1. INTRODUCTION

1.1 Historical background

The Faculty of Applied Sciences (FAS) is one among the four faculties of the South Eastern University of Sri Lanka (SEUSL).

The SEUSL was first established as the South Eastern University College of Sri Lanka and commenced to function from 27th July 1995. It was then upgraded to the status of a fully-fledged university, SEUSL, from 15th May 1996. The other three faculties in the university are Faculty of Arts & Culture, Faculty of Management & Commerce and Faculty of Islamic Studies and Arabic which are located in the main site of the university at Oluvil.

The FAS of the SEUSL was established in 1997 at Sammanthurai. It consists of three departments namely Biological Sciences, Physical Sciences and Mathematical Sciences.

1.2 Objectives

The FAS of the SEUSL has been established with the following objectives:

a) To offer undergraduate and postgraduate courses in Applied Sciences with particular emphasis on fields of technological importance.

b) To promote higher education and research to contribute towards national development.

c) To foster public understanding in science and technology.

2. STAFF

2.1 University administrative staff

Vice Chancellor	Dr. AG.Husain Ismail, B.Ed. (Hons.) (Ceylon), M.Ed. (Colombo), Ph.D. (Colombo).
Acting Registrar	Mr. MF. Hibathul Careem, B. Sc. (Hons.) (EUSL), M. Sc. (Peradeniya), PGDM (OUSL).
Bursar	Mr. A. Gulam Rasheed, ACMA (London). (on sabbatical leave) Ms. WAD Ranjani, B.LE. sp. (Colombo)

2.2 Faculty administrative staff

Dean	Mr. AM. Razmy, B.Sc. Agric. (Hons.) (Peradeniya), M.Sc.(Peradeniya), M.Sc (NUS).
Head/ Dept. of Biological Sc.	Dr. M.I.S. Safeena, B.Sc. (Hons.) (Peradeniya), M.Sc. (Peradeniya), Ph.D, (Peradeniya).
Head/ Dept. of Physical Sc.	Dr. NWB. Balasooriya, B.Sc. sp. (Hons.) (Peradeniya), M.Phil. (Peradeniya), Ph.D, (Grenoble).
Head/Dept of Mathematical Sc.	Dr. P. Elango, B.Sc. sp. (Hons.) (EUSL), M.Sc (Malaya), Ph. D, (Macquarie).
Assistant Registrar	Mr. M.A.C. Mohamed Ramees, B.B.A. (Hons.) (Jaffna), PG Dip. Mgt. (EUSL), MBA(EUSL).

2.3 Academic staff

Department of Biological Sciences

	Mr. A. Naseer Ahmed, B.Sc. Agric. (Hons.) (Peradeniya), M.Sc.(Philippines), Snr. Lecturer (Gr. I).
Division of Botany	Mr. EMJM. Rizvi, B.Sc. sp. (Hons.) (Peradeniya), M.Phil. (Peradeniya), Snr. Lecturer (Gr. II).
	Dr. M.I.S. Safeena, B.Sc. (Hons.) (Peradeniya), M.Sc. (Peradeniya), Ph.D (Peradeniya), Snr. Lecturer (Gr.II).
Division of Zoology	Ms. V. Santhanam, B.Sc. sp. (Hons.) (Colombo), M.Phil. (Cardiff), Snr. Lecturer (Gr. II).
	Mrs. V. Sujarajini, B.Sc. sp. (Hons.) (EUSL), Lecturer (Prob.).

Department of Mathematical Sciences

Division of Applied Statistics	Mr. A. Jahufer, B.Sc. (Hons.) (Peradeniya), M.Sc. (Peradeniya), M.Phil. (Peradeniya), Snr.Lecturer (Gr. II).
	Mr. AM. Razmy, B.Sc. Agric. (Hons.) (Peradeniya), M.Sc.(Peradeniya), M.Sc (NUS), Senior Lecturer (Gr. II).
	Mr. MC. Alibuhtto, B. Sc (Hons.) (SEUSL) M.Sc (Peradeniya), Lecturer (Prob.)
Division of Computer Science	Mr. HMM. Naleer, B.Sc. (Hons) (Peradeniya), M.Sc.(Peradeniya), Lecturer (Prob.).
	Mr.AL. Hanees, B.Sc. sp. (Hons) (SEUSL), Lecturer (Prob.).
	Mr. IM. Kalith, B.Sc. sp. (SEUSL), Instructor.

Division of Mathematics	Dr. P. Elango, B.Sc. sp. (Hons.) (EUSL), M.Sc (Malaya), Ph. D (Macquarie), Snr. Lecturer (Gr. II).
	Dr. K. Komathiraj, B.Sc. sp. (Hons.) (EUSL), M.Sc. (Natal), Ph.D (KwaZulu-Natal) Snr. Lecturer (Gr.II).
	Mr. MAAM. Faham, B.Sc. sp. (Hons.) (Peradeniya), Lecturer (Prob.), (On study leave).
	Ms. N. Fahmiya, B.Sc. sp. (Hons) (Peradeniya), M.Sc. (Peradeniya), Lecturer (Prob.).
	Ms. S. Yogeswary, B.Sc. sp. (Hons.) (EUSL.), PG Dip. (Moratuwa), Edu. Asst.
	Mr. MA. Raheem, B.Sc. (Hons.) (EUSL), PG Dip. (Moratuwa), Edu. Asst.

Department of Physical Sciences

Division of Chemistry	Dr. R. Senthilnithy, B.Sc. sp. (Jaffna), M.Phil.(Jaffna), Ph.D. (Colombo), Snr. Lecturer (Gr. II).
	Mr. MF. Nawas, B.Sc. sp. (Hons.) (Peradeniya), PG Dip. (Peradeniya), M.Phil. (Peradeniya), Lecturer (Prob).
	Mr. MH. Haroon, B.Sc. sp. (Hons.) (Peradeniya), Lecturer (Prob.)
Division of Earth Science	Dr. NWB. Balasooriya, B.Sc. sp. (Hons.) (Peradeniya), M.Phil. (Peradeniya), Ph.D (Grenoble), Snr. Lecturer (Gr. II).
	Mr. AK. Wickramasooriya, B.Sc. sp. (Hons.) (Peradeniya), Lecturer (Prob.).

	Ms. AMNM. Adikaram, B.Sc. Sp. (Hons) (Peradeniya), (Lecturer (Prob.).
Division of Physics	Dr. FC. Ragel, B.Sc. sp. (Hons.) (EUSL), Ph.D. (Witwatersrand), Snr. Lecturer (Gr. II).
	Dr. UL. Zainudeen, B.Sc. (Hons.) (Peradeniya), M.Sc. (Peradeniya), Ph.D (Peradeniya), Lecturer (Prob.).
	Mr. MJM. Jafeen, B.Sc. sp. (Hons.) (EUSL), Lecturer (Prob.), (On study Leave).

3. STUDY PROGRAMMES

3.1 Course unit system

The faculty conducts general degree and special degree programmes. The degree programmes are conducted on a **Course Unit System** where each course is assigned credits, a time based quantitative measure. A **Credit** is equivalent to **15 hours of lectures** or **30-45 hours of practical/field work**. The credit weight of a course unit may be either 01 or more.

Note: English shall be taught 03 hours per week throughout the 1st and 2nd year.

3.2 Medium of instruction

The medium of instruction at FAS shall be **English**.

3.3 Course scheme

The faculty offers courses for students entering from A-level science streams namely Biological Science and Physical Science. A Biological Science stream student has to choose Biology as a main subject from the first column given below together with two other main subjects from each column. A Physical Science student has to similarly choose three subjects from each column with Mathematics I from first column. Only those who offer mathematics I may offer mathematics II.

First Main Subject	Second Main Subject	Third Main Subject
Biology Mathematics I	Applied Statistics Chemistry Physics	Computer Science Earth Science Mathematics II

A student must register for their chosen three main subjects at the beginning of their first year. The chosen subject combination cannot be changed after Second week of the First year of the First Semester.

There may be restrictions on the number of students being permitted to a particular main subject depending on available resources.

The subject combinations offered might change in some years and such a change will be notified to the particular batch of students at the beginning of their study programme.

In addition to above major courses, **compulsory courses, enhancement / auxiliary and optional courses** are also offered (see page 31, 32 and 38).

Note: The Board of FAS with the approval of the Senate, reserves the right to change the contents (syllabus) of any course unit.

The notations used for main subjects are given below.

AS - Applied Statistics
BL - Biology
CH - Chemistry
CS - Computer Science
EL - English
ES - Earth Science
MT - Mathematics (I & II)
PH - Physics

3.4 Course notation

A particular course unit is denoted by an alphanumeric code. The code consists of 04 numerals prefixed by 03 letters. The first 02 letters refer to the subject area of the course unit and the 3rd indicates whether it is a main, compulsory, optional or enhancement course. The 1st numeral denotes the level, the 2nd and 3rd indicates the number assigned to the course unit by the department concerned and the 4th indicates the credit value of that course unit.

Example: MTC 1021 is a level 1 Basic Mathematics (MT) compulsory course unit (C), having subject number 02 and credit value 1.

BLM 1041 is a level 1 Biology (BL) main course unit (M), having subject number 04 and credit value 1.

ELE 1011 is a level 1 English (EL) enhancement course unit (E), having subject number 01 and credit value 1.

Each main subject will have 08 credits per year. A subject without a practical component will have theory course units to the value of 08 credits per year. A subject with a practical component will usually have theory course units to the value of 06 credits and practical course units to the value of 02 credits per year. The theory to practical ratio may change in some cases, particularly in level 3 and level 4courses.

3.5 The Degree Programmes

The minimum credit requirements for a three year degree will be 90 credits and for a four year degree 120 credits, excluding those earned for enhancement / auxiliary courses. Grades earned for enhancement / auxiliary course will not be considered in computing GPA, although they would appear in the transcript. The academic departments / units concerned may request the student to follow enhancement courses where necessary.

A minimum and maximum credits a student can take in an academic year, excluding repeat course units, shall be 27 and 33.

As summarised in Table 1, a student may be allowed to follow

- the degree type 2 and 3 at the end of level 2 if fulfil the following requirements:
  - ✓ Obtains a GPA of at least **2.3** (with no **E** grades) for course units in levels 1 and 2.
  - ✓ A GPA of at least **2.7** for course units of the subject(s) of specialization in levels 1 and 2.

- the degree type 4 at the end of level 3 if obtains a GPA of at least **2.3** (with no **E** grades) for course units in levels 1, 2 and 3.

Table 1: Summary of minimum credit requirements for different degree programmes, excluding enhancement / auxiliary courses.

Degree type	Year of Study	Main subject X	Main subject Y	Main subject Z	Compulsory courses	Name of Degrees
	Level 1	08 Credits	08 Credits	08 Credits	05 Credits	
	Level 2	08 Credits	08 Credits	08 Credits	06 Credits	
1	Level 3	08 Credits	08 Credits	08 Credits	07 Credits	B.Sc. (General) Degree
2	Level 3	26 Credits	04 credits			B.Sc. (Special) Degree in X (Y or Z)
	Level 4	30 Credits	-	-	-	
3	Level 3	15 Credits	15 Credits	-	-	B.Sc. (Joint Major) Degree in X and Y ('X and Z' or 'Y and Z')
	Level 4	15 Credits	15 Credits	-	-	
4	Level 4	30 Credits (shall contain lectures, Practicals, Industrial Training, Mini Projects, Self Employment Projects, etc.)				B.Sc. Degree in Applied Sciences

The four year degree programmes may be offered based on available resources, relevance and demand. The number of students for any specific type of four year degree programme will be limited and be decided by the department(s) concerned based on the resources available. Thus, in case of more applicants only the most eligible candidates will be selected based on the order of the rank of their GPA of the subject(s) of specialization.

Although not encouraged, for students who follow the degree types 2,3 and 4, a three year exit is possible provided a minimum of 90 credits have been earned which would earn them a B.Sc. (General) degree.

3.6 Duration and academic calendar

The faculty offers a general degree programme of 03 academic year duration and special, joint major and extended degree programmes of 04 academic year duration.

The study programme is based on a semester system and an academic year comprises 02 semesters. A semester consists of 15 weeks of academic activities. The duration of a semester is usually 24 weeks, including examinations and vacations. The academic calendar of a semester is usually as follows.

8 weeks	Academic Activities
1 week	Mid-semester Vacation
7 weeks	Academic Activities
2 weeks	Study Leave
3 weeks	End-semester Examinations
3 weeks	End-semester Vacation

4. EXAMINATION CRITERIA

4.1 When are examinations held?

The end-semester examination of a course unit shall be held at the end of the semester in which the course unit is completed. Continuous assessments are held throughout the course during the semester.

4.2 Who can sit for examinations?

A person who has been registered in the university as an internal student for a particular degree can sit for relevant examinations. Students who fail to complete their intended degree at the end of the specified period should renew their registration to be eligible to re-sit failed credits at the next available opportunity.

4.3 Is it necessary to apply to sit for examinations?

Yes. A student to sit for an examination should submit an application in the prescribed form within the stipulated period. The eligible students will be issued with an admission card for the particular examination.

4.4 Is attendance for teaching sessions important?

Yes. Eighty percent (80%) attendance is compulsory for both theory and practical courses. A student who has less than 80% attendance for a particular course unit may not be allowed to sit the end-semester examination of that course unit. Such candidates will have to re-sit that particular examination at the next available opportunity.

4.5 What if a candidate misses the first attempt?

A student who does not appear for an end-semester examination of a particular course unit at the first opportunity available without a valid medical certificate and/or the approval of the Faculty Board and the Senate, shall forfeit the chance of sitting that examination and re-sit at the next available opportunity.

4.6 Re-sitting examinations

4.6.1 When can a candidate re-sit?

Any examination conducted by the faculty will not be repeated. Therefore a student may re-sit the examination of a particular course unit only at the next available opportunity.

4.6.2 Who should re-sit?

The following students should re-sit an examination,

- if he/she has obtained a **E** grade for a particular course unit (see section 5.4 for grades) or
- if he/she could not appear for the end semester examination of a particular course unit at the 1st available opportunity.

4.6.3 Can lower grades be improved?

Yes. A student who has obtained **C^-, D** or **D^+** for a particular course is advised to repeat it. However, if the grade obtained in the second sitting is less than that of the first sitting, he/she shall be entitled to his/her former grade. The maximum grade for a credit repeated shall be **C** or grade point 2.0.

4.6.4 How many repeats are allowed?

A candidate cannot repeat an examination more than **three times**. A grace chance may be permitted with the approval of the Faculty Board and the Senate. But during the period of repeating the examination, student's registration should be valid.

4.6.5 When does a re-sit considered as a proper examination?

The 1st re-sit supported by a valid medical certificate and/or the approval of the Faculty Board and the Senate shall be considered as the first attempt.

4.6.6 Is it possible to proceed to the next academic year with poor grades?

Yes. A candidate, even with **E** grades may proceed to the following year of study. However, he/she should repeat those course units at a subsequent examination.

4.7 What is the maximum period to complete a degree programme?

Student would be allowed a maximum period of five academic years to complete a three year general degree and six years for a four special year degree from the date of 1st registration, excluding periods of absence caused by medical or other valid reasons acceptable to the Faculty.

4.8 What if a candidate wishes to intermit studies before completion of the intended general degree?

A student who wishes to intermit or terminate his/her studies before completion of the intended general degree may be awarded a diploma in science, if he/she satisfies the relevant requirements prescribed in the evaluation criteria.

4.9 What to do if a student fall sick?

A student who falls sick during the sessions (course work or examinations) should contact the University Medical Officer at the Medical Centre. If a student falls sick at home or elsewhere during sessions, he/she or his/her guardian should inform the Assistant Registrar/ Faculty of Applied Sciences within seven days by telegram followed by a valid medical certificate supporting the illness of the student, within 14 days.

4.10 What is a valid Medical Certificate?

This is a document that conforms to the format of a medical certificate issued by a government hospital. Such a medical certificate should be obtained from any one of the following medical practitioners. A University Medical Officer (UMO), District Medical Officer (DMO), Consultant Specialist in a particular field or an Ayurvedic Physician registered in the Ayurvedic Medical Council. Under exceptional circumstances, a medical certificate issued by a private hospital or a private practitioner endorsed by the University Medical Officer might be accepted.

5. EVALUATION CRITERIA

5.1 Introduction

Students are evaluated by both continuous assessments and end-semester examinations. The continuous assessments are of the form of open and closed book tests, take away assignments, quizzes etc. In the case of practical courses the methods of assessments could be different depending on the nature of the subject. The continuous assessments are held throughout the course and are **not repeated**. Therefore regular attendance for lectures and practical classes is very important.

5.2 Theory course units

Duration of a theory question paper for end-semester examination shall be 1-3 hours depending on the credit value of the course unit. The number of questions shall be **02 per credit**, each of half an hour duration and **all the questions should be answered**.

The marks obtained for a course unit at the end semester examination will contribute only 70% to the final total marks of the course unit. The balance 30% of marks should be accumulated from continuous assessments.

5.3 Practical course units

Duration of a practical examination at end-semester examinations shall be 02 to 03 hours.

Fifty percent of marks for a practical credit should be scored from continuous assessments and the balance 50% from end-semester examination.

5.4 Scheme of grading

The marks obtained for each course unit will be assigned a grade and a grade point. The range of marks is partitioned into sequence of suitable sub-range (as decided by the Faculty) and the sub ranges are designated by the grades. These grades are assigned grade points according to the following scheme.

Grade	Grade Points
A^+	4.00
A	4.00
A^-	3.70
B^+	3.30
B	3.00
B^-	2.70
C^+	2.30
C	2.00
C^-	1.70
D^+	1.30
D	1.00
E	0.00

5.5 Calculation of Grade Point Average (GPA)

GPA is the credit-weighted arithmetic mean of all the Grade Points (GP) obtained by a student for the course units he/she offered for a particular academic year. This will be calculated to the second decimal place according to the following formula.

$$GPA = \frac{\sum G_i N_i}{\sum N_i}$$

Where, G_i is the GP of the i^{th} course unit, N_i is the number of credits belonging to the i^{th} course unit.

6. AWARD OF DEGREES

6. AWARD OF DEGREES

6.1 Award of B. Sc. (General) Degree

To be eligible a candidate should have completed at least a total of **90 credits**, excluding enhancement /auxiliary courses, and should also have obtained:

(a) A minimum GPA of **2.00**,
(b) At least **C** grades for both English courses and
(c) No **E** grades.

6.2 Award of B. Sc. (Special) Degree

To be eligible a candidate should have completed at least a total of **120 credits**, excluding enhancement /auxiliary courses and of this a minimum of 72 credits must be in the subject of specialization. Moreover, a candidate should have obtained:

(a) A minimum GPA of **2.00**,
(b) At least **C** grades for both English courses and
(c) No **E** grades.

6.3 Award of B. Sc. (Joint Major) Degree

To be eligible a candidate should have completed at least a total of **120 credits**, excluding enhancement /auxiliary courses and of this a minimum of 45 credits must be in each of the two subjects majoring (90 credits in the two subjects). Moreover, a candidate should have obtained:

(a) A minimum GPA of **2.00**,
(b) At least **C** grades for both English courses and
(c) No **E** grades.

6.4 Award of B. Sc. Degree in Applied Sciences

To be eligible a candidate should have completed at least a total of **120 credits**, excluding enhancement /auxiliary courses and of this the fourth year should comprise with significant exposure to applications with practical training. Moreover, a candidate should have obtained:

(a) A minimum GPA of **2.00**,
(b) At least **C** grades for both English courses and
(c) No **E** grades.

6.5 Award of Honours in B. Sc. Degrees

A candidate may be awarded a Honours in the B.Sc. degrees in sections 6.1-6.4 if he/she:

(a) Is eligible for a B. Sc. Degree as stated in sections 6.1-6.4,

(b) Completes the degree programme within three academic years for the degree in section 6.1 and four academic years for the degrees in sections 6.2-6.4.

First Class: Obtain a minimum GPA of **3.70** and satisfy conditions in sections 6.1-6.4 and (a) & (b) above.

Second Class (Upper Division): Obtain a minimum GPA of **3.30** and satisfy conditions in sections 6.1-6.4 (a) & (b) above.

Second Class (Lower Division): Obtain a minimum GPA of **3.00** and satisfy conditions in section 6.1-6.4 (a) & (b) above.

7. AWARD OF DIPLOMA IN SCIENCE

7.1 Diploma in Science

A candidate who wishes to leave the course after completing level 1 and 2 will be awarded a Diploma in Science if he/she has obtained:

(a) An GPA of not less than **2.00**,
(b) At least **C** grades for both English credits and
(c) No **E** grades.

8. SUMMARY OF COURSE UNITS

8.1 Main course units for the general degree

Applied Statistics

Level	Semester	Code	Title	Credits
1	I	ASM 1021	Introduction to Probability	01
		ASM 1032	Introduction to Statistics	02
		ASM 1041	Statistics Practical-I	01
	II	ASM 1052	Theoretical Probability Distribution	02
		ASM 1071	Sampling Techniques	01
		ASM 1081	Statistics Practical-II	01
2	I	ASM 2012	Statistical Inferences	02
		ASM 2031	Non-parametric Data Analysis	01
		ASM 2041	Statistics Practical-III	01
	II	ASM 2062	Quality Control	02
		ASM 2071	Categorical Data Analysis	01
		ASM 2081	Statistics Practical-IV	01
3	I	ASM 3031	Time Series Analysis	01
		ASM 3082	Regression Analysis	02
		ASM 3041	Statistics Practical-V	01
	II	ASM 3092	Experimental Design	02
		ASM 3072	Group/Individual Project	02

Biology

Level	Semester	Code	Title	Credit
1	I	BLM 1011	Advanced Cell biology	01
		BLM 1021	Introductory Microbiology	01
		BLM 1031	Molecular Genetics	01
		BLM 1041	Practical Biology I	01
	II	BLM 1051	Metabolic Biochemistry	01
		BLM 1061	Enzymology	01
		BLM 1071	Principles of Ecology	01
		BLM 1081	Practical Biology II	01
2	I	BLM 2011	Taxonomy	01
		BLM 2021	Plant Diversity	01
		BLM 2031	Animal Diversity	01
		BLM 2041	Practical Biology III	01
	II	BLM 2052	Biotechnology	02
		BLM 2061	Animal Physiology	01
		BLM 2081	Practical Biology IV	01
3	I	BLM 3011	Plant Physiology	01
		BLM 3021	Parasitology	01
		BLM 3031	Conservation Biology	01
		BLM 3041	Practical Biology V	01
	II	BLM 3051	Quantitative Ecology	01
		BLM 3061	Fauna of Sri Lanka	01
		BLM 3071	Vegetation types of Sri Lanka	01
		BLM 3081	Practical Biology VI	01

Chemistry

Level	Semester	Code	Title	Credit
1	I	CHM 1011	General Inorganic Chemistry	01
		CHM 1021	Introductory Organic Chemistry	01
		CHM 1031	Introductory Physical Chemistry	01
		CHM 1041	Practical Chemistry - I	01
	II	CHM 1051	Properties of Elements	01
		CHM 1061	Stereo Chemistry of Organic Compounds	01
		CHM 1071	Chemical Thermodynamics	01
		CHM 1081	Practical Chemistry - II	01
2	I	CHM 2011	Coordination Chemistry	01
		CHM 2021	Organic Spectroscopy	01
		CHM 2031	Quantum Chemistry and Surface Chemistry	01
		CHM 2041	Practical Chemistry III	01
	II	CHM 2051	Industrial Chemistry	01
		CHM 2061	Organic Reaction Mechanism	01
		CHM 2071	Mineralogy and Metallurgy	01
		CHM 2081	Practical Chemistry IV	01
3	I	CHM 3011	Solid State & Organometallic Chemistry	01
		CHM 3022	Chemistry of Natural Products	02
		CHM 3041	Practical Chemistry V	01
	II	CHM 3051	Analytical Techniques in Chemistry	01
		CHM 3062	Principal of Chemical Technology	02
		CHM 3081	Applied Chemistry Projects	01

Computer Science

Level	Semester	Code	Title	Credits
1	I	CSM 1011	Introduction to Computers	01
		CSM 1021	Object Oriented Programming Using C++	01
		CSM 1031	Fundamentals of Programming using Java	01
		CSM 1041	Computer Science Practical-I	01
	II	CSM 1051	Introduction to Computer Systems- I	01
		CSM 1061	Data Structures –I Using Java	01
		CSM 1071	System Analysis & Design(SAD)	01
		CSM 1081	Computer Science Practical-II	01
2	I	CSM 2011	Introduction to Computer Systems-II	01
		CSM 2021	Data Structures-II Using Java	01
		CSM 2031	Object Oriented System Design	01
		CSM 2041	Computer Science Practical-III	01
	II	CSM 2051	Sorting & Searching Algorithms	01
		CSM 2061	Web Development Techniques	01
		CSM 2071	Internet Application Development	01
		CSM 2081	Computer Science Practical-IV	01
3	I	CSM 3011	Database Management Systems	01
		CSM 3021	Computer Architecture & Assembly Language Programming	01
		CSM 3031	Operating Systems	01
		CSM 3041	Computer Science Practical – V	01
	II	CSM 3051	Computer Networks	01
		CSM 3061	Software Engineering- I	01
		CSM 3071	Software Engineering – II	01
		CSM 3081	Project Work	01

Earth Science

Level	Semester	Code	Title	Credits
1	I	ESM 1011	General Earth Science	01
		ESM 1021	Processes of Physical Environment & Coastal Geomorphology	01
		ESM 1031	Historical Geology, Stratigraphy & Paleontology	01
		ESM 1041	Practical Earth Science I	01
	II	ESM 1052	Crystallography, Mineralogy and Economic Geology	02
		ESM 1061	Marine Geology & Field Techniques	01
		ESM 1081	Practical Earth Science II	01
2	I	ESM 2011	Optical Mineralogy & Economic Geology	01
		ESM 2022	Metamorphic Petrology, Igneous Petrology and Sedimentology	02
		ESM 2041	Practical Earth Science III	01
	II	ESM 2052	Geochemistry & Geophysics	01
		ESM 2061	Hydrology	01
		ESM 2071	Soil Mechanics	01
		ESM 2081	Practical Earth Science IV	01
3	I	ESM 3011	Environmental Geology	01
		ESM 3021	Structural Geology & Tectonics	01
		ESM 3031	Hydrogeology	01
		ESM 3041	Practical Earth Science V	01
	II	ESM 3051	Engineering Geology	01
		ESM 3062	Geographical Information System (GIS) and Remote Sensing	02
		ESM 3081	Practical Earth Science VI	01

Mathematics – I

Level	Semester	Code	Title	credits
1	I	MTM 1012	Set Theory	02
		MTM 1022	Vector algebra and Geometry	02
	II	MTM 1032	Numerical Analysis - I	02
		MTM 1042	Abstract Algebra - I	02
2	I	MTM 2012	Differential Equations - I	02
		MTM 2022	Operational Research -I	02
	II	MTM 2032	Linear Algebra - I	02
		MTM 2042	Classical Mechanics	02
3	I	MTM 3012	Integral Transforms	02
		MTM 3022	Mathematical Modeling	02
	II	MTM 3032	Vector Calculus	02
		MTM 3042	Fluid Dynamics	02

Mathematics – II

Level	Semester	Code	Title	credits
1	I	MTM 1052	Tensor Calculus	02
		MTM 1062	Real Analysis - I	02
	II	MTM 1072	Differential Geometry	02
		MTM 1082	Numerical Analysis - II	02
2	I	MTM 2052	Operational Research – II	02
		MTM 2062	Abstract Algebra - II	02
	II	MTM 2072	Differential Equations - II	02
		MTM 2082	Real Analysis - II	02
3	I	MTM 3052	Linear Algebra - II	02
		MTM 3062	Metric Spaces	02
	II	MTM 3072	Complex Analysis	02
		MTM 3082	Topology	02

Physics

Level	Semester	Code	Title	Credits
1	I	PHM 1011	Newtonian Mechanics	01
		PHM 1021	Electromagnetism	01
		PHM 1031	Thermal Physicsan	01
		PHM 1041	Elementary Physics Laboratory I	01
	II	PHM 1051	Vibrations and Waves	01
		PHM 1061	Physical Optics	01
		PHM 1071	Environmental Physics	01
		PHM 1081	Elementary Physics Laboratory II	01
2	I	PHM 2012	Quantum and Atomic Physics	02
		PHM 2021	Solid State Physics	01
		PHM 2041	General Physics Laboratory I	01
	II	PHM 2051	AC Theory	01
		PHM 2062	Electronics	02
		PHM 2081	Electronic Laboratory	01
3	I	PHM 3011	Optical Physics	01
		PHM 3021	Statistical Physics	01
		PHM 3031	Physics in Materials	01
		PHM 3041	General Physics Laboratory II	01
	II	PHM 3051	Special Theory of Relativity	01
		PHM 3061	Nuclear Physics	01
		PHM 3071	Physics in Biology and Medicine	01
		PHM 3081	General Physics Laboratory III	01

8.2 Compulsory courses

8.2.1 Courses offered in level 1

Semester I	Semester II
Main Courses **12 Credits**	Main Courses **12 Credits**
MTC 1011 for Bio Science Students **BLC 1011** for Physical Science Students	**MTC 1021** for Bio Science Students **ENC 1021** for Physical Science Students
ASC1012	
CSC 1031 or CSC 1021 CSC 1031 for those do not offer Computer Science as a main subject; CSC 1021 for those offering Computer Science as a main subject.	
ELE 1011 Should obtain a **C** or better grade for the award of general or special degree; Enhancement course.	
Total 16 credits	**Total 13 credits**

ASC 1012 Introductory Statistics
BLC 1011 Basic Biology
CSC 1031 Information Technology I
CSC 1021 Computational Mathematics I
ELE 1011 English I
ENC 1021 Basic Environmental Science
MTC 1011 Basic Mathematics I
MTC 1021 Basic Mathematics II

8.2.2 Courses offered in level 2

Semester I	Semester II
Main Courses **12 Credits**	Main Courses **12 Credits**
ECC 2012	**CHC 2011**
CSC 2031 or CSC 2021 CSC 2031 for those do not offer Computer Science as a main subject; CSC 2021 for those offering Computer Science as a main subject.	**CLC 2012**
ELE 2011 Should obtain a **C** or better grade for the award of general or special degree; Enhancement course.	
Total 15 credits	**Total 15 credits**

CHC 2011	Introduction to Toxicology
CLC 2012	Basic Climatology
CSC 2031	Information Technology II
CSC 2021	Computational Mathematics II
ECC 2012	Principles of Economics
ELE 2021	English II

8.2.3 Courses offered in level 3 (General degree)

Semester I	Semester II
Main Courses **12 Credits**	Main Courses **12 Credits**
MGC 3012	**RMC 3012**
PAC 3012	**BLC 3031**
Total 16 credits	**Total 15 credits**

BLC 3011 Bio Ethics
MGC 3012 Principles of Management
PAC 3012 Project Analysis
RMC 3012 Research Methodology

Note:

1. New course units may be introduced instead of some course units at any time depending on the market demand, resources and facilities available with the approval of the Board of FAS and Senate.

2. The practical work of some of the course units of most of the subjects in general as well as special degree courses include field work/excursions and industrial visits/training.

APPENDIX –I

Examination Offences and Recommended Punishments:

Type of Offences	Recommended Punishments
1. Name written on Answer Scripts	Written warning
2. Possession of bag etc. on or near desk	Written warning
3. Possession of unauthorized materials a. Use of cellular telephones at the Examination hall	Students should be informed to providing the electronic equipments which they needed for the examination. Students will not be allowed to bring the electronic equipments themselves. Cancellation of paper. If the same offence repeated cancellation of examination.
b. Possession of relevant material on university stationary and/ or notes on desk.	Cancellation of particular subject
c. Relevant material to relevant subject	Whenever found it, the whole semester examination will be cancelled and they will not eligible for class awarding. And the committee should submit the report before releasing the particular semester examination results.
d. Notes found in bags or near desk relevant to examination paper	Cancellation of whole examination for two semesters. And not eligible for class awarding.
e. University based notes. Subjects based but not relevant to specific examination paper found on/ beside desk.	Warning for first offence. Cancellation of examination for repetition
4. Copying at examination	Cancellation of whole examination for four semesters. Not eligible for class awarding.
5. Disruption of examination (Misconduct)	2-4 weeks out of bounds but student be allowed to sit the exam. Snr. Asst. Registrar/ Examination should be reported within a week about the incidents.
6. Impersonation	If by a student, debarment for two years and to be referred to disciplinary action. If the student in final year, debarment period depends on duration on completion of degree program, anyway the maximum **two years whole examination** will be cancelled. If by an outsider, prosecution to be initiated.

7. Coping an assignment, project work a. If the marks allotted is less than 25% of the total marks	Assign zero marks and written warning and without continuous assessment marks students not allowed to sit for the exam. i.e. Cancellation for eligibility of examination.
b. If the marks allotted is more than 25% of the total marks	Cancellation of paper
8. Aiding and abetting	Cancellation of whole examination for four semesters.

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