UNIVERSITY OF DELTA, AGBOR, NIGERIA
Faculty of Computing
Department of ICT
ICT 201 – ICT Fundamentals (Credit Units: 2)

Lecturer: Mr Okoh Ogechukwu Lucky
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Office Hours: Monday, Tuesday, Wednesday, Thursday & Friday 8:00 am - 4:00 pm
There are many ways to reach me. There is no substitute for face-to-face communication which often leads to more refined and focused questions resulting in your improved understanding. I strongly encourage you to take advantage of my office hours. Questions during class or immediately after class are always welcomed. Email is an easy way to ask questions outside of class but is not productive as face-to-face communication.

Meeting Time and Place: Wednessdays, 12:00pm to 02:00pm, FOC LH 1

Attendance
You are expected to attend every class. If you must miss a class, it is your responsibility to make up for the work you missed. If you are going to be absent from any class, you must please notify the instructor in advance. With 70% Class attendence the student will be eligeble to particpate in the exam.

Methods of Instruction
This syllabus contains an overview of what will be covered in class; for specific information, students are referred to the class web page maintained on the University website. Assignments will be posted on University of Delta LMS or given in the class and should be submitted through University of Delta LMS. Class attendance, doing all your practical and homework will help the borderline cases.

Overview
Information Communication Technology (ICT) is undoubtedly playing an important role in almost every aspect of our life. ICT fundamentals discuss more about computatiinal thinking such as situation analysis and modelling using a range of methods, design thinking methods and tools that are used for handling abstraction and system thinking components and interactions between them. This course covers the significant of design thinking, application of design thinking tools and models. It also covers some significant of system thinking, dsign models and inplimentation model.

Objectives
The objectives of this course are to:
(i) Understand Computational thinking;
(ii) Understand Design thinking;
(iii) Identify Tools and modelling techniques for design thinking;
(iv) Understand System thinking;
(v) Identifying current trends with ICT infrastucture applications;

Learning outcomes
Upon completion of this course, should be able to:
(i) Explain the concept behind Computation thinking ;
(ii) Explain major Modelling techniques behind Design thinking;
(iii) Describe the major technique in system thinking;

Course Contents

Computational thinking: situation analysis and modelling using a range of methods and patterns to frame it so a computer system could operate effectively within it. Design thinking: methods and tools that are used for handling abstraction could vary a great deal with the branch of ICT, from circuit diagrams to data modelling tools to business process modelling. - Information processing in humans and machines, artificial intelligence. Systems thinking: components and interactions between them, structure and function, emergent properties and functions, systems layers - History of computing and ICT, drivers of technology evolution and trends for the future - Social and individual impacts of ICT deployment.

Lecture Schedules

Week	Content	Lecture notes/slides
1.	Introduction to ICT fundamentals and scope	Lecture notes
2.	Introduction to Computational thinking	Lecture notes
3.	Analysis and modelling of computational thinking using models and patterns	Lecture notes
4.	Practical approach to computational thinking and it' benefits	Lecture notes
5.	Test	Lecture notes
6.	Concept of design thinking	Lecture notes
7.	Methods and tools for handling design thinking	Lecture notes
8.	Modelling techs for design thinking	Lecture notes
9.	Significant of Design modelling	Lecture notes
10.	Test	Lecture notes
11.	System thinking concepts and brief introduction	Lecture notes
12.	Components of system thinking	Lecture notes
13.	Structure, functions and application of System thinking	Lecture notes
14.	Revisions	Lecture notes
15.	Final Exam	

Examination schedule
- Attendance
- Homework
- Class Test
- Practical exercises
- End of Semester Exam

Practical Exercises
1: Introduction to computational thinking
2: Practical appliction of Computational thinking
3: Modelling of design thinking principals
4: Design and modelling of system thinking using relevant tools
5: Practical deployment of a design system.

Grading
- Homework: 10% of grade
- Practical: 10% of grade
- Accessment: 10% of grade
- Final Exam: 70% of grade

Text & References

Paul Curzon's(2020), "So What is Computational Thinking"
Jeannette M. Wing's(2009), "Computational Thinking".
Moritz Gekeler(2019), "A practical guide to design thinking"
Jawahar (2020), "Overview of System Analysis & Design"

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behaviour conducive to a positive learning environment. The code of student conduct is described in detail in the student handbook or University website.

Academic Honesty

"All students enrolled at the University shall follow the tenets of common decency and acceptable behaviour conducive to a positive learning environment." It is the policy of the University, that no form of plagiarism or cheating will be tolerated. Plagiarism is defined as the deliberate use of another's work and claiming it as one's own. This means ideas as well as text or code, whether paraphrased or presented verbatim (word-for-word). Cheating is defined as obtaining unauthorised assistance on any assignment. Proper citation of sources must always be utilised thoroughly and accurately. If you are caught sharing or using other people's work in this class, you will receive a 0 grade and a warning on the first instance. A subsequent instance will result in receiving an F grade for the course, and possible disciplinary proceedings. If you are unclear about what constitutes academic dishonesty, ask.