

Admissions Requirements

JUPAS Applicants

Minimum Programme Entrance Requirements:



¹ Elective subjects can be any Category A subject, one of them must be a Science subject
² Candidates with level 4 in English Language and good results in other HKDSE subjects will be exceptionally considered on a case by case basis. If these candidates are admitted, they will be required to take 6 additional credits in University English to complete their degree studies

Non-JUPAS Applicants

Students holding non HKDSE qualifications are considered individually

Useful Information

HKU Undergraduate Admissions
www.aal.hku.hk/admissions

Contacts for Further Information

For BSc, BSc(ActuarSc) & BASc(Applied AI)
 Faculty of Science
www.scifac.hku.hk
 3917-2683
science@hku.hk

For BEd & BSc
 Faculty of Education
web.edu.hku.hk/programme/bedbsc_6119
 3917-4659
bedbsc@hku.hk

For BASc
 Faculty of Social Sciences
www.socsc.hku.hk
 3917-1212
socscug@hku.hk

SCIENCE

Undergraduate Programmes

2019
 2020



FACULTY OF SCIENCE
 THE UNIVERSITY OF HONG KONG
 香港大學理學院



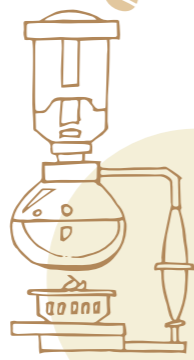
SCIENCE
 Oak Anniversary
 明德於樸 格物以理



NEW INITIATIVES
 Accreditations
 Minor in Science Entrepreneurship
 Articulation Pathways
 Intensive Majors
 New Interdisciplinary Programmes

NEW INITIATIVES

for Science curricula







Seamless articulation to widely recognised postgraduate programmes

- ☉ Taught Postgraduate Programmes at HKU Science
- ☉ Master of Science in Biotechnology at Northeastern University
- ☉ Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)



Quality assured through recognition by international professional bodies

- ☉ Chemistry Major 
- ☉ Ecology & Biodiversity Major 
- ☉ Geology Major 
- ☉ Molecular Biology & Biotechnology Major 



Specialisation and intensive training make experts

- ☉ Chemistry (Intensive)
- ☉ Ecology & Biodiversity (Intensive)
- ☉ Geology (Intensive)
- ☉ Molecular Biology & Biotechnology (Intensive)


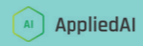


Opening the doors to entrepreneurship

- ☉ visualises how training in science bears relevance to the real world



Opening up new perspectives

-  BASc Bachelor of Arts & Sciences
-  Applied AI
- ☉ 6224 Bachelor of Arts and Sciences (Applied AI)
- ☉ 6212 Bachelor of Arts and Sciences



Why HKU Science?

High University Rankings



QS World University Rankings 2019

#1 among the universities in Hong Kong

#5 among the universities in Asia

#25 in the world



Global Experience

Committed to nurturing students as global citizens



Times Higher Education World University Rankings 2018

#1 among the universities in Hong Kong

#4 among the universities in Asia

#40 in the world

Targeting at **100%** overseas experience by 2022

Examples of overseas experiences

- Worldwide exchange studies
- Overseas Research Fellowships
- Field trips
- Summer courses
- International scientific conferences
- Internships

International Environment

About **40%** academic staff are from overseas

The International Student Ranking 2018
#22 in the world
#1 in Asia

Top-ranked Scientists

(Clarivate Analytics' Essential Science Indicators 2017)

14% of professoriate staff are the world's **top 1%** scholars

Career Prospects

Essentially **100%** employment rate (inclusive of further studies) in the past decade

Our Departments


Department of Earth Sciences 

Department of Mathematics 

Department of Physics 

Department of Statistics & Actuarial Science 

School of Biological Sciences 

Department of Chemistry 

Bachelor of Science BSc



Empowers scientific intellectuals to formulate solutions to society's challenges

A comprehensive training in science that

- Develops students' capabilities in quantitative and logical reasoning
- Cultivates students' ability to tackle novel situations and solve complex problems

The Programme

One entry in the application, with a free choice of 14 Science Majors and 4 Intensive Majors:

- | | |
|---|--|
| Biochemistry | Food & Nutritional Science |
| Biological Sciences | Geology ³ |
| Chemistry | Geology (Intensive) |
| Chemistry (Intensive) ¹ | Mathematics |
| Decision Analytics | Molecular Biology & Biotechnology |
| Earth System Science | Molecular Biology & Biotechnology (Intensive) ² |
| Ecology & Biodiversity | Physics |
| Ecology & Biodiversity (Intensive) ² | Risk Management |
| Environmental Science | Statistics |

Notes:

¹ It follows the Accredited Royal Society of Chemistry Programme



² It follows the Accredited Royal Society of Biology Programme



³ It follows The Geological Society Accredited Programme



Unique Features

- Tackling novel situations:** Nurtures a scientifically literate population to address the global challenges that human faces and make wise decisions informed by scientific understanding
- Career prospects:**
 - The Faculty has got essentially 100% employment rate (inclusive of further studies) in the past decade
 - Many of our graduates are holding positions that demand scientific expertise, such as environmental scientists, nutritionists, clinical scientists, meteorologists, geologists, information specialists, financial analysts, teachers and forensic scientists
 - Our graduates are also preferred by other employers because of their numerical analytical skills and logical thinking

Simple and Flexible

- One entry in application for a choice of 14 Majors and 4 Intensive Majors
- Up to 2 years time to choose a Major
- Flexibility in changing Majors

Key Features of Our BSc Curriculum



1 Major / 2 Majors / Major-Minor / Major-2 Minors

- Students may take a 2nd Major or a Minor or 2nd Minors in Science or non-Science disciplines

No Quota for Any Science Major

Academic Advising System

- One-on-one academic advice

BSc Curriculum Structure (240 Credits)

Forty 6-credit courses spanning over 4 years of full-time study



NEW Intensive Majors

Specialisation and intensive training make experts

- Allow students to specialise in a science discipline with extensive subject knowledge
- Offered alongside with the regular 96-credit Majors
- Equip students who intend to pursue research in science with an adequate depth of their subject knowledge
- Fulfill the accreditation requirements of various royal societies in the UK
- Listed in the transcript
- Having an advantage at job application and when seeking chartered status
- Four accredited Majors are offered at initial stage:
 - Major in Chemistry (Intensive) (144 credits)
 - Major in Ecology & Biodiversity (Intensive) (144 credits)
 - Major in Geology (Intensive) (150 credits)
 - Major in Molecular Biology & Biotechnology (Intensive) (144 credits)

Curriculum Structure for BSc (Intensive Majors) (240 Credits)

Spanning over 4 years of full-time study



Accreditations



Quality assured through recognition by international professional bodies



Royal Society of
Biology

Accredited Degree

Royal Society of Biology, UK ^{NEW}

- Both the Ecology & Biodiversity Major and Molecular Biology & Biotechnology Major have been conferred the accreditation
- The Ecology & Biodiversity Major is the first programme of its type accredited by RSB in Asia
- Students completed the RSB accredited programme will be awarded a certificate by the School of Biological Sciences, with authorisation by the RSB, to recognise their achievements
- Graduates will receive one year of guest membership of RSB at Associate level and this will help them to:
 - > stay up-to-date with what is happening across the life sciences
 - > gain additional recognition for their skills and experience
 - > develop their professional network and
 - > demonstrate their support for the future of biology



ROYAL SOCIETY
OF
CHEMISTRY
Accredited
degree

Royal Society of Chemistry, UK

- Exclusively for students who wish to specialise in chemistry
- Students completed the RSC accredited Chemistry programme will be awarded a certificate by the Department of Chemistry, with authorisation by RSC, to recognise their achievements
- All students in the final year of this accredited programme are qualified to apply for membership to RSC



The Geological Society
Accredited programme

The Geological Society, UK

- Students completing specified geology courses will receive an accredited degree which provides an accelerated route to achieve the qualification
- Students completed the Geological Society accredited programme will be awarded a certificate by the Department of Earth Sciences, with the authorisation by the Geological Society, to recognise their achievements
- Qualification recognised internationally and in Hong Kong, and chartered geologists are regarded as professionally equivalent to chartered engineers



Minor in Science Entrepreneurship

Opening the doors to entrepreneurship

This Minor aims at:

Broadening the
horizon of our
undergraduate
students with
respect to
entrepreneurship

Offering more
competitive edge
to our students via
connecting their
academic knowledge
with the real world

Bringing students
huge insights via
critical analysis of the
operation of existing
enterprises

Some highlights of the Minor:

- Co-taught by other Faculties such as Faculty of Business and Economics
- Strong emphasis on practical experience:
 - > Entrepreneurship Internship
 - > Capstone project (e.g. entrepreneurship-related competitions or business analysis of enterprises)
- Mentoring offered by our alumni and others who are entrepreneurs or hold senior positions in industry/business
- Incorporates new courses tailor-made for this Minor such as organisational behaviours, leadership, principles of technology entrepreneurship, science-based innovation development, strategic marketing and user analysis, as well as related courses currently offered by other Faculties



NEW

Articulation Pathways

Seamless articulation to widely recognised postgraduate programmes

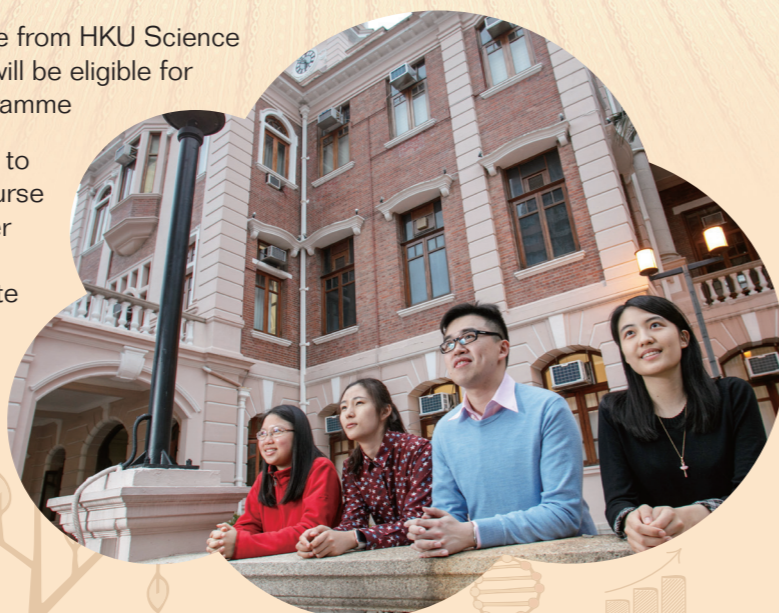
To Taught Postgraduate Programmes at HKU Science

- An articulation pathway attaching 6901 Bachelor of Science, 6729 Bachelor of Science in Actuarial Science and 6224 Bachelor of Arts and Sciences in Applied Artificial Intelligence to master programmes at HKU Science
- Provides a convenient channel of specialised training for deepening knowledge in specific fields of science, with guaranteed admission to the taught postgraduate programmes offered by the Faculty to selected outstanding BSc/ BSc(ActuarSc)/ BASc(Applied AI) students
- Upon successful completion in 5/ 5.5 years, students will be able to obtain a BSc/ BSc(ActuarSc)/ BASc(Applied AI) degree (4 years) plus a MSc/ MStat degree (1 year) or MDASC degree (1.5 years). The taught Master Programmes offered include:
 - + MSc in the field of Applied Geosciences
 - + MSc in the field of Food Safety and Toxicology
 - + MSc in the field of Food Industry: Management and Marketing
 - + Master of Statistics (MStat)
 - + MSc in Environmental Management
 - + Master of Data Science (MDASC)
- Application is open to students who have completed year 3, with a CGPA of 3.5 at graduation and fulfillment of the MSc/ MStat/ MDASC admissions requirements
- Students who are awarded the highest amount of scholarship will only need to pay 50% of tuition fee
- There is no quota for the aforementioned articulation pathway except that for Master of Data Science, a maximum of 2 places will be offered each year

Remarks: the list of TPG programmes for this articulation pathway is subject to change

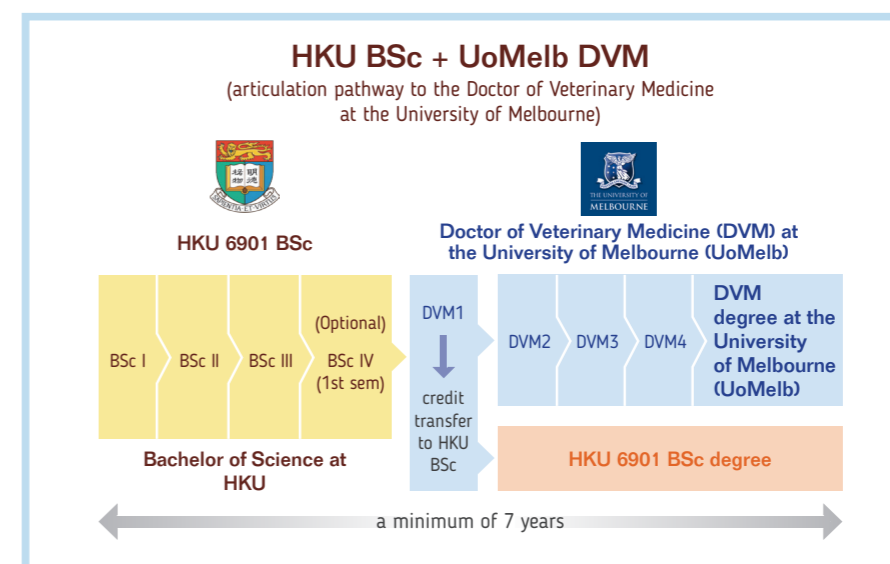
To the Master of Science in Biotechnology at Northeastern University

- Graduates with a BSc degree from HKU Science with a GPA of 3.2 or above will be eligible for direct admission to the programme
- Admitted students may elect to complete the first year of course work online, and then transfer to Northeastern's Boston or California campus to complete the remaining studies



To Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)

- In collaboration with University of Melbourne (UoMelb) in Australia, HKU Science will provide a pathway to BSc 6901 students of the following majors to articulate into the DVM of the UoMelb:
 - + Biochemistry
 - + Biological Sciences
 - + Ecology & Biodiversity
 - + Molecular Biology & Biotechnology
 - + Food & Nutritional Science
- Provides a new pathway to talented students who aspire to pursue a career in veterinary
- Facilitates selected HKU science undergraduates, upon successful completion of a minimum of 6 semesters and gaining 186 credits under BSc 6901 programme, to enrol in DVM at UoMelb
- Credits obtained during the first year of DVM at UoMelb can be transferred to HKU as electives, subject to relevant HKU regulations, for the purpose of fulfilling the credit requirements of the BSc programme
- Students obtain 2 degrees from the 2 universities – the HKU BSc degree and the DVM in UoMelb in as little as 7 years
- A maximum of 5 places will be offered annually to accommodate selected HKU BSc students who demonstrate good academic achievements
- Scholarship will be provided by HKU Faculty of Science to partially cover selected students' tuition fees for their first year of study at UoMelb



About DVM at UoMelb

- The internationally accredited programme allows graduates to find employment as a practising veterinarian in many countries without further training
- Accredited by Australasian Veterinary Boards Council Inc (Australia), American Veterinary Medical Association (USA) and Royal College of Veterinary Surgeons (UK)
- Graduates can register as veterinary surgeons and practise in HK through Veterinary Surgeons Board of Hong Kong
- The UoMelb is a renowned university in the global arena and its DVM programme ranks 15th in Veterinary Science of QS World University Rankings 2018

Diverse Learning Experiences

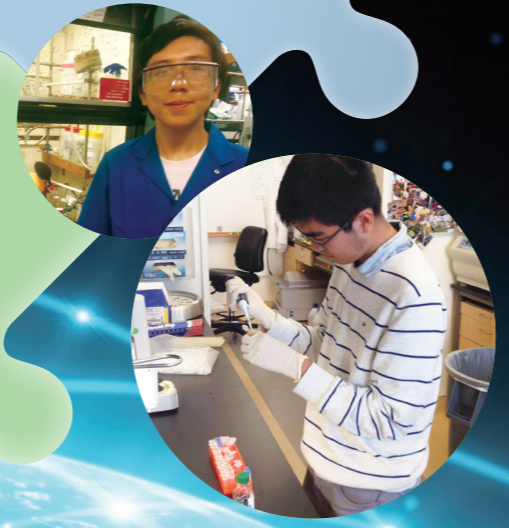


Undergraduate Research Experiences

- **Overseas Research Fellowship (ORF)**
- Examples:
 - North America**
 - California Institute of Technology
 - Columbia University • Cornell University
 - MIT • Stanford University
 - University of California at Berkeley
 - University of California at Los Angeles
 - Europe**
 - CERN • University of Cambridge
 - University College London

• Around 300 partner universities in more than 40 countries, including:

- North America**
 - University of California • University of Chicago
 - Columbia University
 - Johns Hopkins University
 - Stanford University • Yale University
- Europe**
 - University of Cambridge
 - Imperial College London
 - University of Oxford



Field Trips

• Provide students with hands-on learning experience outside classroom

- Examples of field trip destinations:
- Kenya • Thailand
 - USA • Australia



Career Preparation & Internships

- **Career Success Programme**
- Enables students to apply knowledge in the workplace
- Prepares students for their career

- Examples of internship opportunities:
- Government bodies • Scientific laboratories
 - Non-government agencies/ NGOs
 - Commercial companies
 - Non-government agencies/NGOs
 - Commercial companies



Young Scientist Scheme (YSS) Early Research Experiences for Outstanding Students in 6901 BSc Programme

YSS participants are guaranteed to go on exchange, visiting or summer study in a top university, including:



Students in YSS are guaranteed with:

- 1 Summer Research Fellowship (SRF)
- 2 A further SRF or an Overseas Research Fellowship (ORF)
- 3 International exchange, visiting or summer study
- 4 Attendance to an international scientific conference
- 5 A research mentor
- 6 Enrollment in the Frontiers of Science Honours Seminar
- 7 Stipends for research activities
- 8 Entrance scholarship

Who are eligible to join YSS?

In 2018, 31 students were admitted to YSS

Non-JUPAS

Selected Non-JUPAS applicants will be invited to enroll in YSS

JUPAS

Best 5 HKDSE
Score of subjects* ≥ 35
- automatically accepted to YSS
- no interview is necessary
* including Category A subjects and M1/M2

Notes:

1. 6901 BSc students not admitted to YSS on entry but show excellent talent afterwards would still have a second chance to enroll in YSS.
2. Students who are not admitted to YSS can still compete for SRF, ORF and/or international exchange during their study.

Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(Applied AI)



Impacts the world with the limitless power of AI

The Programme

- Highlights AI applications in diverse areas so that students can develop the intellectual capacity essential to meeting new challenges
- Gives students both fundamental and practical knowledge in the design and construction of intelligent systems so that they can apply their skills in a variety of career settings
- Supported by a wide range of courses in computer science, geography, mathematics, psychology, statistics, and urban studies which emphasise problem-based learning
- Nurtures students to transfer interdisciplinary scientific knowledge into a range of integrated applications and technological innovations

Unique Features

- New option for elite students:** Provides formal academic training to elite students who wish to join the AI profession
- Featured concentrations:** AI in technology, AI in business and finance, AI in medicine, AI in smart city, or AI in neurocognitive science
- Career prospects:** Connects the exploding demand of the AI market in diverse areas: science and technology, environmental protection, medical informatics, health care, business, banking, finance, urban development, neurocognitive science, etc.
- Interdisciplinary training:** Facilitates a coordinated approach to teaching and learning across different disciplinary fields in collaboration with the Faculties of Engineering, Social Sciences and Architecture

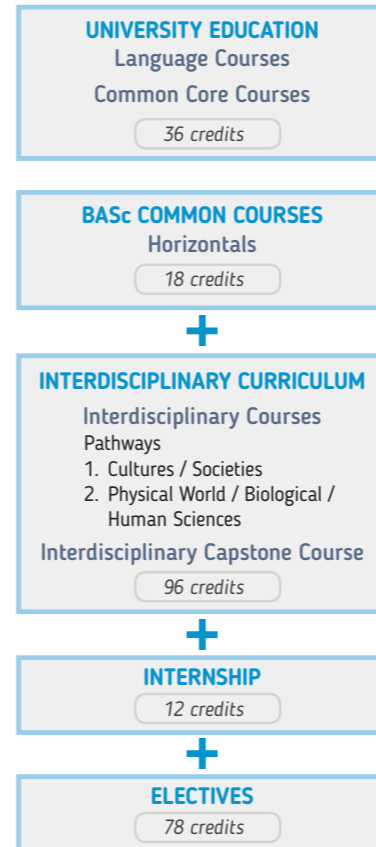


BASc(Applied AI) Curriculum Structure* (240 Credits) Spanning over 4 years of full-time study



*May subject to change

BASc Curriculum Structure* (240 Credits) Spanning over 4 years of full-time study



*May subject to change

The Programme

- An intrinsically integrated programme co-offered by the Faculties of Social Sciences, Arts and Science
- Designed for intellectually ambitious students who want to develop a broad set of scholarly skills in order to become leaders across a diverse range of fields to meet important global challenges
- Equips students with social intelligence, creative problem-solving, analytical skills, communication skills, ethical responsibility and interdisciplinary perspective in understanding our world

Unique Features

- Interdisciplinary major:** Students take disciplinary courses from the 3 Faculties and also elective courses within 2 pathways: (1) Cultures/ Societies and (2) Physical World/ Biological/ Human Sciences
- Developing intellectual toolkit:** Learn how to intertwine knowledge from various disciplines and integrate them together through case studies, capstone learning, and experiences of thought leaders in professions
- Career prospects:** Wide career prospects in government, management consultancy, public relations, banking, public policy, environmental services, museum, heritage or science writing/ journalism, and non-governmental organisation work, etc.



Bachelor of Arts and Sciences BASc

Nurtures future global leaders to make changes in interconnected world

Social Sciences

Psychology, sociology, politics, geography, journalism, social work

Arts

Cultural studies, history, philosophy, language, literature, creative & performative arts

Science

Physics, chemistry, biology, nutrition, from molecules to cells, ecology, evolution, planet, energy & environment

6729

Bachelor of Science in Actuarial Science BSc(ActuarSc)

A gateway to the actuarial profession with internationally-recognised qualifications

The Programme

- Provides specialist academic and professional training to students in actuarial science
- Prepares students for professional examinations to Associateship level
 - UK** – Institute and Faculty of Actuaries
 - North America** – Casualty Actuarial Society, and Society of Actuaries
- Accredited by professional body, while graduates will be exempted from various professional examinations
 - UK** – Institute and Faculty of Actuaries
- Validation by Educational Experience (VEE) obtained
 - North America** – Casualty Actuarial Society, Society of Actuaries, and Canadian Institute of Actuaries

Internship opportunities with major insurers, actuarial consulting firms, reinsurers, investment firms, auditing firms, and management consulting firms

Unique Features

- Specialisation:** The ONLY programme of its kind in Hong Kong
- Professional recognition:** The Department of Statistics & Actuarial Science has been designated a Centre of Actuarial Excellence by the Society of Actuaries since 2011
- Career prospects:** Given Hong Kong's booming insurance industry and the rapid development of the mainland China market, actuaries enjoy very attractive career prospects. Recent graduates hold positions in major insurance and reinsurance companies, actuarial consulting firms, and investment banks

The Department of Statistics & Actuarial Science has been designated a Centre of Actuarial Excellence by the Society of Actuaries since 2011



Dr Patrick S C Poon Scholarship in Actuarial Science

- 5 scholarships are awarded annually to freshly-admitted first year students with outstanding entrance records, each at HK\$50,000 or HK\$60,000
- Renewable based on satisfactory performance in each year's study in the programme

BSc(ActuarSc) Curriculum Structure (240 credits)

Forty 6-credit courses spanning over 4 years of full-time study



*Additional credits required



6119

Bachelor of Education and Bachelor of Science BEd & BSc

Consolidates scientific knowledge through practical experience and teaching in science

The Programme

- 5-year Double Degree Programme
- Offered jointly by the Faculty of Education and the Faculty of Science
- Integrated programme offering both academic and professional studies
- Requires students to complete 300 credits of course units including:
 - Science courses to fulfill the requirement of a Science Major
 - Education Professional core courses with the Faculty of Education

Unique Features

- Professional training:**
 - Incorporates a graduate teaching qualification equivalent to a BSc plus a Postgraduate Diploma in Education
 - Pedagogy courses and Teaching Practice in Hong Kong secondary schools included
- Career prospects:**
 - Thorough knowledge of Science subject, broad understanding of educational issues, and high level of classroom expertise prepare graduates for teaching Science at all levels in local secondary and international schools
 - Graduates also find employment opportunities in industrial and government sectors in which BSc graduates are often employed

BEd & BSc Curriculum Structure (300 Credits)

Spanning over 5 years of full-time study

