

**SCHOOL OF LIFE SCIENCES**

**PROGRAMME CODE:** LS5A

**PROGRAMME TITLE:** MASTER OF SCIENCE IN LIFE SCIENCES

**OBJECTIVES:**

The broad objectives of the M.Sc. programme are as follows:

- To produce competent biologists who can employ and implement their knowledge gained from this programme in applications which will profoundly influence different fields viz. pharmaceutical and biotech industries, healthcare, agriculture and sustainable environment.
- The programme aims to work towards upliftment of the human society and generate skilled human resources for future India.

**ELIGIBILITY:**

B.Sc. in any area of Biological Sciences (Life Science, Biotechnology, Botany, Zoology, Biochemistry, Microbiology and other allied subjects) with at least 50% marks in aggregate or an equivalent grade for General / OBC candidates, and 45% marks in aggregate or an equivalent grade for SC/ST and Differently Abled (DA) category candidates from a recognized University / Institute.

**OR**

Candidates who have appeared in final year degree examination can also apply. Admission will be finalized if the result is declared before August 14 in the admission year and the candidate secures min. % of marks as mentioned above.

**AGE LIMIT:** No age limit.

**ADMISSION PROCEDURE:**

The admissions will be done as per merit in the entrance test conducted by the university.

**SEATS: 20** (reservation as per state Govt. rules).

**DURATION:** Four Semesters (Two Years).

**FEE STRUCTURE (2020-22):**

Semester	Academic Fee	Development & Maintenance Fee	Students' Services Fee		Examination Fee	Total (Rs.)	
			Boys	Girls		Boys	Girls

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First	5000	4000	3300	3111	2500	14800	14611
Second	5000	4000	2911	2722	2500	14411	14222
Third	5000	4000	3300	3111	2500	14800	14611
Fourth	5000	4000	2911	2722	2500	14411	14222

- Caution money (Refundable) of Rs. 4000/- will be charged additionally in the first semester.
- Alumni Fee of Rs. 500/- will be charged extra in the first semester.
- If a student repeats a paper(s) in a semester, an additional fee of Rs.500/- per paper shall be payable.
- For NRI/ FN/ PIO Candidates, a fee of US\$ 3500 Per Annum shall be payable on yearly basis. They will have to pay a refundable deposit of US\$ 500 once at the time of admission.
- Hostel Fee and Central Library Fee will be extra.

### PROGRAMME STRUCTURE (2020-22):

#### First Semester:

Code	Title	Credits (T P)
<b>CORE COURSES</b>		
LS5A-501	Biochemistry	4 (3+1)
LS5A-503	Cell Biology	4 (3+1)
LS5A-505	Basic Genetics	4 (3+1)
LS5A-507	Analytical Techniques	4 (3+1)
<b>ELECTIVE COURSES-DISCIPLINE CENTRIC</b>		
LS5A-521	Biostatistics, Bioinformatics & Computers	2 (2+0)
LS5A-523	Basic Microbiology	4 (3+1)
<b>COMPREHENSIVE VIVA-VOCE:</b>		
LS5A-551	Comprehensive Viva-Voce	4

#### Second Semester:

Code	Title	Credits (T P)
<b>CORE COURSES</b>		
LS5A-502	Immunology	4 (3+1)
LS5A-504	Molecular Biology & Genetic Engineering	4 (3+1)
LS5A-506	Environmental Biology	4 (3+1)
LS5A-508	Applied Animal Physiology	4 (3+1)
<b>ELECTIVE COURSES -DISCIPLINE CENTRIC</b>		
LS5A-522	Plant Physiology	3 (3+0)
<b>ELECTIVE GENERIC:</b> The students can choose following course or any other PG level generic course being run in this campus.		
LS5A-542	Techniques in Life Sciences	3 (3+0)
<b>COMPREHENSIVE VIVA-VOCE:</b>		
LS5A-552	Comprehensive Viva-Voce	4

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## Third Semester:

Code	Title	Credits (T P)
<b>CORE COURSES</b>		
LS5A-601	Plant Metabolism	4 (3+1)
LS5A-603	Plant Biotech: Tissue & Cell Culture	4 (3+1)
LS5A-605	Biodiversity & Toxicology	4 (3+1)
LS5A-607	Environmental Responses & Laws	4 (3+1)
<b>ELECTIVE COURSES -DISCIPLINE CENTRIC (Any One)</b>		
LS5A-621	Photomorphogenesis	3 (3+0)
LS5A-623	Developmental Biology	3 (3+0)
LS5A-625	System Physiology-Animal	3 (3+0)
<b>ELECTIVE GENERIC:</b> The students can choose following course or any other PG level generic course being run in this campus.		
LS5A-641	Cardiovascular abnormalities and their Regulations	3 (3+0)
<b>COMPREHENSIVE VIVA-VOCE:</b>		
LS5A-651	Comprehensive Viva-Voce	4

## Fourth Semester:

Code	Title	Credits (T P)
<b>Project</b>		
LS5A-602	Project Work (Quality, Presentation & Timely Submission)	12 (10+2)
LS5A-652	Comprehensive Viva-Voce	4

Note: The above programme structure can be modified as per requirement from time to time in accordance with University Ordinance No. 14.

## PROGRAMME OUTCOMES:

- Students can pursue higher studies (M.Phil., Ph.D.) after clearing national level examinations such as, CSIR-NET, ARS-NET, GATE, ICMR and gain suitable positions in research institutions and universities.
- Students can choose entrepreneurship ventures such as consultancy and training centers related to their field of expertise.
- Students can opt for a promising career in Pharmaceutical and Biotech industries in R&D, Product Management, Quality Control and Quality Assurance departments.
- Several career opportunities are available for our students abroad especially in countries like USA, UK, Germany, Australia, Canada, Japan and so on in emerging areas of Life Sciences.

## PROGRAMME SPECIFIC OUTCOMES:

- The programme is helpful in recruiting students with high level of competence in research in fields like cell biology, gene function and regulation, immunology, animal physiology &

developmental biology, plant physiology, plant tissue culture, biodiversity, its conservation & management.

- Students will be able to understand, identify and analyse problems related to Life Sciences and find conclusions with basic knowledge in the field of Life Sciences.
- Students will be able to design experiments, perform experiments, analyse data and interpret it and will be able to draw conclusions from it in the relevant field of Life Sciences.
- Students have knowledge and will be able to decide and apply appropriate tools and techniques currently used in Life Sciences.
- Students will be able to justify health safety, ethical and IPR issues in Life Science research.
- Students will be able to understand the need and impact of biochemical solutions on environmental and societal context keeping in view need for sustainable solutions.