



**BUNDAY TUTORIAL**  
**MAKE-HAY ACADEMY**  
**LAGOS STATE UNIVERSITY**



Compiled by: **MR BUNDAY (B.Sc, M.Sc Mathematics)**  
07011534711, 07053845576

**100LEVEL SECOND SEMESTER COURSE OUTLINES.**  
FACULTY OF SCIENCES, LASUCOMM, ENGINEERING, TRANSPORT AND EDUCATION



*Bunday Tutorial*

RC: 7756243

**#500**  
Referral  
bonus

# 100LEVEL & 200LEVEL TUTORIALS

SCIENCES | ENGINEERING | EDUCATION | TRANSPORT | MANAGEMENT SCIENCES |  
SOCIAL SCIENCES | ARTS | LAW | MASS COMMUNICATION

## What we do:

- 100level tutorials
- 200level tutorials
- Private class of 1
- Private class of 10
- Marathon revision classes
- Solution packs for science faculty

## VENUE FOR 100L SCIENCES:

Benson hall, faculty of sciences.

## VENUE FOR 100L FMS & FSS:

Eco Hall, faculty of social science

## VENUE FOR 100L MASSCOMM, ARTS & LAW:

Fa 007/ 010, faculty of Arts



## BUNDAY TUTORIAL CENTRE (BTC)

Gofamint fellowship - get to the ppl gate from behind faculty of transport inside lasu, enter through, the building beside the fence is our venue.

## WHY JOIN US?

- We have amassed more than 5 academic awards of excellence and recognition from LASUSU & NASS-LASU.
- Demonstration of mastery of courses by teaching from lecturer's pdf, tutorial pdfs and giving weekly assessments.
- Creation of an inclusive learning environment for the students by engaging students in discussions and group work.
- Our tutors are graduates and scholars of the departments concerned.
- We use diversifying teaching methods: visual, auditory and kinesthetic.



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Bunday Tutorial



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..... if you are not a bundite, you are wrong

## **1 GNS 104 - Use of Yoruba language & Culture (2 units)**

- Awon iro ede Yoruba
- Ounjé Ile Yoruba
- Awon itan alo, itan iwase, oruko awon akoni ile Yoruba, orin ati awon ewi keekeke
- Asa oge sise
- Owe ati akanlo ede
- Awon ise ibile ati asa
- Asa iran-ara-eni-lowo
- Aroko pipa, eewo ile Yoruba
- Eto molebi ati ayeye sise
- Ifunniloruko ati ifunloruko
- Ere idaraya
- Awon ibo ile Yoruba ati odun ibile
- Iwa omoluabi
- Akoto ati ede iperi Yoruba
- Akaye, aroko, oro ayalo
- Aayan ogbufo
- Onka Yoruba
- Isori oro
- Gbolohun ede Yoruba

## **2 GNS 112 - Nigerian Peoples & Culture (2 units)**

- Nigerian history, culture and arts up to 1800 (yoruba, hausa, igbo and the ethnic minorities)
- Individual norms and values
- History of trade, economy, and self-reliance in Nigeria
- Nigeria under colonial administration
- Re-orientation, moral, and national values (the 3rs, re-orientation strategies; operation feed the nation, green revolution, austerity measures, war against indiscipline (WAI), war against indiscipline and corruption (WAIC), and national orientation agency)
- Evolution of Nigeria as a political unit in historical context
- Cultism, kidnapping, and other related social vices in Nigeria
- The political administration of Lagos 1400 - 1999
- The People of Lagos State
- The Growth and Development of Education in Lagos State
- The Role of The Judiciary in Upholding People's Fundamental Rights
- Current Socio-Political and Cultural Developments in Nigeria

### 3 CHEM 102 - General Chemistry II (2 units)

- Historical survey of the development and importance of organic Chemistry.
- Fullerenes as fourth allotrope of carbon, uses in nanotubes, nanostructures, nanochemistry
- Nomenclature and functional group classes of organic compounds; alkanes, alkynes, alcohol, esters, amines, alkylhalides.
- Nomenclature and functional group classes of organic compounds; aldehydes, ketones, nitriles, carboxylic acids, and its derivatives.
- Determination of structure of organic compounds including qualitative and quantitative analysis and isolation and purification of organic compounds.
- Electronic theory of organic chemistry.
- Introduction to transition metal chemistry.
- The chemistry of selected metals and non-metals and comparative chemistry of groups IIA, IVA elements.
- Benzene and Aromatic Compounds.
- Introductory reaction mechanism and kinetics.
- Stereochemistry.

### 4 PHY 102 - General Physics II (2 units) (Electric field, Magnetic field, Electromagnetism)

- 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.
- Energy in Electric fields
- Conductors and insulators
- DC circuits (current, voltage, and resistance)
- Ohm's law. Resistor combinations
- Analysis of DC circuits
- Magnetic fields
- Lorentz force
- Biot-Savart and Ampere'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 and resistance.



## 5 PHY 104 - General Physics IV (2 units) (SHM, Waves, Optics & Sound waves)

- Simple Harmonic Motion (SHM)
  - Energy in a vibrating system
  - Damped SHM
  - Q values and power response curves
  - Forced SHM
  - Resonance and transients
  - Coupled SHM, normal modes
- Waves
  - Types and properties of waves as applied to sound
  - Transverse and longitudinal waves
  - Superposition, interference, diffraction, dispersion, polarization
  - Waves at interfaces
  - Energy and power of waves
  - the 1-D wave equation, 2-D wave equation, and 3-D wave equations
- Wave energy and power
  - Phase and group velocities
  - Echo, beats, doppler effects
  - Propagation of sound in gases, solids and liquids and their properties
  - Optics: Nature and propagation of light
  - Reflection, refraction and internal reflection
- Dispersion, scattering of light, reflection and refraction at plane and spherical surfaces
  - Thin lenses and optical instruments
  - Wave nature of light
  - Huygen's principle
  - Interference and diffraction

## 6 MAT 102 - Elementary Mathematics II (2 units) (CALCULUS)

- Elementary function of real variables and their graphs
- Limits and idea of continuity, one sided limits.
- The derivative as limit of rate of change
- Techniques of Differentiation
  - Rate of change
  - Product and quotient rules
  - Function of a function
  - Implicit functions
  - Differentiation of trigonometric and inverse trig function
  - Exponential and logarithmic differentiation
  - Stationary values of simple functions, maxima and minima, point of inflexion and extreme curve sketching
- Integration as an inverse of differentiation
- Integration of simple and harder functions
- Integration by parts, and by substitution
- Definite integrals
- Applications to areas and volumes

## **7 MAT 108 - Elementary Mathematics III (Vectors, Geometry & Dynamics) - 2 units**

- Geometric representation of vectors in 1-3 dimensions, components, direction cosines.
- Addition, scalar, multiplication of vectors, linear independence.
- Scalar and vector products of two vectors.
- Differentiation and integration of vectors with respect to a scalar variable.
- Two dimensional coordinate geometry; straight lines, circles, parabola, ellipse, hyperbola, tangents and normal.
- Impact of two smooth sphere and of a sphere on a smooth sphere.

## **8 MAT 162 - Introductory Statistics II (Statistical Inference I) (3 units)**

- Population and samples
- Random sampling distributions
- Estimation (point and interval) and tests of hypothesis concerning population mean and proportion (one and two large sample cases)
- Regression and Correlation
- Elementary time series analysis

## **9 MAT 164 - Statistical Computing I (3 units)**

- Introduction to Computer: structure, type, uses and applications
- Computations Using Computers and Calculators involving topics in STA 111 and 121
- Organization of Computations to access, transform, explore, analyze data and produce results.
- Concepts and Vocabulary of Statistical Computing
- Microsoft Excel and specifically the installation and the utility function of the analysis tool pack.

## **10 MAT 122 - Coding in Mathematics II (1 unit)**

- Introduction to Databases and Database Architecture
- Data Modelling and ER Diagrams
- The Relational Model and Relational Algebra
- SQL Basics and Advanced SQL
- Database Design and Normalization
- Transactions, Concurrency Control, and Database Security
- Database Administration and NoSQL Databases
- Practical Applications and Case Studies

## **11 BIO 102 - General Biology II (2 units)**

- Module 1
  - Living Organisms
  - Algae
  - Bryophytes
  - Pteridophytes
  - Seed Plants (Gymnosperms and Angiosperms)
- Module 2
  - Animal Kingdom (Protozoa)
  - Phylum Porifera
  - Phylum Coelenterate
  - Phylum Platyhelminthes
  - Phylum Aschelminthes
- Module 3
  - Phylum Annelida
  - Phylum Mollusca
  - Arthropods
  - Phylum Echinodermata
- Module 4
  - Vertebrates / Vertebrata (Fishes)
  - Amphibia
  - Reptiles
  - Aves (Birds)
  - Mammalia

## **12 ZOO 102 - Animal Diversity (2 units)**

- General classification of animals
- Characteristics and life history of representatives of each phylum
- Animals of economic importance; medical; veterinary and agricultural
- The concept of evolution, multicellularity, germ layers, body cavities, metameric segmentation cephalization e.t.c.

## **13 BOT 102 - Introductory Botany: Flowering Plants: Forms and functions (2 units)**

- An introduction to morphology, Anatomy, and their relationship to physiological processes of Angiosperms, seed, fruit formation and dormancy.
- Practical to include morphological descriptions; sectioning, staining, demonstration and observation of some vital physiological processes among others.

## **14 SOC 106 - Introduction to Sociology II (2 unit)**

- Introduction to Sociology theory
- Socialization: Purpose and its importance
- Social Inequality, stratification and mobility
- Introduction to Sociology; Is Sociology a science?

- Social groups
- Research methodology in gender studies
- Language and Communication
- Introduction to Criminology
- Theoretical perspective of health and illness.

## **15 CSC 102 - Computer as a Problem solving tool (3 units)**

- Concept of Problem solving
- Problem solving steps i.e Problem identification (e.g. in Management, science and Engineering).
- Definition of users' needs/requirement
- Identification of solution models.
- Algorithm design, Coding and Test running, Implementation and documentation.
- Classes of problems.
- Effective approach to problem solving using computer programming tools i.e flowcharts, Algorithm design, decision table etc.
- The role of algorithm in problem solving process.
- Formulation of alternative solutions to problems and their computer models.
- Number systems and their representations, codes with detection and correction.

## **16 CSC 104 - Software Workshop (3 units)**

- Programming language; Basic elements, data types, control structures and program design.
- Basic I/O concepts
- Arrays; procedures, functions and structured programming.
- Modules; Dynamic Memory Allocation
- Programming exercises using current version of FORTRAN language with emphasis on science application problems

## **17 CSC 112 - Principle Of Computer Organization (3 units)**

- Basic concepts of simple machine architecture
- Major concepts, functional relationship between the components of the processing UNITS (controls, memory and A.L.U) stored program concepts
- Representation of instruction in computer memory, addressing, instruction cycle
- Computer design: organization, design operation and programming assemblers, program loaders and relocation
- Levels of machine design, gates, register and processor levels
- CPU design, instruction sets, von Neumann architecture, multiplication and division algorithms and implementation, floating point processors
- Parallelism, multiprocessor etc. control unit design, hardwired and micro-programmed control
- Memory design, hierarchical memory design, cache, associative and inter leaved memory.



## 18 CSC 132 - Principles Of Programming Languages I - 2 units

- Overview of programming languages:
  - History of programming languages
  - Brief survey of programming paradigms (procedural languages, object-oriented languages, functional languages, declarative - non-algorithmic languages, scripting languages).
- Study of the features of a common and popular programming language.
- Introduction to language translation:
  - Comparison of interpreters and compilers etc.

## 19 CSC 123 - Introduction to Information Processing Methods (3 units)

- Information systems
- Management information system
- Information retrieval
- Overview file organisation
- Overview of data structure
- Overview of sorting and merging
- Overview of construction and maintenance of search trees
- Decision table
- Structure of decision table

## 20 FAA 102 - Introductory Ecological Economics (2 unit)

- Introduction to Ecological economics, its Rationale and problem areas
- Foundation of ecological economics - a teleological approach
- Relevance of ecological considerations in economic activity
- Ecological economics view of sustainability
- Fundamental concepts of efficient resource distribution required for ecological accountability and policy
- Evaluation techniques e.g revealed and stated preferences, choice modelling etc
- Ecological footprint and cost benefit analysis
- Environmental taxes and quota
- Ethic, sustainable development and green economy
- Prominent themes in ecological economics and their relationship with steady state economic theory
- Valuation of natural and environmental resources
- Aquatic ecological services.

## 21 ECE 102 - Introduction to Computer Engineering (2 unit)

- Historical development of modern computing and computer engineering profession
- Roles and responsibilities of the computer engineer
- Career paths and development (public and private sectors, academics/research and industry)
- Overview of computer engineering design
- Computer devices/hardware in the age of smartness and internet of things and people 'IoTs and P'
- Identification of computer software and hardware components and operational relationships (central processing units, input/output devices, operating systems, languages)

**22 ECE 104 - Introduction to Electronics Engineering (2 unit)**

- History of Electronics Engineering (EE)
- Evolution of Electronics Engineering
- Duties of Electronics Engineering
- Areas of specialisation and work environment
- Skill requirements (soft and hard)
- Qualities for Electronics Engineers
- Careers related to EE
- Typical course modules
- Job outlook/opportunities for Electronics Engineers
- Future of EEE
- Professional registration (NSE, COREN, IEEE, IET, e.t.c.)
- Passive components (R, L, C, transformers)
- Descriptive features, including values and colour codes, uses in electrical circuits
- DC and AC signal parameters

**23 MEE 102 - Introduction to Mechanical Engineering (2 unit)**

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**24 MEE 104 - Introduction to Engineering Graphics (2 unit)**

- Revision on orthographic projection
  - First angle projection
  - Third angle projection
- Introduction to Autocad
  - Making use of autocad for drawings
  - Making use of autocad for tangential drawings i.e drawings that involve tangency
- Continuation on Autocad
  - Making use of autocad for 3D drawings i.e
  - Isometric drawings
  - Oblique drawings

**25 CPE 102 - Introduction to Chemical & Polymer Engineering (2 unit)**

- Introduction to chemical engineering
- Historical development of chemical engineering
- Introduction to unit operation and ancillary
- Chemical engineering process flowcharts and process symbol
- Techniques of solving problems
- Energy balance
- Stoichiometry
- Material Balance

**26 CVE 102 - Introduction to Civil Engineering (2 unit)**

- Professions in Civil Engineering
- Roles played by Civil Engineers
- All Professions and their interaction with civil engineers (branches of civil engineering)
- Career opportunities in Civil Engineering
- Professional and regulatory bodies.

**27 IPE 102 - Introduction to Industrial and Production Engineering (2 unit)**

- Classification of Modern industry
  - Industrial and production activities
  - Production and its effects on economic development and the standard of living of the citizens of a nation
- Work design and measurement
  - Control, operation and design of manned industrial and service systems.
  - Methods and techniques of measuring work performance
- Safety Engineering
  - Principles and procedures of systems design and operation
  - Systems that involve people for maximal safety
- Job satisfaction and efficiency
  - Principles of motion economy and plant location
  - Material handling principles
  - Selective treatment of other basic techniques actually used by industrial and industrial engineers.

**28 AAE 102 or ASE 102 - Introduction to Aerospace Engineering (2 unit)**

- History of Aeronautical Engineers and Types and Parts of Aircrafts
- Overview of Aerospace Engineering Industry
- Differing job roles for Aerospace Maintenance Staff
- Training opportunities and Job progression
- License, Examination, Qualification
- Airworthiness Regulation
- Aircraft Maintenance
- Safety culture
- Introduction to Aerodynamics
- Review of Atmospheric Physics
- Elementary Aerodynamics
- Flight Forces
- Flight Stability and Dynamics
- Aircraft Controllability

**29 PHY 108 - General Physics Practical II (1 unit)**

- Experiments arising from General Physics II.

**30 CHEM 108 - General Chemistry Practical II (1 unit)**

- Experiments arising from General Chemistry II.

**31 BIO 108 - General Biology Practical II (1 unit)**

- Experiments arising from General Biology II.

**32 MIC 102 - Microbiology Practical I (1 unit)**

- Experiments arising from Introduction to Microbiology.



## LIST OF DEPARTMENTS AND COURSES

MEDICINE & SURGERY	DENTISTRY	PHARMACOLOGY	PHARMACY	PHYSIOLOGY
GNS 112 - C	GNS 112 - C	GNS 112 - C	GNS 112 - C	GNS 112 - C
GNS 104 - C	GNS 104 - C	GNS 104 - C	GNS 104 - C	GNS 104 - C
CSC 102 - C	BIO 102 - C	MIC 102 - C	PHM 102 - C	MIC 102 - C
MIC 102 - C	BIO 108 - C	MAT 102 - C	MAT 102 - C	MAT 102 - E
MAT 102 - C	CHM 102 - C	BIO 102 - C	BIO 102 - C	BIO 102 - C
BIO 102 - C	CHM 108 - C	BIO 108 - C	BIO 108 - C	BIO 108 - C
BIO 108 - C	PHY 102 - C	CHM 102 - C	CHM 102 - C	CHM 102 - C
CHM 102 - C	PHY 108 - C	CHM 108 - C	CHM 108 - C	CHM 108 - C
CHM 108 - C	MIC 102 - C	PHY 102 - C	PHY 102 - C	PHY 102 - C
PHY 102 - C	CSC 102 - C	PHY 108 - C	PHY 108 - C	PHY 108 - C
PHY 108 - C	MAT 102 - C	ZOO 102 - R	PCG 102 - C	ZOO 102 - C
		MAT 164 - E		

PHYSIOTHERAPY RADIOGRAPHY MED & LAB SCIENCE	NURSING	AGRICULTURE	BIOCHEMISTRY	BOTANY
GNS 112 - C	GNS 112 - C	GNS 112 - C	GNS 112 - C	GNS 112 - C
SOC 106 - C	GNS 104 - C	GNS 104 - C	GNS 104 - C	CSC 102 - E
GNS 104 - C	BIO 102 - C	AGG 102 - C	BOT 102 - R	GNS 104 - C
ZOO 102 - C	BIO 108 - C	MAT 102 - C	MAT 102 - C	MAT 102 - C
MAT 102 - C	CHM 102 - C	AGG 112 - C	BIO 102 - C	BIO 102 - C
BIO 102 - C	CHM 108 - C	ANS 102 - C	BIO 108 - C	BIO 108 - C
BIO 108 - C	PHY 102 - C	CHM 102 - C	CHM 102 - C	CHM 102 - C
CHM 102 - C	PHY 108 - C	CHM 108 - C	CHM 108 - C	CHM 108 - R
CHM 108 - C	MIC 102 - C	PHY 102 - C	PHY 102 - C	PHY 102 - R
PHY 102 - C	CSC 105 - R	PHY 108 - C	PHY 108 - C	PHY 108 - E
PHY 108 - C	FAA 122 - C	AEC 102 - E	ZOO 102 - R	BOT 102 - C
		AED 102 - E	FAA 102 - E	ZOO 102 - R
		CPD 102 - C		

FISHERIES	ZOOLOGY	MICROBIOLOGY	SCIENCE & LAB TECH
GNS 112 - C	GNS 112 - C	GNS 112 - C	GNS 112 - C
FAA 102 - C	MAT 102 - C	MIC 102 - C	GNS 104 - C
AGG 102 - C	BIO 102 - C	GNS 104 - C	GLT 102 - C
ZOO 102 - E	BIO 108 - C	MAT 102 - C	MAT 102 - C
MAT 102 - C	CHM 102 - C	BIO 102 - C	BIO 102 - C
BOT 102 - E	CHM 108 - C	BIO 108 - C	BIO 108 - C
GLT 102 - R	PHY 102 - C	CHM 102 - C	CHM 102 - C
CHM 102 - C	PHY 108 - C	CHM 108 - C	CHM 108 - C
CHM 108 - C	ZOO 102 - C	PHY 102 - C	PHY 102 - C
PHY 102 - C	BOT 102 - R	PHY 108 - C	PHY 108 - C
PHY 108 - C	GNS 104 - C	ZOO 102 - R	ZOO 102 - E
GNS 104 - C		MAT 162 - R	BOT 102 - E
AGG 112 - C			MAT 162 - E
			GLT 104 - C



PHYSICS	COMPUTER SCIENCE	MATHEMATICS	CHEMISTRY	CHEMICAL & POLYMER ENGINEERING
GNS 112 - C MAT 164 - E MAT 162 - E GLT 102 - E MAT 102 - C MAT 108 - R GNS 104 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C PHY 104 - C	GNS 112 - C MAT 102 - C GNS 104 - C CSC 102 - C CSC 112 - C CSC 104 - C PHY 102 - C PHY 108 - C CSC 123 - C	GNS 112 - C MAT 102 - C MAT 122 - R MAT 162 - C MAT 164 - R CSC 102 - E MAT 108 - C GNS 104 - C PHY 102 - C PHY 104 - R PHY 108 - E	GNS 112 - C CSC 102 - E MAT 162 - R MAT 102 - C BIO 102 - C BIO 108 - C CHM 102 - C CHM 108 - C GNS 104 - C PHY 102 - C PHY 108 - C	GNS 112 - C GNS 104 - C MAT 162 - R MAT 102 - C CPE 102 - C MAT 108 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C

INDUSTRIAL & PRODUCTION ENGINEERING	MECHANICAL ENGINEERING	ELECTRONICS & COMPUTER ENGINEERING	CIVIL ENGINEERING	AERONAUTICS & ASTRONAUTICS ENGINEERING
GNS 112 - C MEE 104 - C GNS 104 - C MAT 162 - C MAT 102 - C IPE 102 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C MAT 108 - C	GNS 112 - C MEE 102 - C MEE 104 - C MAT 162 - C MAT 102 - C MAT 102 - C GNS 104 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C MAT 108 - C	GNS 112 - C GNS 104 - C MAT 108 - C MAT 162 - C MAT 102 - C ECE 102 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C ECE 104 - C	GNS 111 - C GNS 104 - C MAT 162 - C MAT 102 - C MAT 108 - C MEE 104 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C CVE 102 - C	GNS 112 - C GNS 104 - C MAT 162 - R MAT 102 - C MAT 108 - C AAE 102 - C CHM 102 - C CHM 108 - C PHY 102 - C PHY 108 - C CSC 132 - C

**C = Compulsory course - It is a must you offer the course.**

**E = Elective course - You may or may not offer the course .**

**R = Required course - It is a prerequisite course, it is required of you by the department to offer the course. You should offer the course.**

**FOR MORE ENQUIRIES, CONTACT: 07011534711, 07053845576**

**CEO: MR BUNDAY (07011534711, 07053845576)**

***.....your distinctions are our success***