Misconduct not specifically stated	Penalty shall be determined based on the recommendation of the Misconduct Panel.

SECTION 7.0 Courses for B.Sc. Information Technology

CCMAS Course Structure for B.Sc. Information Technology

100 Level First Semester

Course Code	Course Title	Unit(s)	Status	LH	PH
GST 111	Communication in English	2	C	15	45
MTH 111	Elementary Mathematics I	2	C	30	0
PHY 111	General Physics I	2	C	30	0
PHY 112	General Practical Physics I	1	C	0	45
COS 111	Introduction to Computing Sciences	3	C	30	45
STA 111	Descriptive Statistics	3	C	45	0
DOU-IFT111	Element of Programming with Python in Information Technology	2	C	15	45
DOU-IFT112	Basics of Cyber Security	2	C	30	0
	Semester Total	17			

100 Level Second Semester

Course Code	Course Title	Unit(s)	Status	LH	PH
GST 121	Nigerian Peoples and Culture	2	C	30	0
MTH 121	Elementary Mathematics II	2	C	30	0
PHY 121	General Physics II	2	C	30	0
PHY 122	General Physics Practical II	1	C	0	45
COS 121	Problem-Solving	2	C	30	45

DOU-IFT 121	Ethical Issues in Information Technology	3	C	45	0
DOU-IFT 122	Introduction to Critical Thinking	3	C	30	45
	Semester Total	15			
	Sessional Total	32			

200 Level First Semester

Course Code	Course Title	Units	Status	LH	PH
GST 211	Philosophy, Logic, and Human Existence	2	C	30	0
EDC 211	Entrepreneurship and Innovation	2	C	30	0
COS 211	Computer Programming I	3	C	30	45
IFT 211	Digital Logic Design	2	C	15	45
IFT 212	Introduction to Information Technology	2	C	30	0
DOU-IFT 211	Systems Analysis and Design	3	C	30	45
DOU-IFT 212	Introduction to Enterprise System	3	C	30	0
	Semester Total	17			

200 Level Second Semester

Course Code	Course Title	Unit(s)	Status	LH	PH
COS 221	Computer Programming II	3	C	30	45
INS 221	Human-Computer Interface (HCI)	2	C	30	0
IFT 221	Computer Architecture and Organisation	2	C	15	45
IFT 222	Introduction to Web Technologies	2	C	15	45
DOU-IFT 221	Database Design and Management	2	C	15	45
DOU-IFT 222	Business Continuity and Disaster Recovery	2	C	15	45
DOU-IFT 223	Network Administration and Management	2	C	15	45
	Semester Total	15			
	Sessional Total	32			

300 Level First Semester

Course Code	Course Title	Units	Status	LH	PH
GST 311	Peace and Conflict Resolution	2	C	30	0
EDC 311	Venture Creation	2	C	15	45
CSC 311	Operating Systems	3	C	30	45
ICT 311	Data Communications Systems and Network	3	C	30	45
IFT 311	Web Application Development	2	C	15	45
IFT 312	Ethics and Legal Issues in IT	2	C	30	0
IFT 313	Mobile Application Development	2	C	15	45
IFT 314	IT Innovation and Entrepreneurship	2	C	15	45
IFT 315	Network Servers and Infrastructures	2	C	15	45
IFT 316	Web Development using Content Management System	2	C	15	45
DOU-IFT 311	User Interface Development	2	E	15	45
	Semester	22			

300 Level Second Semester

Course Code	Course Title	Unit(s)	Status	LH	PH
IFT 398	Students Industrial Work Experience	6	C	0	13

	Scheme (SIWES I)				5
IFT 399	Students Industrial Work Experience Scheme (SIWES II)	6	C	0	135
DOU-IFT 321	SIWES Report	3	C	0	45
	Semester Total	15			
	Sessional Total	37			

400 Level First Semester

Course Code	Course Title	Units	Status	LH	PH
INS 411	Project Management	2	C	30	0
COS 411	Research Methodology and Technical Report Writing	2	C	45	0
IFT 411	Mobile and Pervasive Computing	2	C	15	45
IFT 497	Final Year Student's Project I	3	C	0	135
DOU-IFT 411	Information Technology Governance	2	C	30	0
DOU-IFT 412	Business Information Technology	2	C	15	45
DOU-IFT 413	Cloud Computing	2	2	15	45
	Semester Total	15			

400 Level Second Semester

Course Code	Course Title	Unit (s)	Status	LH	PH
IFT 421	System Integration and Architecture	2	C	30	0
IFT 422	Wireless Communications and Networking	2	C	15	45
IFT 499	Final Year Project II	3	C	0	135
DOU-IFT 421	Business Systems Analysis and Modeling	3	C	15	45
DOU-IFT 422	Distributed Computing Systems	3	C	15	45
DOU-IFT 423	Data Management and Business Intelligence	2	C	30	0
	Semester Total	15			
	Sessional	30			

COURSE Contents/Synopsis

Synopses/Course Description for Film and Multimedia Programme

100 LEVEL FIRST SEMESTER

GST 111: Communication in English

(2 Units C: LH 15; PH 45)

Course Contents

Sound patterns in English language (vowels and consonants, phonetics, and phonology). English word classes (lexical and grammatical words, definitions, forms, functions, usages, collocations). A sentence in English (types: structural and functional, simple and complex). 177 Grammar and Usage (tense, mood, modality and concord, aspects of language use in everyday life). Logical and Critical Thinking and Reasoning Methods (Logic and Syllogism, Inductive and Deductive Argument and Reasoning Methods, Analogy, Generalisation, and Explanations). Ethical considerations, Copyright Rules, and Infringements. Writing Activities: (Pre-writing, Writing, Post Writing, Editing, and Proofreading; Brainstorming, outlining, Paragraphing, Types of writing, Summary, Essays, Letter, Curriculum Vitae, Report writing, Note making, etc. Mechanics of writing). Comprehension Strategies: (Reading and types of Reading, Comprehension Skills, 3RsQ). Information and Communication Technology in modern Language Learning. Language skills for effective communication. Major word-formation processes. Writing and reading comprehension strategies.

Logical and critical reasoning for meaningful presentations. Art of public speaking and listening. Report writing.

MTH 111: Elementary Mathematics I (Algebra and Trigonometry)

(2 Units C: LH 30)

Course Contents

Elementary set theory, subsets, union, intersection, complements, Venn diagrams. Real numbers; integers, rational and irrational numbers, mathematical induction, real sequences and series, theory of quadratic equations, binomial theorem. Complex numbers; algebra of complex numbers; the Argand diagram. De-Moivre's theorem, n th roots of unity. Circular measure, trigonometric functions of angles of any magnitude, addition and factor formulae.

PHY 111: General Physics I (Mechanics)

(2 Units C: LH 30)

Course Contents

Space and time. Units and dimension, Vectors and Scalars, Differentiation of vectors. Displacement, velocity and acceleration. Kinematics. Newton laws of motion (Inertial frames, Impulse, force and action at a distance, momentum conservation). Relative motion. Application of Newtonian mechanics. Equations of motion. Conservation principles in physics, Conservative forces, conservation of linear momentum, Kinetic energy and work, Potential energy, System of particles, Centre of mass. Rotational motion. Torque, vector product, moment, rotation of coordinate axes and angular momentum. Polar coordinates. Conservation of angular momentum. Circular motion. Moments of inertia, gyroscopes and precession. Gravitation: Newton's Law of Gravitation, Kepler's laws of planetary motion, Gravitational potential energy, Escape velocity, Satellites motion and orbits.

PHY 112: General Practical Physics I

(1 Unit C: PH 45)

Course Contents

This introductory course emphasizes quantitative measurements, the treatment of measurement errors and graphical analysis. A variety of experimental techniques should be employed. The experiments include studies of meters, the oscilloscope, mechanical systems, electrical and mechanical resonant systems, light, heat, viscosity etc., covered in PHY 111. However, emphasis should be placed on the basic physical techniques for observation, measurements, data collection, analysis and deduction.

COS 111: Introduction to Computing Sciences

(3 Units C: LH 30; PH 45)

Course Contents

Brief history of computing. Description of the basic components of a computer/computing device. Input/Output devices and peripherals. Hardware, software and human ware. Diverse and growing computer/digital applications. Information processing and its roles in society. The Internet, its applications and its impact on the world today. The different areas/programs of the computing discipline. The job specializations for computing professionals. The future of computing.

Lab Work: Practical demonstration of the basic parts of a computer. Illustration of different operating systems of different computing devices including desktops, laptops, tablets, smart boards and smart phones. Demonstration of commonly used applications such as word processors, spreadsheets, presentation software and graphics. Illustration of input and output devices including printers, scanners, projectors and smartboards. Practical demonstration of the Internet and its various applications. Illustration of browsers and search engines. How to access online resources.

STA 111: Descriptive Statistics

(3 Units C: LH 45)

Course content

Statistical data. Types, sources and methods of collection. Presentation of data. Tables chart and graph. Errors and approximations. Frequency and cumulative distributions. Measures of location, partition, dispersion, skewness and Kurtosis. Rates, ratios and index numbers.

DOU-IFT 111 Element of Programming with Python in Information Technology (2 Units C; LH: 15; PH: 45)

Course Contents

Introduction to Programming. Setting up Python Development Environment on a PC. Setting up Python Development Environment on an Android Mobile Device. Setting up Python Development Environment on an iOS Mobile Device. Basic Concepts of Software Development. Analysis of basic problem-solving methods. Flowcharts. Algorithms. Pseudocodes. Python Variables and Simple Data Types. List and Tuple Data Types. Set, Array & Dictionary Data Types. Conditional Statements. Loops. Functions. Classes. Files and Exceptions. Code Testing.

DOU-IFT112 Basics of Cyber Security

(2 Units C; LH = 30; PH = 0)

Course Content

Concept of Cyber Security. History of Cyber Security. Role of Cyber Security in the society and Industries. Top skills in cyber Security. What is Cyber Crime? Impact of Cybercrime in the society and industry. Fighting Cyber Crime. Principles and tools for Cyber Security. Careers in Cyber Security. Academic Requirements for Cyber Security Professionals. Professional Bodies and Associations for Cyber Security. Identification of SME in Cyber Security. What is Critical Infrastructure? Identify Industries with Critical Infrastructure. Identify specialized computing equipment employed in industries with critical infrastructure and how they are secured from Cyber-attacks. Overview of Cyber security in the oil and gas industry. Overview of Cyber security in aviation, overview of Cyber security in banking and finance.

100 LEVEL SECOND SEMESTER

GST 121: Nigerian Peoples and Culture

(2 Units C: LH 30)

Course Contents

Nigerian history, culture, and art up to 1800 (Yoruba, Hausa and Igbo peoples and culture; peoples and culture of the ethnic minority groups). Nigeria under colonial rule (advent of colonial rule in Nigeria; Colonial administration of Nigeria). Evolution of Nigeria as a political unit (amalgamation of Nigeria in 1914, formation of political parties in Nigeria, nationalist movement and struggle for independence). Nigeria and challenges of nation building (military intervention in Nigerian politics; Nigerian civil war). Concept of trade and economics of self-reliance (indigenous trade and market system, indigenous apprenticeship system among Nigeria people; trade, skill acquisition and self-reliance). Social justices and national development (law definition and classification. Judiciary and fundamental rights. Individual, norms and values (basic Nigeria norms and values, patterns of citizenship acquisition; citizenship and civic responsibilities; indigenous languages, usage, and development; negative attitudes and conducts. Cultism, kidnapping and other related social vices). Re-orientation, moral and national values (The 3R's – Reconstruction, Rehabilitation and Re-orientation.; Re-orientation Strategies: Operation Feed the Nation (OFN), Green revolution, austerity measures, War Against Indiscipline (WAI), War Against Indiscipline and Corruption (WAIC), Mass Mobilization for Self-Reliance, Social Justice and Economic Recovery (MAMSER), National Orientation Agency (NOA). Current socio-political and cultural developments in Nigeria.

MTH 121: Elementary Mathematics II (Calculus)

(2 Units C: LH 30)

Course Contents

Function of a real variable, graphs, limits, and idea of continuity. The derivative, as limit of rate of change. Techniques of differentiation. Extreme curve sketching; integration as an inverse of differentiation. Methods of integration, definite integrals. Application to areas and volumes.

PHY 121: General Physics II (Electricity & Magnetism)

(2 Units C: LH 30)

Course Contents

Forces in nature; electrostatics, electric charge and its properties. Methods of charging, Coulomb's law and superposition. Electric field and potential, Gauss's law. Capacitance. Electric dipoles. Energy in electric fields. Conductors and insulators. Current, voltage and resistance, Ohm's law and

analysis of DC circuits. Magnetic fields; Lorentz force, Biot-Savart and Ampère's laws. Magnetic dipoles. Dielectrics. Energy in magnetic fields. Electromotive force. Electromagnetic induction. Self and mutual inductances Faraday and Lenz's laws. Step up and step-down transformers: Maxwell's equations. Electromagnetic oscillations and Waves. AC voltages and currents applied to inductors, capacitors, resistance, and combinations.

PHY 122 - General Practical Physics II

(1 Unit C: PH 45)

Course Contents

This practical course is a continuation of PHY 112 and is intended to be taught during the second semester of the 100 level to cover the practical aspect of the theoretical courses that have been covered with emphasis on quantitative measurements, the treatment of measurement errors, and graphical analysis. However, emphasis should be placed on the basic physical techniques for observation, measurements, data collection, analysis and deduction.

COS 121: Problem Solving

(3 Units C: LH 30; PH 45)

Course Contents

Introduction to the core concepts of computing. Problems and problem-solving. The identification of problems and types of problems (routine problems and non-routine problems). Method of solving computing problems (introduction to algorithms and heuristics). Solvable and unsolvable problems. Solution techniques of solving problems (abstraction, analogy, brainstorming, trial and error, hypothesis testing, reduction, literal thinking, means end analysis, method of focal object, morphological analysis, research, root cause analysis, proof, divide and conquer). General Problem-solving process. Solution formulation and design: flowchart, pseudocode, decision table, decision tree. Implementation, evaluation and refinement. Programming in C, Python etc.

Lab Work: Use of simple tools for algorithms and flowcharts; writing pseudocode; writing assignment statements, input-output statements and condition statements; demonstrating simple programs using any programming language (Visual Basic, Python, C)

DOU-IFT 121: Ethical Issues in Information Technology

(3 Units C: LH 30)

Course Contents

Introduction to ethics. Cybercrime and ethics. Autonomous weapons and ethics. Secret services and ethics. Relationship between ethics and cyber security. Ethics and harms to privacy. Cyber security resource allocation and transparency disclosure. Intellectual Property and its relationship to cyber security. Ethics of whistleblowing. Ethics of confidentiality. The trade-off between privacy and security. Ethical best practices in cyber security. Cyber security professionals' obligation to the public. Common ethical challenges to cyber security professionals. Plagiarism. Cyberlaw. Governance and ethics. Voluntary values and legally binding norms, international conventions

DOU-IFT 122 Introduction to Critical Thinking

(3 Units; C; LH=30, PH = 45)

Course Content

Introduction to critical thinking. Elements of critical thinking. Cognitive thinking. Importance of critical thinking. Psychological barriers to logical and critical thinking. Critical thinking in the workplace. Theory of thinking. Thinking hats model. Practical application of critical thinking. Reasoning. Types of reasoning. Characteristics of reasoning. Fallacies and biases. Logical connectivity of ideas. Relevance and importance of ideas. Arguments. Systematic problem-solving. Self-belief and values justification.

200 LEVEL FIRST SEMESTER

GST 211: Philosophy, Logic and Human Existence

(2 Units C: LH 30)

Course Contents

Scope of philosophy; notions, meanings, branches and problems of philosophy. Logic as an indispensable tool of philosophy. Elements of syllogism, symbolic logic— the first nine rules of inference. Informal fallacies, laws of thought, nature of arguments. Valid and invalid arguments, logic of form and logic of content — deduction, induction and inferences. Creative and critical thinking. Impact of philosophy on human existence. Philosophy and politics, philosophy and human conduct, philosophy and religion, philosophy and human values, philosophy and character moulding, etc.

EDC 211: Entrepreneurship and Innovation

(2 Units C: LH 30)

Course Contents

Concept of Entrepreneurship (Entrepreneurship, Corporate Entrepreneurship). Theories, Rationale, and relevance of Entrepreneurship (Schumpeterian and other perspectives. Risk Taking, necessity, and opportunity-based entrepreneurship and creative destruction). Characteristics of Entrepreneurs (Opportunity seeker, Risk-taker, Natural and Nurtured, Problem solver and change agent, innovator and creative thinker). Entrepreneurial thinking (Critical thinking, Reflective Thinking, and Creative thinking). Innovation (Concept of innovation, Dimensions of innovation, Change and innovation, Knowledge and innovation). Enterprise formation, partnership, and networking (Basics of Business Plan, Forms of business ownership, business registration, and forming alliances and joint ventures). Contemporary Entrepreneurship Issues (Knowledge, Skills and Technology, Intellectual property, Virtual office, Networking). Entrepreneurship in Nigeria (Biography of inspirational entrepreneurs, youth and women entrepreneurship, Entrepreneurship support institutions, Youth enterprise networks, and Environmental and cultural barriers to entrepreneurship). Basic principles of e-commerce

COS 211: Computer Programming I

(3 Units C: LH 30; PH 45)

Course Contents

Essentials of computer programming. Types of programming: Functional programming; Declarative programming; Logic programming, object-oriented programming. Scripting languages, structured programming principles. Basic data types, variables, expressions, assignment statements, and operators. Basic object-oriented concepts: abstraction; objects; classes; methods; parameter passing; encapsulation. Class hierarchies and programme organisation using packages/namespaces. Use of API – use of iterators/enumerators, List, Stack, Queue from API. Searching; sorting; Recursive algorithms. Event-driven programming: event-handling methods; event propagation; exception handling. Introduction to Strings and string processing. Simple I/O; control structures; Arrays. Simple recursive algorithms; inheritance; polymorphism.

Lab work: Programming assignments, design and implementation of simple algorithms, e.g., average, standard deviation, searching and sorting. Developing and tracing simple recursive algorithms. Inheritance and polymorphism.

IFT 211: Digital Logic Design

(2 Units C: LH 15; PH 45)

Course Contents

Introduction to information representation and number systems. Boolean algebra and switching theory. Manipulation and minimisation of completely and incompletely specified Boolean functions. Physical properties of gates: fan-in, fan-out, propagation delay, timing diagrams and tri-state drivers. Combinational circuits design using multiplexers, decoders, comparators and adders. Sequential circuit analysis and design, basic flip-flops, clocking and timing diagrams. Registers, counters, RAMs, ROMs, PLAs, PLDs, and FPGAs.

Lab Work: Simple combinational gates (AND, OR, NOT, NAND, NOR); Combinational circuits design using multiplexers, decoders, comparators and adders. Sequential circuit analysis and design using basic flip-flops (S-R, J-K, D, T flip-flops); Demonstration of registers, counters, RAMs, ROMs, PLAs, PLDs, and FPGAs.

IFT 212: Introduction to Information Technology

(2 Units C: LH 30)

Course Contents

Introduction to IT. Concept of computer software, hardware. Networking technologies. Networking models and types. Information technology systems model. A brief introduction to information technologies human-computer interaction. Information management. Platform technologies. Programming and web systems and technologies. Data versus information. History of information technology and the internet. Information technology application domains. Security, privacy, policy, and other social issues are inherent in Information technology development and use. Future trends in information technology. Problems with mining. Visualization and natural language processing. Main issues to be considered in a data protection policy in organisations.

DOU-IFT 211 Systems Analysis and Design

(3 Units C; LH: 30; PH:45)

Course Content

Overview of System Analysis and Design. Importance of system analyses. System Analysis life cycle. System analysis and design in business. Role and responsibilities of system analyst. Business analysis tools, techniques and software. System modeling and development. System design and architecture. System implementation in SDLC. Systems support and security. System Requirement Specifications and Analysis. Structures System Design. Input Design and Control. Output Design. File and Database Design. System Development. System Control and Quantity Assurance. Documentation.

DOU-IFT 212 Introduction to Enterprise System

(3 Units C; LH 30)

Course Content

Theoretical concepts and current practice of enterprise systems. Different types and components of an enterprise system. Business process in the enterprise system. Concept of system integration. Enterprise systems architecture and development life cycle. Architectures and the enterprise systems market. Organisational Case study. Organisational change and business process reengineering. Process of vendor selection. Enterprise system integration strategies. Challenges faced during the implementation of an enterprise system. Operations and post-implementation. Supply chain management. Customer relation management. Global ethics and security management. Concept of supply chain management. Discuss trends, opportunities, and issues with enterprise systems.

200 LEVEL SECOND SEMESTER

COS 221: Computer Programming II

(3 Units C: LH 30; PH 45)

Course Contents

Review and coverage of advanced object-oriented programming - polymorphism, abstract classes, and interfaces. Class hierarchies and programme organisation using packages/namespaces. Use of API – use of iterators/enumerators, List, Stack, Queue from API. Searching, sorting. Recursive algorithms. Event-driven programming: event-handling methods, event propagation, exception handling. Applications in Graphical User Interface (GUI) programming.

Lab work: Programming assignments leading to extensive practice in problem-solving and programme development with emphasis on object orientation. Solving basic problems using static and dynamic data structures. Solving various searching and sorting algorithms using iterative and recursive approaches. GUI programming.

INS 221 Human-Computer Interface (HCI)

(2 Units C: LH 30)

Course Contents

Foundations of HCI. The concept underlying the design of HCI. Principles of GUI. GUI toolkits. System design methods. User conceptual models and interface metaphors. Human cognitive and physical ergonomics. Human-centred software evaluation and development. GUI design and programming.

Lab Work: Illustration of the principles of HCI design. Practice on GUI design and programming. Demonstration of some GUI toolkits. Practical evaluation of GUIs

IFT 221: Computer Architecture and Organisation**(2 Units C: LH 15; PH 45)****Course Contents**

Instruction format and types, memory and I/O instructions, dataflow, arithmetic, and flow control instructions, addressing modes, stack operations, and interrupts. Data path and control unit design. RTL, microprogramming, and hardwired control. Practice of assembly language programming. Memory hierarchy, cache memory, virtual memory. I/O fundamentals. Interrupt structures.

Lab work: Programming assignments to practice MS-DOS batch programming, Assembly Process, Debugging, Procedures, Keyboard input, Video Output, File and Disk I/O and Data Structure. Instruction and arithmetic pipelining, superscalar architecture. Reduced Instruction Set Computers. Parallel architectures and interconnection networks

IFT 222: Introduction to Web Technologies**(2 Units C: LH 15; PH 45)****Course Contents**

Introduction to the internet, the world wide web (WWW), and web development. WW as a platform for interactive applications, content publishing, and social services. The role of HTTP and HTTPS in the context of web applications. Roles and operations of web browsers and the web server. Interacting with web applications through forms, and using style sheets to separate document structure and document formatting. Web development tools and frameworks. Build a simple website that: organizes information effectively, uses valid HTML 185 and CSS, and applies appropriate web standards from standards bodies such as W3C. HTTP communication protocol, the mark-up languages HTML, XHTML, and XML, the CSS and XSLT standards for formatting and transforming web content. Interactive graphics and multimedia content on the web, client-side programming using JavaScript. Impact of the world wide web on people's lives over time.

Lab Work: Using simple form-based web applications; developing simple websites using web development tools and frameworks; using the mark-up languages HTML, XHTML and XML; using JavaScript. Illustration of the use of interactive graphics and multimedia content.

DOU-IFT 221 Database Design and Management**(2 Units C; LH 15; PH 45)****Course Content**

Define the concepts of database, database design, and database management. Importance and characteristics of databases. Types and categories of databases. Database design, development, maintenance, and Implementation Strategies. Concurrency control. Object Oriented Databases. SQL, and Data Modelling. Normalization. Storage Management of databases. Transaction management and query evaluation of the database. Distributed and non-relational database systems. Network-centric data management. Client-Server systems overview. Web-based Information Systems. Heterogeneous databases. Information integration and wireless data management. Database manager and user. Database security and integrity. Introduction to query processing and optimization. The challenges of the development and Management of databases. Logical database design principles.

DOU-IFT 222: Business Continuity and I.T Disaster Recovery (3UnitsC:LH:15; PH:45)**Course Content**

Introduction to Business Continuity and I.T Recovery. Business continuity Plan. Business Continuity process. Business Continuity plan implementation. Business continuity impact analysis. Business continuity and IT recovery team. Disaster recovery and virtualization technologies. Risk assessment. IT recovery strategy. IT recovery architecture. System security strategy. Data storage & recovery. System Backup and recovery plan. Disaster recovery plan testing. System restores plan and implementation. Alternative recovery pans. Business Continuity and IT Recovery documentation.

DOU-IFT 223 Network Administration and Management**(3 Units C; LH: 15; PH:****45)****Course Content**

Introduction to system and network administration. The role of computer networks in organisations. Theoretical aspects of computer communications. Systems software for computer networks.

Applications software and computer networks. Implementation and maintenance of computer networks. Technical problem-solving and troubleshooting. Network security. Remote access. User access and privileges. Network management tools. Security and network management. Service Authentication and Authorization. Type of network administration (SANs, WAN, LAN administration). File and print, update and patch management. System administration. Incident response and forensics. Network design and implementation. Computer network architecture. Issues and challenges in network administration.

300 LEVEL FIRST SEMESTER

GST 311: Peace and Conflict Resolution

(2 Units C: LH 30)

Course Contents

Concepts of Peace, Conflict and Security in a multi-ethnic nation. Types and Theories of Conflicts: Ethnic, Religious, Economic, Geopolitical Conflicts; Structural Conflict Theory, Realist Theory of Conflict, Frustration-Aggression Conflict Theory. Root causes of Conflict and Violence in Africa: Indigene and settlers Phenomenon; Boundaries/border disputes; Political disputes; Ethnic disputes and rivalries; Economic Inequalities; Social disputes; Nationalist Movements and Agitations; Selected Conflict Case Studies – Tiv-Junkun; Zango Kartaf, Chieftaincy and Land disputes, etc. Peace Building, Management of Conflicts and Security: Peace & Human Development. Approaches to Peace & Conflict Management --- (Religious, Government, Community Leaders, etc.). Elements of Peace Studies and Conflict Resolution: Conflict dynamics assessment Scales: Constructive & Destructive. Justice and Legal framework: Concepts of Social Justice; The Nigeria Legal System. Insurgency and Terrorism. Peace Mediation and Peace Keeping. Peace & Security Council (International, National and Local levels) Agents of Conflict resolution – Conventions, Treaties Community Policing: Evolution and Imperatives. Alternative Dispute Resolution, ADR. Dialogue b). Arbitration, c). Negotiation d). Collaboration, etc. Roles of International Organisations in Conflict Resolution. (a). The United Nations, UN and its Conflict Resolution Organs. (b). The African Union & Peace Security Council (c). ECOWAS in Peace Keeping. Media and Traditional Institutions in Peace Building. Managing Post-Conflict Situations/Crisis: Refugees. Internally Displaced Persons, IDPs. The role of NGOs in Post-Conflict Situations/Crisis

EDC 311: Venture Creation

(2 Units C: LH: 15; PH: 45)

Course Contents

Opportunity Identification (Sources of business opportunities in Nigeria, Environmental scanning, Demand and supply gap/unmet needs/market gaps/market research, Unutilised resources, Social and climate conditions, and technology adoption gap). New business development (business planning, market research). Entrepreneurial finance (venture capital, equity finance, microfinance, personal savings, small business investment organisations, and business plan competition). Entrepreneurial marketing and e-commerce (Principles of marketing, customer acquisition & retention, B2B, C2C and B2C models of e-commerce, first mover advantage, e-commerce business models and successful e-commerce companies,). Small business management/family business: Leadership & Management, basic bookkeeping, nature of family business and family business growth model. Negotiation and business communication (Strategy and tactics of negotiation/bargaining, traditional and modern business communication methods). Opportunity discovery demonstrations (business idea generation presentations, business idea contest, brainstorming sessions, idea pitching). Technological solutions (the concept of market/customer solution, customer solution, and emerging technologies, business applications of new technologies- Artificial Intelligence (AI), Virtual/Mixed Reality (VR), Internet of Things (IoT), Blockchain, Cloud Computing, renewable energy, etc. digital business and e-commerce strategies).

CSC 311 Operating System

(3 Units C: LH 30; PH 45)

Course Contents

Fundamentals of operating systems design and implementation. History and evolution of operating systems. Types of operating systems. Operating system structures. Process management:

processes, threads, CPU scheduling, process synchronisation. Memory management and virtual memory. File systems; I/O systems; Security and protection; Distributed systems; Case studies.

Lab work: Practical hands-on engagement to facilitate understanding of the material taught in the course. All the process, memory, file and directory management issues will be demonstrated under the LINUX operating system. Also UNIX commands will be briefly discussed. Alternatively, hands-on exposure may be through the use of operating systems developed for teaching, like TempOS, Nachos, Xinu or MiniOS. Another possibility is through programming exercises that implement and simulate algorithms taught. Simulation of CPU scheduling algorithms, producer-consumer problem, memory allocation algorithms, file organisation techniques, deadlock algorithms and disk scheduling algorithms.

ICT 311: Data Communications Systems and Network

(3 Units C: LH 30; PH 45)

Course Contents

Types and sources of data, simple communications network, transmission definitions, one way transmission, half-duplex transmission, transmission codes, transmission modes, parallel transmission, serial transmission, bit synchronization, character synchronization, character synchronization, synchronous transmission, asynchronous transmission, the efficiency of transmission, error detection methods and data compression. Protocols: Introduction to the network protocol. Seven Layer ISO-OSI standard protocols and network architecture. Transport protocols, session services protocols, and other protocols. Institute of Electrical and Electronics Engineering 802 standards. Error control and Data Compression: Forward Error Control; error detection methods; parity checking; linear block codes, cyclic redundancy checking; feedback error control, data compression, Huffman coding, and dynamic Huffman coding. Local Area Networks: medium access control techniques – Ethernet, token bus and token ring; LAN standards; fibre-distributed data interface, metropolitan area network. Peer-to-peer, Client-Server. Client-Server Requirements: GUI design standards, interface independence, platform independence, transaction processing, and connectivity, reliability, backup, and recovery mechanisms. Information Network Software; Features and benefits of major recovery mechanisms. Information Network Software: features and benefits of major Network Operating Systems. Network OS: (e.g., Novell NetWare, UNIX/LINUX, and OS/2 & Windows NT). TCP/IP and Network OS. INTERNET: Definition, architecture, services, internet addressing. Internet protocol, IPv4, IPv6. Internet programming, Intranet. System administration, and security issues.

Lab Work: Demonstration of simple communications networks. Illustration of applications at the various levels of the OSI model. Demonstration of different types of Local Area Networks (LANs). Illustration of Metropolitan Area Networks. Illustration of Error Detection and Error Correction techniques. Demonstration of Network Operating Systems.

IFT 311: Web Application Development

(2 Units C: LH 15; PH 45)

Course Contents

Introduction to framework-based web development using a contemporary language like PHP and ASP.net. Principles of web pages (dynamic and static) and website design. The tool used in web development. Client-side and server-side languages. Creation of interactive, dynamic websites using a common web architecture and object-based database access. Design, implementation, and testing of web-based applications including related software, databases, interfaces, and digital media. Standard object models, and the use of server-side programmes for database and file access; testing, software quality assurance; and the process of publishing Web sites. Hands-on PHP and Python programme using open-source software (Apache, PHP, Python, JavaScript, and MySQL). Programming for web development includes control structures, objects, functions, and the use of composite data types. Deploying dynamic content using JavaScript. Designing and developing dynamic web pages and creating, validating, transforming, and formatting data using PHP.

Lab Work: Simple PHP programming. Design of simple web pages. Creation of dynamic websites. Design of client-side and server-side programmes. Demonstration of web-based applications with

database access. Use of JavaScript to develop dynamic content. Use of Python to develop dynamic web pages.

IFT 312: Ethics and Legal Issues in IT

(2 Units C: LH 30)

Course Contents

Social, ethical, legal, and managerial issues in the application of information technology in government, organizations, and industry. Foundations of intellectual property. Ownership of information. Plagiarism, Software piracy. Fairness in the workplace. Digital millennium copyright act. Patents. Trademarks and trade secrets. Legal issues in computing. Organizational context; professional and ethical issues and responsibilities. Relationships with professional societies. Codes of professional conduct. Ethics and history of ethics. Whistle blowing. Workplace issues (harassment, discrimination). Identify theft. Ethical hacking. Privacy and civil liberties organizations

IFT 313: Mobile Application Development

(2 Units C: LH 15; PH 45)

Course Contents

Introduction to developing mobile applications. Mobile operating systems capabilities, application architecture, and major components, such as activities, services, broadcast receivers, etc. Development of interactive applications using widget libraries, web-based services. Basic concepts of 2D graphics and animation. An SQL database engine, and multithreading. Multiplatform mobile application development. Mobile application basics and features; Android application basics, UI design. Data storage; networking application design. Advanced application design (sensors, camera, GPS, Audio, etc.), graphics and games, web-based hybrid application design. Design and implement a simple mobile application for a given mobile platform. Metrics and methods to evaluate the performance of mobile applications. Mobile application perspectives and impact.

Lab Work: Demonstration of a Simple Mobile Application. Design and Development of interactive mobile applications. Demonstration of multiplatform mobile application development. Development of Android applications including UI design and data storage design. Demonstration of advanced mobile application design. Illustration of metrics for measuring the performance of mobile applications.

IFT 314: I.T Innovation and Entrepreneurship

(2 Units C: LH 15, PH 45)

Course Contents. Legal issues and business ethics. New venture creation process. Business feasibility planning. Market research. Business strategy. Business models and business plans. Technical presentations. Report on a successful entrepreneurial outfit.

IFT 315: Network Servers and Infrastructures

(2 Units C: LH 15: PH 45)

Course Contents

IP networking concepts and practices for IPv6 addressing. DHCP and DNS in IPv.6 networks. Secure communication over VPNs, VoIP architecture. Concept of Virtual Computing, Cloud Computing, VoIP. Traffic monitoring and network connectivity between operating systems. Overview of latest technologies of IP networks and understand application-level services used in the internet. Multi-Protocol Label Switching (MPLS). VPN Secure Network Connectivity. VoIP Architecture. Network Neutrality

Lab Work: Demonstration of IPv6 networks including DHCP and DNS configuration. Basics of VPNs. Simple applications of VPNs. Installation of applications on virtual servers. Monitoring traffic on virtual servers. Working with Multiple Servers. Balancing traffic on servers. Testing the security of VPNs. Illustration of VOIP architecture.

DOU-IFT 316: Web Development using Content Management Systems (2Units C: LH 15;PH 45)

Course Contents

Web development techniques using content management systems (CMS) (e.g., Joomla, MS SharePoint 2013). Design and creation of websites using specialised CMS tools. Review and evaluation of CMS tools and technologies in terms of client requirements. Development of Web sites using front-end (client-side) and back-end (server-side). Use of a CMS to set up, deploy, and maintain websites. Programming while considering issues of interface and user experience design, accessibility, and Web standards. Methods, languages, tools related to developing web-based content management systems. Development of plugins or extensions that integrate with existing systems to extend their functionality. Audit content for a website. Choose an appropriate CMS, and convert a static design into a dynamic CMS-powered site

Lab Work: Basic features of Content Management Systems. Developing websites using CMS. Developing front-ends and back-ends. Using various tools in CMS. Developing plugins and extensions. Converting static designs to dynamic websites.

DOU-IFT 311 Users Interface Development 45)

(2 Units E; LH: 15; PH:

Course Content

Introduction to the user interface. Overview of HTML and CSS. User interface design process. User interface designer tools. Principles of the user interface. Interface design. Abstract user interfaces components. Graphic design. Functional user interfaces. Images. Information architecture. Form validation. Principle Java Swing classes. Design for behaviour and ethics. Flexbox. Timing functions. Animations and keyframes.

300 LEVEL SECOND SEMESTER

IFT 398: Students Industrial Work Experience Scheme SIWES I

(6 Units C: PH 135)

Course Contents

Students are attached to private and public organizations for three months at first instance to enable them acquire practical experience and to the extent possible, develop skills in all areas of computing. Students are supervised during the training period and shall be expected to keep records designed to monitor their performance. They are also expected to submit a report on the experience gained and defend their reports.

IFT 399: Students Industrial Work Experience Scheme SIWES II

(6 Units C: PH 135)

Course Contents

Students are attached to private and public organizations for three months to make them acquire practical experience and to the extent possible, develop skills in all areas of computing. Students are supervised during the training period and shall be expected to keep records designed to monitor their performance. They are also expected to submit a report on the experience gained and defend their reports.

DOU-IFT 321: Students Industrial Work Experience Scheme Report

(3 Units C: PH 45)

Report writing of the SIWES activity and presentation of learning experience during the course of the industrial training exercise.

400 LEVEL FIRST SEMESTER

INS 411: Project Management

(2 Units C: LH 30)

Course Contents

Introduction to Project Management; The Project Management Lifecycle: Project management and systems development or acquisition, The project management context, Technology and techniques to support the project management lifecycle, and Project management processes; Managing Project

Teams: Project team planning, Motivating team members, Leadership, power and conflict in project teams, and Managing global project teams; Managing Project Communication and enhancing team communication; Project Initiation and Planning; Managing Project Scope: Project initiation, How organisations choose projects, Activities, and Developing the project charter; Managing Project Scheduling: Common problems in project scheduling, and Techniques for project scheduling; Managing Project Resources: Types of resources (human, capital, time), and Techniques for managing resources; Project quality and tools to manage project quality; Managing project risk and tools for managing project risk; Managing Project Procurement: Alternatives to systems development, External acquisition, Outsourcing-domestic and offshore, Steps in the procurement process, and Managing the procurement process; Project Execution, Control and Closure: Managing project execution, Monitoring progress and managing change, Documentation and communication, and Common problems in project execution; Managing Project Control and Closure: Obtaining information, Cost control, Change control, Administrative closure, Personnel closure, Contractual closure and Project auditing.

COS 411: Research Methodology and Technical Report Writing

(3 Units C: LH 45)

Course Contents

Foundations of Research. Types of Research. Research Approaches. Significance of Research. Research Methods versus Methodology. Research Process. Criteria and Strategy for Good Research. Problems Encountered by Researchers in Nigeria. Principles of Scientific Research. Scientific investigation. Problem formulation. Definition and technique of the Research Problem. Selection of Appropriate Method for Data Collection- Primary Data and Secondary Data. Guidelines for Constructing Questionnaire/Schedule. Guidelines for Successful Interviewing. Difference between Survey and Experiment. Eliciting Research Proposal and Research Plan. Formulation of working hypothesis and Testing. Literature review. Procedure for reviewing related relevant studies and referencing cited works. Types of Reports. Technical Report Writing. Layout and Mechanics of Writing a Research Report. Standard Techniques for Research Documentation. Sampling Design. Different Types of Sample Designs. Steps in Sampling Design. Criteria of Selecting a Sampling Procedure. Methods of analysis. Processing and Analysis of Data Elements/Types of Analysis. Interpretation and Presentation of results. How to prepare References and Bibliography.

IFT 411: Mobile and Pervasive Computing

(2 Units C: LH 15; PH 45)

Course Contents

Definitions and motivations: mobile, pervasive and ubiquitous computing. Physical interaction. Theoretical foundations of pervasive computing. Context-aware interaction, resource and device constraints. Implementing pervasive systems: sensor, actuators, and embedded systems. Applications, programming languages, and approaches, device types, and choices. Capturing needs and requirements for pervasive systems: techniques and challenges. Multisensory communication using pervasive computing. Sensor Networks. Security Protocols for Sensor Networks. Introduction to cloud computing technologies and its services.

Lab Work: Developing simple mobile applications. Design of simple pervasive computer systems. Design of context-aware sensor networks. Testing the security of mobile and pervasive computer systems. Using security protocols for sensor networks

IFT 497: Final Year Project I

(3 Units C: PH 135)

Course Contents

An independent or group investigation of appropriate software, hardware, communication and networks or IT related problems in Computer Science carried out under the supervision of a lecturer. Before registering, the student must submit a written proposal to the supervisor to review. The proposal should give a brief outline of the project, estimated schedule of completion, and

computer resources needed. A formal written report is essential and an oral presentation may also be required.

DOU-IFT 411: Information Technology Governance

(2 Units C: LH 30)

Course Content

Introduction to IT Governance. Definition and importance of IT governance. Role of IT governance in organisations. IT Governance Frameworks. Overview of key frameworks (e.g., COBIT, ITIL, ISO/IEC 38500). Application of governance frameworks. Strategic IT Alignment, Aligning IT strategy with organisations goals, Case studies of IT governance and strategic alignment in higher education. Risk Management in IT Governance. Identifying IT risks to higher education and other fields (e.g., cybersecurity, data breaches). Developing and implementing risk management strategies. Legal and Regulatory Compliance. Overview of relevant laws (e.g., GDPR, FERPA, HIPAA) impacting organisation's IT policies. Developing policies that ensure compliance with legal and regulatory standards. Resource Allocation and IT Budgeting. Efficient management of IT resources (financial, human, technological). Strategic budgeting and resource allocation in IT departments. Developing and Implementing IT Policies. Crafting IT policies for governance, security, and operational efficiency. Policy formulation for areas like data privacy, cybersecurity, and IT ethics. Cybersecurity and Data Protection. Security frameworks and measures to protect university data and IT systems. Best practices for maintaining cybersecurity in academic environments. Ethical Issues in IT Governance. Addressing ethical challenges in IT governance, including data privacy and access inequality. IT Performance Monitoring and Evaluation. Metrics and tools for assessing the effectiveness of IT governance. Case Studies in IT Governance. Real-world examples of IT governance success and failure in higher education. Analysis of different governance models and their outcomes. Future Trends in IT Governance.

DOU-IFT 412 Business Information Technology Architecture (2 Units C; LH 15; PH 45)

Course Content

Overview of BITA. Information technology applications. Computer code development for business applications. Network troubleshooting. Telecommunication principles to design and configure a network. Strategies and implementation of security technology in BITA. Business applications and project tracking. Conceptual database model. Introduction to database management. Query for relational databases. Visual interface design. Professional ethical and legal issues impacting information technology. Examining project life cycle. Project management techniques for IT projects. Evaluating user requirements in the systems development environment. Design documentation. Managing project teams, estimating project times, and developing plans in the BITA environment. Identification of risks in IT environment. Understanding Business and Financial Information.

DOU-IFT 413 Cloud Computing

(2 Units C; LH = 15; PH = 45)

Course Contents

Understanding the Cloud. Cloud Business Imperative. Architectural Considerations. Hybrid and Multi-cloud Environments. Cloud Services. Cloud Models. Infrastructure as a Service. Software as a Service. Platform as a Service. Planning for DevOps in the Cloud. Managing Multi-cloud Workloads. Managing Data Storage in the Cloud. Developing Your Cloud Strategy. Integrating Data in the Cloud. Promoting Cloud Security and Governance. Cloud Economics. Planning Your Cloud Strategy. Some Cloud Resources. Cloud Do's and Don'ts.

Lab Work: Practical demonstration of the concepts of cloud computing and DevOps. Development of a cloud-based app.

400 LEVEL SECOND SEMESTER

IFT 421: System Integration and Architecture

(2 Units C: LH 30)

Course Contents

System architecture, testing, evaluation, and benchmarking. Contracts, RFPs, and quality. System integration and deployment. System release. Pilot and acceptance testing and defect repair. System

support strategies and user support plans, and enterprise integration approaches, standards, and best practices. Testing and quality assurance. Role of systems architecture in systems integration, performance, and effectiveness. Principles and concepts of DevOps. The interplay between IT applications roll-out and related organisational processes. The concept of Enterprise Architecture. Developing an Enterprise Architecture.

IFT 422: Wireless Communications and Networking

(2 Units C: LH 15; PH 45)

Course Contents

Fundamental principles underlying wireless data communications. Wireless transmission basics. Radio propagation issues, antennas, digital modulation. Spread spectrum techniques, and their applications, and popular standards. Wi-Fi, WiMAX, and Bluetooth. Practical knowledge in the design, testing, deployment, debugging, and commissioning of Wi-Fi, WiMAX networks, and point-to-point microwave systems. Cellular Concept and Spatial Reuse (Interference-Limited and Coverage-Limited Systems). Frequency Reuse (Cellular vs. WIFI - GSM: Architecture). Voice Support, UMTS: Basics of CDMA, Architecture and Key Channels. Introduction to LTE: History, Architecture. Uplink and Downlink Communication in LTE. Mobility in Cellular Systems: The Gateway Concept. Measurement Reports. Mobility Procedures. Mobile IP: Basic Components, Tunnelling, Enhancements for Mobile Ipv6 - Wireless Personal Area Networks (PANS). Discussions on emerging cellular network technologies.

Lab Work: Basics on wireless transmission. Design of simple Wi-Fi and Wi-Max networks. Demonstration of GSM networks. Deployment and testing of wireless networks. Working with LTE. Demonstration of IPv6. Illustration of Wireless Personal Area Networks (PANS)

IFT 499 Final Year Project II

(3 Units C: PH 135)

Course Contents

This is a continuation of IFT 497. This contains the implementation and the evaluation of the project. A formal written report, chapters 4 - 5 has to be approved by the supervisor. A final report comprising chapters 1 - 5 will be submitted to the department for final grading. An oral presentation is required.

DOU-IFT 421 Business Systems Analysis and Modeling

(2 Units C; LH: 15, PH: 45)

Course Content

Introduction to business system analysis and modeling. System planning. System lifecycle methodology. Feasibility analysis. Project planning. System analysis. Develop the requirements determination. Application architecture and modeling. Database design. Input design and prototyping. Output design and prototyping. User interface design. Develop and analyse data flow diagrams. Identify the elements of architectural design. Techniques moving to the implementation phase. Systems Close-out Phase. Process for obtaining project deliverables acceptance. Data Modeling. System construction and implementation. Systems operations and support.

DOU-IFT 422 Distributed Computing Systems **45)**

(3Units C: LH 15, PH

Course contents

Communication Mechanisms. Communication Protocols. RPC. RMI. Stream Oriented Communication. Synchronization. Global State. Election. Distributed Mutual Exclusion. Distributed Transactions. Naming. Generic Schemes. DNS. Naming and Localization. Replication and Coherence. Consistency Models and Protocols. Fault Tolerance. Group Communication. Two-And Three-Phase Commit. Check pointing. Security. Access Control. Key Management. Cryptography. Distributed File Systems. NFS. Coda.

Lab Work: Practical demonstration of the concepts of distributed systems. Development of a small distributed software.

DOU-IFT 423 Data Management and Business Intelligence (2Units; LH 15; PH 45)

Course content

Overview of data management concepts, Data lifecycle management, Data governance and compliance, Data Modeling and Database Design: Conceptual, logical, and physical data models: Entity-Relationship (ER) modelling, Database normalization and denormalization. Database Management Systems (DBMS): Relational databases (SQL), Non-relational databases (NoSQL). Data storage, retrieval, and optimization techniques, Data Integration and ETL Processes: Extract, Transform, Load (ETL) concepts, Data integration strategies, Tools and techniques for data transformation, Business Intelligence Fundamentals: Introduction to Business Intelligence, BI architecture and components, BI tools (e.g., Tableau, Power BI, QlikView). Data Visualization and Reporting: Principles of effective data visualization, Creating dashboards and reports, Advanced reporting techniques. Big Data and Analytics: Introduction to Big Data, Hadoop ecosystem and Spark, Data warehousing and data lakes. Applying data management and BI to business challenges: Industry-specific case studies. Project work: Developing a BI solution.

List of Departmental Staff

The Department of Information comprises Teaching Staff, Academic Advisers, and Non-Teaching (Administrative) Staff. The following tables present their details, including names, disciplines, qualifications, ranks/designations, areas of specialization, and other relevant information.

Table 1: Academic (Teaching Staff)

S/N	NAME	QUALIFICATIONS	AREA OF SPECIALIZATION	RANK	Employment Status
1	Bridget Ogheneovo MALASOWE	Ph.D. Computer Sci. M.Sc. Computer Sci. PGDE B.Sc. Computer Sci.	Artificial Intelligence & Software Development	Professor	Full Time
2	Scholastica NNEBE	Ph.D. (Electronic and Computer Engineering) M.Eng. (Electronic & Comp. Engineering) B.Eng. (Elect/Electronics & Comp. Engineering)	Electronics, and Communication Engineering	Professor	Sabbatical
3	Matthew Chukwuemeka OKORONKWO	Ph.D. Comp Sci., MSc Comp Sc., PGD Comp Sc., HND Systems Sc.	Information Technology	Senior Lecturer	Sabbatical
4	Chukwunenye Sunday OKAFOR	Ph.D. (Electronic and Computer Engineering) M.Eng. (Elect/Electr Engineering) B.Eng. (Elect/Electronics Engineering)	Electronics, Communication and Control Engineering	Senior Lecturer	Sabbatical
5	ANUJEONYE Christiana Nneamaka	PhD Comp. Sc, MSc.Comp. Sc, PDGE, B.Eng	Software Engineering, Information Technology	Senior Lecturer	Full Time

		Comp.Sci/Engr			
6	NWOYE Nnanyelugo PaulAnslem	Ph.D. Comp. Sci. Education M.Sc. Comp Sci. Education B.Ed. Comp. Sci. Education B.Eng Elect/Elect Engineering	Artificial Intelligence	Lect II	Full Time
7	Sandra Chioma NWOKOYE	M.Eng. Elect/ Comp. Engr. B.Eng. Elect/ Comp. Engr.	Software Engineering, Data Science	Lect II	Full Time
8	EBOKA Andrew	M.Sc. Network Computing PGD. Computer Sci B.Sc. Education/Computer	Cybersecurity	AL	Full Time
9	Frances Uchechukwu EMORDI	MSc. Computer Science B.Sc. Computer Science	Information Technology	AL	Full Time

Table 2: Academic Level Advisers

Level	Names of Advisers	Qualifications
100	Dr. ANUJEONYE Christiana Nneamaka	PhD Computer Science, MSc.Computer Science PDGE, B.Eng Comp.Sci/Engr
200	Frances Uchechukwu EMORDI	MSc. (Computer Science) B.Sc. Computer Science)

Table 3: Non-teaching Staff (Administrative)

S/N	Name of Staff	Qualification and Dates Obtained	Area of Specialization	Rank	Employment Status
1	Alero MOSES-OTIEDHE	B.Sc. Ed Geography (2010)	Administration and Management	Assistant Registrar	Full-time
2	Faith ODHIGBO	B.Sci/Ed. Social Studies Education (2007)	Office Management & Communication	Administrative Officer II	Full-time
3.	Shadrack John IDIDIEMISE	B.Sc. Zoology (2020)	Office Management & Communication	Administrative Officer II	Full-time

Table 4: Technical Staff

S/N	Name of Staff	Qualification and Dates Obtained	Area of Specialization	Rank	Employment Status
1	Joe EBASA	B.Sc. Mathematics (2007)	Software Programming	Chief Programmer	Full-time
2	Louis ORHERHE	Post Graduate Diploma (PGD), Computer Science	Hardware Maintenance/Software Programming	Asst. Chief Programmer	Full-time

		Higher National Diploma (HND), Computer Science			
3.	Oghenyerhovwo OBAKANURBE	B.Sc. Computer Science (2020)	Hardware Maintenance/Software Programming	Programmer/ Hardware Maintenance	Full-time