

<b>Year II: Semester I</b>		
MTH 2101	Real Analysis I	3
MTH 2102	Probability Theory	3
MTH 2103	Differential Equations	3
MTH 2104	Linear Algebra II	3
TH 2105	Classical Mechanics I	3
<b>Semester II</b>		
MTH 2201	Abstract Algebra	3
MTH 2202	Complex Variables I	3
MTH 2203	Numerical Analysis I	3
MTH 2204	Statistical Inference I	3
MTH 2206	Mathematical Logic	3

<b>Year III: Semester I</b>		
MTH 3101	Functional Analysis	3
MTH 3102	Numerical Analysis II	3
MTH 3103	Biomathematics	3
MTH 3104	Dynamical Systems	3
MTH 3105	Discrete Mathematics	3
MTH 3106	Stochastic Processes	3
<b>Semester II</b>		
MTH 3201	Real Analysis II	3
MTH 3202	Differential Equations II	3
MTH 3203	Linear Programming I	3
MTH 3204	Classical Mechanics II	3
MTH 3205	Topography	3
MTH 3206	Advanced Statistics	3

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## DEPARTMENT OF PHYSICS

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### Introduction

The Department of Physics offers courses in Physics leading to the award of Bachelor of Science, Master of Science and Doctor of Philosophy. The undergraduate courses are arranged such that a student may take Physics as major or minor. The Department teaches Physics to students from the School of Education, the School of Librarianship and Information Science and any other faculty which may wish to take some courses in Physics.

### Program Structure

#### Physics Major

<b>Year I: Semester I</b>		
Course Code	Course	CU
PHY1101	Physics Practicals	2
PHY1103	Properties of Matter	2
PHY 1102	Classical Mechanics I	3
<b>Semester II (Core Courses)</b>		
PHY 1201	Physics Practical	2
PHY 1205	Electricity and Magnetism	3
PHY 1206	Heat and Thermodynamics	2
<b>Service Courses:</b>		
<b>Semester I:</b>		

PHY 1105	Electricity	3
PHY 1106	Optics	2
<b>Semester II:</b>		
PHY 1206	Heat and Thermodynamics	2
<b>Year II : Semester I (Core Courses)</b>		
PHY 2101	Physics Practicals	2
PHY 2102	Classical Mechanics II	2
PHY 2103	Solid State Physics I	
PHY 2105	Electromagnetism	3
*PHY 2108	Introduction to Computer Science	2
<b>Electives: (At least one elective from the following)</b>		
*PHY 2104	Evolution of Physics	2
*PHY 2106	Elements of Astronomy and Astrophysics	2
PHY 2107	Elements of Environmental Physics	2
<b>Semester II: Core Courses</b>		
PHY 2201	Physics Practicals	2
PHY 2206	Waves and Optics	3
PHY 2207	Quantum Mechanics I	3
PHY 2208	Electronics	3
<b>Electives: (One elective from the following)</b>		
PHY 2202	Geophysics I	2
*PHY 2203	Fluid Physics	2

*PHY2209	Acoustics	2
<b>Recess Term: (Field Work)</b>		
PHY 2310	Industrial Training	3
<b>Year III: Semester I Core Courses</b>		
PHY 3101	Physics Practicals	2
PHY 3103	Solid State Physics II	3
PHY 3106	Statistical Mechanics	3
PHY 3107	Quantum Mechanics II	3
<b>Electives: (At least one elective from the following)</b>		
PHY 3102	Geophysics II	3
PHY 3108	Electronics and Instrumentation	3
*PHY 3109	Agricultural Physics	3
<b>Semester II (Core Courses)</b>		
PHY 3201	Project	3
PHY 3206	Nuclear Physics	3
*PHY 3208	Computer Applications	3
<b>Electives: (Two electives from the following)</b>		
PHY 3203	Materials Science	3
PHY 3205	Microwave and Fibre Optics	3
*PHY 3209	Industrial Physics	3
PHY 3204	Solar Energy	3

### Physics Minor

<b>Year I: Semester I (Core Courses)</b>		
Course Code	Course	CU
PHY 1101	Physics Practical	2
PHY 1103	Properties of Matter	2
PHY 1102	Classical Mechanics I	3
<b>Semester II (Core Courses)</b>		
PHY 1201	Physics Practical	2
PHY 1205	Electricity and Magnetism	3
PHY 1206	Heat and Thermodynamics	2

<b>Year II: Semester I (Core Courses)</b>		
PHY 2101	Physics Practicals	2
PHY 2102	Classical Mechanics II	3
<b>One elective from the following</b>		
PHY 2107	Elements of Environmental Physics	2
PHY 2104	Evolution of Physics	2
<b>Semester II: (Core Courses)</b>		
PHY 2201	Physics Practicals	2
PHY 2206	Waves and Optics	3
<b>Year III: Semester I (Core Courses)</b>		
PHY 2103	Solid State Physics I	2
PHY 2105	Electromagnetism	3
<b>Semester II: Core Courses</b>		
PHY 2207	Quantum Mechanics I	2
PHY 2208	Electronics	3

### CHANGES:

**PHY1102:** *Classical Mechanics I is a core first year course based in Physics.*

**PHY1105:** *Electricity and PHY1106 Optics are first year elective offered as a service courses.*

**PHY2103:** *Solid State Physics I and PHY2207: Quantum Mechanics I have been introduced in the second year for students majoring in Physics.*

**Courses: PHY2104, 2106, 2108, 2203, 2209, 3109, 3208 and 3209, marked with an asterisk (\*) are new courses.**

## DEPARTMENT OF ZOOLOGY

### Introduction

Zoology is a branch of biology that deals with the study of mainly animals and Animal-plant interactions. It is one of the oldest disciplines of science at Makerere University. It embraces a wide range of topics. Present emphasis is on aspects that are directly relevant to the economic development of Uganda. They include the study of all invertebrate and vertebrate groups, Wildlife, Ecology, Fisheries

and Aquatic Science, Entomology and Parasitology. These are key areas of science in the agriculture and livestock raising industries of Uganda.

Various other supportive disciplines are studied in the Department. These include Cell biology and genetics, evolutionary biology, endocrinology and reproductive