Syllabus
ICT 102–Introduction to Data Communications(CreditUnits:2)

Department of Information Communication Technology
FacultyofComputing
UniversityofDelta,Agbor,Nigeria

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OfficeHours:Monday,Tuesday,Wednesday, Thursday&Friday8:00am-4:00pm
Therearemanywaystoreachme.Thereisnosubstituteforface-to-facecommunicationwhichoftenleadstomorerefinedandfocusedquestionsresulting in your improved understanding. I strongly encourage you to takeadvantage of my office hours. Questions during class or immediately after classare always welcomed. Email and DLMS are easy ways to ask questions outside of class butarenotproductive asface-to-facecommunication.

MeetingTimeandPlace:Monday,4:00pmto6:00pm,FOCLH1

Attendance
Attendance is mandatory. You are expected to attend every class. If you must miss a class, it is your responsibility to make up forthe work that you missed. If you are going to be absent from any class, you must please notify theinstructorinadvance.

MethodsofInstruction
Thissyllabuscontainsanoverviewofwhatwillbecoveredinclass;forspecificinformation,studentsarereferredtotheclasswebpageavailableontheUniversitywebsite.Lectures will be delivered via demonstrations using the white board. Mandatory AssignmentswillbepostedonUniversityofDeltaLMSorgivenintheclassandshouldbesubmittedthroughUniversityofDeltaLMS.Classattendance,doingallyourlaboratory worksandhomeworkwillhelptheborderlinecases.

Overview
Data Communication continues to play a crucial role in today's interconnected world.Data Communication plays a pivotal role in enabling real-time sharing of computer resources and efficient transfer of data across networks.An effective knowledge of data communication is essential for students in information communication technology department.Theobjectiveofthisclassencompasses both theoretical and practical skills that are necessary for students intending to pursue careers in networking, telecommunication and other related fields. This course focuses mainly on the modes of data communication, networking protocols, teleconferencing, description of the internet, communication protocols and internet communication software.

Objectives
The objectives of this course are to: (i) understand the concepts of data communication underlying the modes of data communication, synchronization, channels and media, and modulation; (ii) seek to grasp the knowledge of network protocols, switching, techniques and transfer modes, and mobile communication; (iii) comprehend the various aspects of teleconferencing; (iv) have a practical knowledge of the internet as it relates to websites; (v) instill in students the basic communication protocols, and internet communication software.

Learningoutcomes

Uponcompletionofthiscourse,students shouldbeableto:(i)explain the different modes of data communication, synchronization, channel and media, and modulation; (ii) discuss the basic principles and concepts of network; (iii)describeteleconferencing and the internet; (iv) have a thorough knowledge of internet communication software; and (v) create disk images, recover deleted files and extracthidden information; (vi) identify the various communication protocols

CourseContents

Data Communication: Simplex, Half Duplex, Full Duplex, Synchronization, channels and media, Modulation, Networks, Protocols, Switching, Techniques and Transfer modes, mobile communications, Teleconferencing, Voice Mail and Facsimile. Description of the Internet, Intranets and Extranet and relationships, Internet websites, Domains and www (Site name, Points of Presence, Line Capacity, Site Maintenance etc). Communication protocols, Internet communication softwares.

LectureSchedules

Week	Content	Lecturenotes/slides
1.	Introduction to Data Communication	Lecture Notes
2.	Simplex, Half Duplex, Full Duplex	✓
3.	Synchronization, channels and media, and modulation	✓
4.	Networks, protocols, switching	✓
5.	Techniques and transfer modes, mobile communication	✓
6.	Teleconferencing, voice mail, and facsimile	✓
7.	Description of the Internet	✓
8.	Intranets and Extranets, and relationships	✓
9.	Test	
10.	Internet websites	✓
11.	Domains and WWW	✓
12.	Communication Protocols	✓
13.	Internet communication software	✓
14.	Revisions	
15.	FinalExam	

Examinationschedule

- Attendance
- Homework
- ClassTest
- Practicalexercises
- EndofSemesterExam

PracticalExercises

1. Design of small and medium-sized computer networks
2:Manage, maintain and troubleshoot existing data networks
3: Build a simple internet website

Grading
- Homework:10%ofgrade
- Practical:10%ofgrade
- MidtermExam:10%ofgrade
- FinalExam:70%ofgrade

Text&References
1. National Council of Education.(2023),Data Communication. https://ncert.nic.in
2. Saideep S. (2021), A Brief Study on Data Communication and Computer Networks
3. Mumbai University (2019)., Introduction to data communication and networking. https://archive.mu.ac.in
4. Wang J. Analysis of Computer Networking and Communication System
5. Shaohauai S., Xiaowen C., Bo L. (2018). Efficient Data Communication for Distributed Synchronous Stochastic Gradient Descent Algorithms

StudentConduct
All students enrolled at the University shall follow the tenets of common decency and acceptablebehaviorconducivetoapositivelearningenvironment.Thecodeofstudentconductisdescribedin detailinthestudenthandbookorUniversitywebsite.

AcademicHonesty
"All students enrolled at the University shall follow the tenets of common decency and acceptablebehavior conducive to a positive learning environment." It is the policy of the University, that noform of plagiarism or cheating will be tolerated. Plagiarism is defined as the deliberate use of another'sworkandclaimingitasone'sown.Thismeansideasaswellastextorcode,whetherparaphrasedorpre sented verbatim (word-for-word). Cheating is defined as obtaining unauthorized assistance on anyassignment.Propercitationofsourcesmustalwaysbe utilizedthoroughlyandaccurately.Ifyouarecaughtsharingorusingotherpeople'sworkinthisclass,youwillr eceivea0gradeandawarningonthe first instance. A subsequent instance will result in receiving an F grade for the course, and possibledisciplinaryproceedings.Ifyouareunclearaboutwhatconstitutesacademicdishonesty,ask.