THE OPEN UNIVERSITY OF SRI LANKA

Regulation for the Award of

Degree of Bachelor of Science Honours in Physics

Regulation No: 21. NS. (02) [a -2022]

May 2022

Preamble:

Regulation No. 21. NS (1) [a -2022] for Award of the Degree of Bachelor of Science Honours in Physics and the Regulation was approved by the Faculty Board of Faculty of Natural Sciences at its 392nd Meeting held on 06.04.2022 [Memo No: VV/9/392/02E].

The revised version of **Regulation No: 21. NS. (02) [a -2022]** has;

(1) Revisited the current eligibility requirements for the BSc Honours degree by comparing them with the other universities.
(2) Prescribed the duration of the BSc Honours in Physics degree programme in keeping with the ODL delivery practices and getting the due recognition for qualification holders compared to similar graduates of other universities.
(3) Granted the option for students to withdraw from the BSc Honours degree programme and receive a Bachelor of Science or Higher Diploma in Science

This Programme of Study is offered by the Faculty of Natural Sciences with the joint coordination of the Departments of Botany, Chemistry, Computer Science, Mathematics, Physics and Zoology of The Open University of Sri Lanka.

The table below provides a brief historical background to the revisions approved by the Senate and Council for the Programme of Study, which is previously known as S and S1 structures.

Approved Regulation / Rules by the Council	Details of approval given by the Council		
	Meeting number	Memo number	Date
(S) Regulation 1.1.1.1 (e)	415	VV/415/17(iv)	27.11.2015
(S1) Regulation 1.1.1.1(g)	447	VV/447.9(vi)	31.08.2018
Regulation No: 21. NS. (02)	475	VV/475/12(x)	30.04.2021

THE OPEN UNIVERSITY OF SRI LANKA

REGULATION FOR THE AWARD OF

THE DEGREE OF BACHELOR OF SCIENCE HONOURS IN PHYSICS

This Regulation was prepared under Section 136 of the Universities Act No. 16 of 1978 read in conjunction with The Open University Ordinance No. 1 of 1990 (as amended).

Part I - General

1.1.   This Regulation shall be cited as the Regulation No. 21. NS. (2) [a – 2022] of 2022 approved by the Council of The Open University of Sri Lanka at its **487th** meeting held on **20.05.2022** and shall be deemed to be the consolidated Regulation for the award of the Degree of Bachelor of Science Honours in Physics.

1.2.   This Regulation for the Award of the Degree of Bachelor of Science Honours in Physics shall be made by the Senate and approved by the Council.

1.3.   A student who has successfully completed the prescribed Programme of Study shall be awarded the Degree of Bachelor of Science Honours in Physics [BScHons (Physics)] in accordance with the General By-Law No. 1 for the Award of Certificates, Advanced Certificates, Diplomas, Higher Diplomas, Degrees, Postgraduate Diplomas, Post Graduate Degrees and Higher Degrees, By-Law No. 21 for the award of Bachelors Honours Degrees and this Regulation for the award of the Bachelor of Science Honours in Physics.

1.4.   This Regulation shall come into effect from the academic year 2021/2022.

Part II - Eligibility for Admission to the Programme of Study

2.1.   A person seeking admission to the Programme of Study leading to the award of the Degree of Bachelor of Science Honours in Physics shall be required to have.

2.1.1.   a minimum of three (03) Pass grades at the General Certificate of Education (Advanced Level) Examination, Sri Lanka, in three (03) science subjects, from among Applied Mathematics, Biology, Botany, Chemistry, Combined Mathematics, Higher Mathematics, Mathematics, Physics, Pure Mathematics, Zoology, Agricultural Science and Information and Communication Technology acceptable for the selection of three subjects at Level 3, **OR**,

2.1.2.   pass grades in all the courses offered in three (03) science subjects, from among Applied Mathematics, Biology, Botany, Chemistry, Mathematics, Physics, Pure Mathematics and Zoology, in Advanced Certificate in Science or equivalent programme offered by the Open University of Sri Lanka, acceptable for the selection of three subjects at Level 3, **OR**,

2.1.3. a minimum of three (03) Pass grades in three (03) science subjects, obtained from the combination of Sections 2.1.1, and 2.1.2. of this Regulation, acceptable for the selection of three subjects at Level 3, **OR**,

2.1.4. an equivalent or higher qualification acceptable to the Senate

2.2. In addition to Section 2.1 above, the person shall fulfil the following requirements, within four (04) consecutive academic years from his/her initial registration for the Degree of Bachelor of Science under the Regulation No: 20. NS. (2) amendments therein.

2.2.1. A minimum of C grades for thirty (30) course credits of regular courses at Level 3, **AND**,

2.2.2 A minimum of C grades for twenty-four (24) course credits at Level 4, including twelve (12) course credits from the subject of Physics and, at least eligibility for sitting final examination for the other six (6) course credits, **AND**

2.2.3 A minimum GPA of 3.00 in course credits adding up to twenty (20) course credits of Levels 3 and 4, from the subject of Physics, **AND**,

2.2.4 At least a Pass grade or Exemption for each of the continuing education courses specified in the Schedule 1.

2.3 The University may select candidates for admission to the Programme of Study from among those deemed to be eligible for admission under Sections 2.1 and 2.2 above of this Regulation based on their performance at a test and/or an interview conducted for the purpose of admission.

Part III – Admission to the Programme of Study and Registration for the Courses

3.1. A person may register for courses in the Programme of Study subject to limits on the course credit ratings and any other conditions as laid down in the General By-Law No. 1, By-Law No. 21 and the conditions provided in Schedule 1 of this Regulation.

3.2. To be eligible to register for each Level of the Programme of Study a person shall have satisfied the prerequisites for each Level and/or course(s) as specified in Schedule 1 of this Regulation.

Part IV - Programme of Study

4.1. The combination of courses and the category, the level and the credit rating of each course and in the Programme of Study for the award of the Degree in Bachelor of Science Honours in Physics shall be as specified in Schedule 1 of this Regulation.

4.2. Registration for courses at any given level shall be in accordance with Schedule 1 of this Regulation.

4.3.   The medium of instruction of the Programme of Study leading to the Degree of Bachelor of Science Honours in Physics shall be English/Sinhala/Tamil at Level 3 and English at all the Levels above the Level 3.

Part V - Scheme of Assessment

5.1.   The Overall Assessment Mark (Z%) of a student in respect of any course, shall be based on the Overall Continuous Assessment Mark (X%) and the mark obtained at the Final Examination (Y%) and shall be computed as follows:

5.1.1.   For courses offered by the Faculty of Natural Sciences:

If $Y \geq 40$, then $Z = 0.4 X + 0.6 Y$

If $30 \leq Y < 40$, then $Z = 0.4 X + 0.6 Y$, subject to a maximum of 40.

If $Y < 30$, then $Z = Y$

5.1.2.   For courses offered by the Faculty of Humanities and Social Sciences and the Faculty of Management Studies except for the course LLU3261 Understanding Law:

If $Y \geq 40$, then $Z = 0.4 X + 0.6 Y$

If $30 \leq Y < 40$, then $Z = 0.4 X + 0.6 Y$, subject to a maximum of 40.

If $Y < 30$, then $Z = Y$

5.1.3.   For LLU3261 Understanding Law:

If $Y \geq 40$, then $Z = 0.3 X + 0.7 Y$

If $35 \leq Y < 40$, then $Z = 0.3 X + 0.7 Y$, subject to a maximum of 40.

If $Y < 35$, then $Z = Y$

5.2.   Each student who sits for the Final Examination of a course shall be awarded a grade in respect of such course based on the Overall Assessment Mark (Z%), as specified in Schedule 2 of this Regulation and a Grade Point Value (GPV) shall be awarded in accordance with the Section 5.5 in Part V of the By-Law No. 21.

Part VI (a) - Award of the Degree of Bachelor of Science Honours in Physics

6.1   A candidate eligible for the Award of Degree of Bachelor of Science Honours in Physics in accordance with this Regulation shall supplicate for same to the Deputy Registrar / Senior Assistant Registrar / Assistant Registrar of Examinations before the prescribed date on the prescribed form.

6.2   A candidate who satisfies the requirements for the award of the Degree of Bachelor of Science Honours in Physics shall be awarded such Bachelors Honours Degree with Pass, Second Class (Lower Division), Second Class (Upper Division) or First Class

provided he/she satisfies the requirements specified in Sections 6.8, 6.9, 6.10 and 6.11 respectively in this Regulation, within such period specified in Section 6.4 below of this Regulation.

6.3. A candidate shall be awarded the Degree of Bachelor of Science Honours in Physics if he/she has successfully completed minimum of one hundred and twenty (120) course credits as specified in Schedule 1 of this Regulation.

6.4. A candidate shall acquire the course credit requirement as specified in Sections 6.2 and 6.3 of this Regulation for the award of the Degree of Bachelor of Science Honours in Physics, within a minimum period of four (04) academic years and a maximum period of eight (08) consecutive academic years from his/her initial registration for the Degree of Bachelor of Science under the Regulation No: 20. NS. (2) and amendments therein.

A candidate shall acquire the course credit requirement as specified in Sections 6.2 and 6.3 of this Regulation for the award of a Class in the Bachelor of Science Honours Degree in Physics, within a minimum period of four (04) academic years and a maximum period of six (06) consecutive academic years from his/her initial registration for the Degree of Bachelor of Science under the Regulation No: 20. NS. (2) and amendments therein.

6.5 The Grade Point Average (GPA) of a student shall be computed by considering the courses at levels 3, 4, 5 and 6 of a student who has satisfied the conditions for the award of the Degree of Bachelor of Science Honours in Physics in line with the procedure set out in sections below.

6.6 The Grade Point Average (GPA) shall be the course credit and level weighted mean of all the individual Grade Point Values (GPV) obtained by a candidate for one hundred and twenty (120) course credits of courses he/she has offered. The grades obtained for the continuing education courses shall not be included in the calculation of the GPA.

6.7. The Grade Point Average shall be computed as follows:

$$\text{GPA} = \frac{\sum_{i=1}^{n}(GPV_i)(CR_i)(L_i)}{\sum_{i=1}^{n}(CR_i)(L_i)}$$

where GPV_i = Grade Point Value of course i

CR_i = Course Credit Rating of course i

L_i = 2 if the course i is in either Level 3 or Level 4; and

L_i = 3 if the course i is in either Level 5 or Level 6.

GPA shall be calculated to the second decimal place subject to a maximum of 4.00.

6.8.   A candidate shall be awarded a Pass in Degree of Bachelor of Science Honours in Physics, if he/she has,

6.8.1   obtained a minimum of C grades for thirty (30) course credits at the Level 3 of the Programme of Study; comprising eight (08) course credits each from the chosen three subjects and six (06) course credits from the open elective courses, **AND,**

6.8.2   obtained a minimum of C grades for thirty (30) course credits at the Level 4 of the Programme of Study; comprising twelve (12) course credits each from two major subjects, including the subject of Physics, and six (06) course credits from the minor subject which is the remaining third subject chosen at the Level 3, **AND,**

6.8.3   obtained a minimum of C grades for thirty (30) course credits at the Level 5 of the Programme of Study; comprising twenty-four (24) course credits from the subject of Physics, including all the compulsory courses specified in Schedule 1, and remaining six (06) course credits from any subjects and/or open elective courses at the Level 5, **AND,**

6.8.4   obtained a minimum of C grades for thirty (30) course credits from the subject of Physics at the Level 6 of the Programme of Study, including all the compulsory courses specified in Schedule 1 which shall include a minimum of six (06) course credits of research component, **AND,**

6.8.5   obtained a minimum GPA of 2.00 in course credits adding up to one hundred and twenty (120) course credits at Levels 3, 4, 5 and 6 of the Programme of Study, as considered in Sections 6.8.1, 6.8.2, 6.8.3 and 6.8.4 of this Regulation, **AND,**

6.8.6   obtained at least a Pass grade or Exemption for each of the continuing education courses specified in the Schedule 1.

6.9   A candidate shall be awarded Second Class (Lower Division) in the Degree of Bachelor of Science Honours in Physics, if he/she has,

6.9.1   obtained a Pass in accordance with the Section 6.8 above, **AND,**

6.9.2   obtained a minimum GPA of 3.00 in course credits adding up to one hundred and twenty (120) course credits at Levels 3, 4, 5 and 6 of the Programme of Study, as considered in Sections 6.8.1, 6.8.2, 6.8.3 and 6.8.4 of this Regulation, **AND,**

6.9.3   obtained a minimum of B grades for sixty (60) course credits out of the 120 course credits; comprising a minimum of thirty-nine (39) course credits from the subject of Physics at Levels 5 and 6 of the Programme of Study.

6.10   A candidate shall be awarded Second Class (Upper Division) in the Degree of Bachelor of Science Honours in Physics, if he/she has,

    6.10.1   obtained a Pass in accordance with the Section 6.8 above, **AND**,

    6.10.2   obtained a minimum GPA of 3.30 in course credits adding up to one hundred and twenty (120) course credits at Levels 3, 4, 5 and 6 of the Programme of Study, as considered in Sections 6.8.1, 6.8.2, 6.8.3 and 6.8.4 of this Regulation, **AND,**

    6.10.3   obtained a minimum of B^+ grades for sixty (60) course credits out of the 120 course credits; comprising a minimum of thirty-nine (39) course credits from the subject of Physics at Levels 5 and 6 of the Programme of Study.

6.11   A candidate shall be awarded First Class in the Degree of Bachelor of Science Honours in Physics, if he/she has,

    6.11.1   obtained a Pass in accordance with the Section 6.8 above, **AND**,

    6.11.2   obtained a minimum GPA of 3.70 in course credits adding up to one hundred and twenty (120) course credits at Levels 3, 4, 5 and 6 of the Programme of Study, as considered in Sections 6.8.1, 6.8.2, 6.8.3 and 6.8.4 of this Regulation, **AND,**

    6.11.3   obtained a minimum of A grades for sixty (60) course credits out of the 120 course credits; comprising a minimum of thirty-nine (39) course credits from the subject of Physics at Levels 5 and 6 of the Programme of Study.

Part VI (b)- Award of the of the Degree of Bachelor of Science

6.12   A student may be awarded a Degree of Bachelor of Science in accordance with the By Law No. 20, the Regulation No: 20. NS. (2) and amendments therein and shall receive the award as an exit qualification, on the agreement that he/she cancels his/her registration for the Programme of Study leading to the Degree of Bachelor of Science Honours in Physics. Such student shall make an application to the Deputy Registrar/ Senior Assistant Registrar/ Assistant Registrar of Examinations before the prescribed date on the prescribed form.

Part VI (c)- Award of the of the Higher Diploma in Science

6.13   A student may be awarded a Higher Diploma in Science in accordance with the By Law No. 19, the Regulation No: 19. NS. (2) and amendments therein shall receive the award as an exit qualification, on the agreement that he/she cancels his/her registration for the Programme of Study leading to the Degree of Bachelor of Science Honours in Physics. Such student shall make an application to the Deputy Registrar/ Senior Assistant Registrar/ Assistant Registrar of Examinations before the prescribed date on the prescribed form.

Part VII – Exemptions

7.1.   Exemptions may be granted as specified in Schedule 3 of these Regulations.

7.2.   Exemptions, other than those given in Schedule 3, may be granted with the approval of the Faculty Board and the Senate.

7.3.   Notwithstanding any exemptions so granted for the award, a student shall acquire at least 50% of the minimum course credit requirement of the sixty (60) course credits at Levels 3 and 4, and the remaining minimum course credit requirement of the sixty (60) course credits at Levels 5 and 6 by successful completion in accordance with the Part V of this Regulation for the award of the Degree of Bachelor of Science Honours in Physics.

7.4.   Exemptions may be considered for any prior learning if the relevant learning outcomes are achieved within the period of the last ten (10) years from the date of completing such course.

Part VIII - Course credit transfers

8.1.   Course credit transfers may be granted as specified in Schedule 3 of this Regulation.

8.2.   Course credit transfers, other than those given in Schedule 3, may be granted with the approval of the Faculty Board and the Senate.

8.3.   Notwithstanding any exemptions so granted for the award, a student shall acquire at least 50% of the minimum course credit requirement of the sixty (60) course credits at Levels 3 and 4, and the remaining minimum course credit requirement of the sixty (60) course credits at Levels 5 and 6 by successful completion in accordance with the Part V of this Regulation for the award of the Degree of Bachelor of Science Honours in Physics.

8.4.   Any relevant courses shall be considered for course credit transfers only up to a period of ten (10) years from the date of completing such course.

Part IX – Revisions

9.1.   This Regulation may be revised, amended or repealed as and when deemed necessary by the Senate.

9.2.   Such revisions, amendments or repeals shall come into effect as determined by the Senate and approved by the Council.

List of Schedules

Schedule 1 – Curriculum with Pre-requisites for Courses

Schedule 2 – Overall Assessment Marks (Z%) Ranges and Grades

Schedule 3 – Exemptions, Course Credit Transfers and Equivalent Courses

SCHEDULES

SCHEDULE 1 – CURRICULUM WITH PRE-REQUISITES FOR COURSES

1.1 REGULAR COURSES

LEVEL 3
Requirement: Thirty (30) Course Credits; comprising eight (08) course credits each from the chosen three subjects, adding up to a total of twenty-four (24) course credits and six (06) course credits from the open elective courses.

Subject-based Courses

Course Code	Credit Rating	Course Title	Pre-Requisites
Botany			
BYU3500	5	Diversity of Plants	Pass in Botany/Biology at: GCE A/L **or** Advanced Certificate in Science **o**r Acceptable equivalent qualification
BYU3301	3	Organization of Cells and Plant Biochemistry	
Chemistry			
CYU3300	3	Basic Principles of Chemistry I	Pass in Chemistry at: GCE A/L **or** Advanced Certificate in Science **o**r Acceptable equivalent qualification
CYU3201	2	Basic Principles of Chemistry II	
CYU3302	3	Basic Practical Chemistry	
Physics			
PHU3300	3	General and Thermal Physics	Pass in Physics at: GCE A/L **or** Advanced Certificate in Science **o**r Acceptable equivalent qualification
PHU3301	3	Basic Electromagnetism	
PHU3202	2	Waves in Physics	
Zoology			
ZYU3500	5	Animal Life and Diversity	Pass in Zoology/Biology at: GCE A/L **or** Advanced Certificate in Science **o**r Acceptable equivalent qualification
ZYU3301	3	Biogeography	
Computer Science			
CSU3200	2	Introduction to Computer Programming	3 Passes at GCE (A/L) in Science or Acceptable equivalent qualifications and FNU3201 (CR/EL/P) and CSE3213 in the StART@OUSL (CR/EL/P)
CSU3301	3	Database Design and Implementation	
CSU3302	3	Data Structures & Algorithms	CSU3200 (CR/EL/P)
Applied Mathematics			
ADU3300	3	Vector Algebra	Pass in Applied Mathematics/ Combined Mathematics/ Higher Mathematics/ Mathematics at: GCE A/L **or** Advanced Certificate in Science **o**r Acceptable equivalent qualification
ADU3201	2	Basic Statistics	
ADU3302	3	Differential Equations	ADE3200 (CR/EL/P)
Pure Mathematics			
PEU3300	3	Mathematical Logic and Mathematical Proofs	Pass in Pure Mathematics/ Combined Mathematics/ Higher Mathematics/ Mathematics at: GCE A/L **or** Advanced Certificate in Science **o**r Acceptable equivalent qualification
PEU3301	3	Foundation of Mathematics	PEU3300 (CR/EL/P)
PEU3202	2	Vector Spaces	PEU3301 (CR/EL/P)

Open Elective Courses

Course Code	Credit Rating	Course Title	Pre-Requisites
FNU3200	2	Ethics in Science & Technology	-
FNU3201	2	Communication Skills	*[Compulsory for Computer Science students]*
LLU3261	2	Understanding Law	-
MSU3208	2	Managing Your Work and People	-
DSU3298	2	Introduction to Sri Lankan Society	-
ADU3218	2	Basic Statistics	*[ONLY for Mathematics students not offering Applied Mathematics at L3]*

LEVEL 4

Pre-requisite to register for courses at Level 4: CR/EL/P/Ex for thirty (30) course credits at Level 3 regular courses, specified as the requirement at Level 3. And in addition, CR/EL/P/Ex for LEE3410/LTE3401 and CSE3213; and EL/P/Ex for CYE3200; and P/Ex for FDE3020 at Level 3 continuing education courses.

Requirement: Thirty (30) Course Credits; comprising twelve (12) course credits from the subject of Physics and twelve (12) course credits from the remaining major subject, which are any two subjects from the chosen three subjects at the Level 3 and six (06) course credits from the minor subject which is the remaining third subject chosen at the Level 3.

Subject based Courses

Course Code	Credit Rating	Course Title	Pre-Requisites
Botany			
BYU4300	3	Plant Physiology	BYU3301 (CR/EL/P)
BYU4301	3	Genetics and Evolution	BYU3500 (CR/EL/P)
BYU4302	3	Systematics of Higher Plants and Animals	BYU3500 (CR/EL/P)
BYU4303	3	Principles of Microbiology	
Chemistry			
CYU4300	3	Inorganic Chemistry	{CYU3300 & CYU3201} (EL/P)
CYU4301	3	Concepts in Chemistry	{CYU3300 & CYU3201} (EL/P)
CYU4303	3	Organic Chemistry I	{CYU3300 & CYU3201} (EL/P)
CYU4302	3	Practical Chemistry II	CYU3302 (EL/P) AND {CYU4301& CYU4303} (CR/EL/P)
Physics			
PHU4300	3	Modern Physics	PHU4303 (CR/EL/P)
PHU4301	3	Electronics	{PHU3300 & PHU3301 & PHU3202} (CR/EL/P)
PHU4302	3	Optics	{PHU3300 & PHU3301 & PHU3202} (CR/EL/P)
PHU4303	3	Mathematical Methods for Physics	{PHU3300 & PHU3301 & PHU3202} (CR/EL/P)
Zoology			
ZYU4300	3	Animal Form and Function	ZYU3500 (CR/EL/P)
ZYU4301	3	Ecology	ZYU3500 (CR/EL/P)
ZYU4302	3	Animal Development	ZYU3500 (CR/EL/P)
ZYU4303	3	Animal Behaviour	ZYU3500 (CR/EL/P)

Computer Science			
CSU4300	3	Operating Systems	{CSU3200 & CSU3301 & CSU3302} (CR/EL/P)
CSU4301	3	Object Oriented Programming	
CSU4302	3	System Analysis & Software Engineering	
CSU4303	3	Computer Networks	
Applied Mathematics			
ADU4300	3	Statistical Distribution Theory	ADU3201 (CR/EL/P)
ADU4301*	3	Newtonian Mechanics I	ADU3300 (CR/EL/P) and ADU3302 (EL/P)
ADU4302	3	Vector Calculus	ADU3300 (EL/P)
ADU4303*	3	Applied Linear Algebra and Differential Equations	ADU3302 (EL/P)
Pure Mathematics			
PEU4300*	3	Real Analysis I	{PEU3300 and PEU3301} (EL/P)
PEU4301	3	Real Analysis II	PEU4300 (CR/EL/P)
PEU4302*	3	Linear Algebra	PEU3202 (EL/P)
PEU4303	3	Group Theory I	PEU3301 (CR/EL/P)

LEVEL 5

Pre-requisite to register for courses at Level 5: CR/EL/P/Ex for thirty (30) course credits each at Levels 3 & 4 regular courses, specified as the requirements at the respective Levels. And in addition, P/Ex for LEE3410/LTE3401, CSE3213 and CYE3200 at Level 3 continuing education courses.

Requirement: Thirty (30) Course Credits; comprising twenty-four (24) course credits from the Subject of Physics, including all the compulsory courses specified here, and remaining six (06) course credits from any subjects and/or open elective courses at the Level 5.

Subject- based Courses

Course Code	Credit Rating	Course Title	Pre-Requisites
Botany			
BYU5300$	3	Environmental and Applied Microbiology	BYU4303 (EL/P)
BYU5301$	3	Plant Pathology	
BYU5302	3	Plant Growth and Development	BYU4300 (EL/P)
BYU5303	3	Plants and Man	BYU3500 (EL/P)
BYU5304$	3	Soils and Plant Growth	
BYU5306$	3	Plant Breeding	BYU4301 (EL/P)
BYU5307	3	Forest Management and its Conservation	-
BYU5308	3	Postharvest Technology of Fresh Produce	BYU4300 (EL/P)
BYU5609	6	Horticulture	-
Chemistry			
CYU5300$	3	Organometallic Chemistry	CYU4300 (EL/P)
CYU5301$	3	Concepts in Spectroscopy	CYU4301 (EL/P)
CYU5302$	3	Analytical Chemistry	{CYU3300 & CYU3201 & CYU3302} (P)
CYU5303$	3	Organic Chemistry II	{CYU4302 & CYU4303} (EL/P)
CYU5304$	3	Chemistry of Biomolecules	CYU4303 (EL/P)
CYU5305	3	Natural Product Chemistry	CYU5304 (CR/EL/P)
CYU5306	3	Biochemistry	
CYU5307	3	Chemical aspects of Food Industry	CYU5304 (CR/EL/P) and CYU3302 (P)

Course Code	Credit Rating	Course Title	Pre-Requisites
CYU5308$	3	Instrumental Methods of Chemical Analysis	CYU5302 (CR/EL/P)
CYU5309	3	Environmental Chemistry	{CYU3300 & CYU3201} (P)
CYU5614	6	Physical Chemistry I	{CYU4301 & CYU4302 & CYU4303} (EL/P) and CYU5301(CR/EL/P)
CYU5615	6	Advanced Organic Chemistry	{CYU4301 & CYU4302 & CYU4303} (EL/P) and CYU5303 (CR/EL/P)
Physics			
PHU5300$	3	Nuclear & Particle Physics	PHU4300 (CR/EL/P)
PHU5301$	3	Practical Physics	{PHU4301 & PHU5303} (CR/EL/P)
PHU5302	3	Atmospheric Physics	-
PHU5303$	3	Data Acquisition and Signal Processing	PHU4301 (CR/EL/P)
PHU5304	3	Biophysics	-
PHU5305	3	Essentials of Geology	-
PHU5306	3	Applied Geology	PHU5305 (CR/EL/P)
PHU5307	3	Medical Physics	-
PHU5308	3	Fundamentals of Geophysics	PHU5305 (CR/EL/P)
PHU5311	3	Astronomy	-
PHU5312$	3	Solid State Physics	{PHU4300 & PHU4303} (CR/EL/P)
PHU5313$	3	Advanced Electromagnetism	PHU3300 (EL/P) and PHU4303 (CR/EL/P)
PHU5314$	3	Thermodynamics	
PHU5315	3	Renewable Energy Sources	-
Zoology			
ZYU5300	3	Aquatic Biology	-
ZYU5301	3	Fish Biology and Fishery Management	-
ZYU5302	3	Conservation & Management of Biodiversity	-
ZYU5303	3	Environmental Toxicology	-
ZYU5304	3	Parasitology	-
ZYU5305	3	Human Biology	-
ZYU5306	3	Entomology	-
ZYU5307	3	Mammalian Biology	-
ZYU5309	3	Paleobiology	-
ZYU5310	3	Concepts and Application on Evolutionary Biology	BYU4301 (EL/P)
ZYU5311$	3	Literature Review in Zoology	-
ZYU5313$	3	Research Methodology	*[Limited Registration]*
Computer Science			
CSU5300	3	IT Project Management	6 credits of L4 Computer Science courses (CR/EL/P) including CSU4302 (CR/EL/P)
CSU5301	3	Software Quality Assurance	6 credits of L4 Computer Science courses (CR/EL/P)
CSU5302$	3	Web Technologies	
CSU5303$	3	Management Information Systems	
CSU5304#	3	Mathematics for Computing	
CSU5305	3	Theory of Computing	
CSU5306	3	Digital Electronics	
CSU5307$	3	Data Communication	
CSU5308$	3	Artificial Intelligence	
CSU5309$	3	Information Security & Cryptography	

Course Code	Credit Rating	Course Title	Pre-Requisites
CSU5310	3	Computer Architecture	
CSU5311$	3	Computer Graphics	
Applied Mathematics			
ADU5300	3	Linear Programming	-
ADU5301	3	Regression Analysis I	{ADU3201/ADU3218} (CR/EL/P)
ADU5302$M	3	Mathematical Methods	ADU3302 (EL/P)
ADU5303	3	Newtonian Mechanics II	ADU4301 (EL/P)
ADU5304	3	Operational Research	ADU5300 (CR/EL/P)
ADU5305	3	Statistical Inference	ADU4300 (CR/EL/P)
ADU5306	3	Fluid Mechanics	ADU4302 (EL/P)
ADU5307	3	Numerical Methods	ADU3302 (EL/P)
ADU5308	3	Graph Theory	-
ADU5309	3	Design and Analysis of Experiments	ADU3201 (CR/EL/P)
ADU5310	3	Time Series Analysis	{ADU3201/ADU3218/ADU5318} (EL/P)
ADU5311	3	Regression Analysis II	ADU5301 (EL/P)
ADU5312	3	Data Mining Techniques	{ADU3201/ADU3218/ADU5318} (EL/P)
ADU5313	3	Generalized Linear Models	ADU5301 (EL/P)
ADU5314	3	Sampling Techniques	{ADU3201/ADU3218} (CR/EL/P) or ADU5318 (EL/P)
ADU5615	6	Project in Mathematics	*[Limited Registration]*
Pure Mathematics			
PEU5300$	3	Riemann Integration	PEU4301 (EL/P)
PEU5301	3	Ring Theory	PEU4303 (EL/P)
PEU5302	3	Combinatorics	-
PEU5303$	3	Number Theory	PEU3301 (EL/P)
PEU5304$	3	Introduction to Complex Analysis	{PEU4300 & PEU4301} (EL/P)
PEU5305$	3	Complex Analysis I	PEU5304 (CR/EL/P)
PEU5306	3	Introduction to dynamical Systems	{PEU4300 & PEU4301} (EL/P)
PEU5307	3	Cryptography	PEU5303 (CR/EL/P)

Open Elective Courses

Course Codes	Credit Rating	Course Title	Pre-Requisites
ADU5318	3	Bio Statistics	CYE3200 (EL/P); *[Only for Non-Mathematics students]*
ADU5319	3	Design and Analysis of Experiments	{ADU3218/ADU5318} (CR/EL/P)
ADU5320	3	Introduction to MATLAB Software	{ADU4303/PEU4302} (EL/P)
BYU5318$M	3	Environmental Studies	--
PHU5318	3	Electronics for Biology Students	*[Only for Non-Physics students]*
ADU5321	3	Applied Calculus II	ADE3200 (P)
FNU5300	3	GIS and Remote Sensing in Natural Resource Management	*[Only for BSc Honours degree students in any subject]*
FNU5301	3	Environmental Degradation Management	
FNU5302	3	Fundamentals of Environmental Impact Assessment	

LEVEL 6

Pre-requisite to register for courses at Level 6: CR/EL/P for thirty (30) course credits at Level 5 regular courses, specified as the requirements at the Level 5.

Requirement: Thirty (30) course credits from the Subject of Physics at the Level 6 of the Programme of Study, including all the compulsory courses specified here which shall include at least six (06) course credits of research component.

Subject- based Courses

Course Code	Credit Rating	Course Title	Pre-Requisites
Physics			
PHU6300$	3	Advanced Practical in Physics	PHU5313 (CR/EL/P)
PHU6301$	3	Advanced Solid State Physics	PHU5312 (CR/EL/P)
PHU6302$	3	Advanced Quantum Mechanics	--
PHU6603$	6	Advanced Research Project in Physics	--
PHU6304$	3	Advanced Electronics	--
PHU6305	3	Nanophysics and its Applications	--
PHU6306$	3	Statistical Physics	PHU5314 (CR/EL/P)
PHU6307	3	Modern Optics	--
PHU6308$	3	Classical Mechanics	--

1.2 CONTINUING EDUCATION COURSES

LEVEL 3

Requirement for the award: Obtaining a Pass grade or Exemption for each of the courses CYE3200, LEE3410/LTE3401, FDE3020 and CSE3213 is required for the award of the degree.

Course Code	Credit Rating	Course Title	Pre-Requisites
CYE3200	2	Mathematics for Chemistry and Biology	-
LEE3410	4	English for General Academic Purposes (EGAP)	-
FDE3020	0	Empowering for Independent Learning (EfIL)	-
CSE3213	2	Information & Communication Technology	-
ADE3200	2	Applied Calculus I	*[For Applied Mathematics Students, not offering Pure Mathematics]*

Abbreviations:

CR	:	Concurrent Registration
EL	:	Eligibility $\Rightarrow$ OCAM (X%) ≥ 35%
Ex	:	Exemption
P	:	Pass
$	:	Compulsory for the specialization in the relevant subject
*	:	Compulsory for the relevant minor subjects
#	:	Students not offering Applied Mathematics and/or Pure Mathematics
$M	:	Compulsory for the specialization in Mathematics

1.3 Eligibility: Requirement to Appear for the Final Examination

- Obtaining '**eligibility**' for a course is the condition required for a student to appear for the final examination conducted for that course; and the eligibility for a course is obtained when the Overall Continuous Assessment Mark (OCAM) for that course is ≥ 35%. [i.e. (X%) ≥ 35%].

- OCAM and hence the eligibility of that course may be carried forward only to the immediate subsequent academic year.

Notes:
- Limited Registration: The relevant department will select students based on; request from students, such students' performance at Levels 3 & 4, availability of supervisors & facilities in the proposed area of study/research and department's selection criteria approved by the Faculty.

- The Faculty / Department may not offer certain Level 05 and Level 06 course(s) for registration in particular academic year(s) with a prior notification.

SCHEDULE 2 – OVERALL ASSESSMENT MARK (Z%) RANGES AND GRADES

Z%: Range of Marks	Grade	Grade Point Value
85 - 100	A$^+$	4.00
70 - 84	A	4.00
65 - 69	A$^-$	3.70
60 - 64	B$^+$	3.30
55 - 59	B	3.00
50 - 54	B$^-$	2.70
45 - 49	C$^+$	2.30
40 - 44	C	2.00
35 - 39	C$^-$	1.70
30 - 34	D$^+$	1.30
20 - 29	D	1.00
00 - 19	E	0.00

SCHEDULE 3 – EXEMPTIONS, COURSE CREDIT TRANSFERS AND EQUIVALENT COURSES

3.1 Specific Exemptions Granted for the Continuing Education Courses

Courses Exempted	Qualification
CYE3200	• GCE (A/L) Examination, Sri Lanka: Pass in Applied Mathematics **or** Combined Mathematics **or** Higher Mathematics **or** Pure Mathematics. • Advanced Certificate in Science, OUSL: Passes in Applied Mathematics **or** Pure Mathematics **or** Mathematics Courses at Level 2 **or** Foundation Courses equivalent to the subjects listed above. • Passes in Applied Mathematics **or** Pure Mathematics courses at 1st year Examination in Physical Science of a recognized University. • National Diploma in Teaching Mathematics. • Any other qualifications acceptable to the Senate of OUSL.

LEE3410/ LTE3401	• Successful completion of a Bachelor's degree **or** Postgraduate Diploma **or** Master's Degree in English Medium.
	• Diploma in English from a recognized university.
	• National Diploma in Teaching (English) conducted and awarded by the NIE.
	• UTEL score of not less than band 6.00 in all skills.
	• IELTS overall score of at least 5.0 (academic) 5.5 (general) with not less than 4.00 in writing (within 3 years).
	• TOEFL (within 3 years).
	    o Paper based overall score of at least 450 with at least 3.5 in writing
	    o Computer based overall score of at least 200 with at least 3.5 in writing
	    o Internet Based test overall score of at least 90 with at least 20 in writing
	• Successful completion of GCE (A/L) Examination, Sri Lanka in English Medium
	• Successful completion of London A/L (Edexcel or Cambridge) in English medium
	• Any other qualifications acceptable to the Senate of OUSL.

CSE3213	• Successful completion of Short Course in Professional Computer Applications offered by the Department of Computer Science, OUSL. • Successful completion of CPCA: Certificate in Professional Computer Applications offered by the Department of Computer Science, OUSL. • Successful completion of National Certificate in Information Communication Technology Technician (ICT Technician) NVQ L4 at Vocational Training Centre. • Successful completion of Sri Lanka Computing Driving License (SCDL) or International Driving License (ICDL). • Successful completion of the University Competency Test in Information Technology (UCTIT) conducted by the Higher Education for Twenty First Century (HETC) project of the Ministry of Higher Education. • Pass grade of Information and Communication Technology (ICT) in GCE (A/L) • Any other qualifications acceptable to the Senate of OUSL.

3.2 Specific exemptions granted for the admission requirements

Qualification	Subjects					
	Chemistry	Physics	Applied Mathematic	Pure Mathematic	Botany	Zoology
Foundation Course in Physics (IPSL) and Studied Physics as a subject in the school and sat for GCE (A/L) examination in Physics.		✕				
GCE A-Level (Cambridge/Edexcel) - Biology					✕	✕
GCE A-Level (Cambridge/Edexcel) - Chemistry	✕					
GCE A-Level (Cambridge/Edexcel) - Mathematics			✕	✕		
GCE A-Level (Cambridge/Edexcel) - Physics		✕				
Diploma in Mathematics/Science (AUC) - Mathematics			✕	✕		
Diploma in Teaching Mathematics/Science (NIE) - Mathematics			✕	✕		
Diploma in Mathematics/Science (AUC) - Science	✕	✕			✕	✕
Diploma in Teaching Mathematics/Science (NIE) - Science	✕	✕			✕	✕
Science Teachers Diploma (Biological Science)					✕	✕
Science Teachers Diploma (Physical Science)		✕				
Institute of Chemistry Lab Technicians Certificate (LTCC)	✕					