

Department of Life Sciences
University School of Sciences,
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Director : Dr. S. K. Menon

Head : Dr. Nayan K. Jain



Introduction

Brief History

M.Sc. in Life Sciences has been started since June 1982, looking to job prospects in interdisciplinary approach of biological sciences. Post-Graduated students were absorbed at R & D and Q & C of research institutes and Pharmaceutical industries.

Present Scenario

Post Graduated students are going absorbed for further career in research and academics. Every year at least one student out of 15-20 students cleared CSIR-UGC-NET. Industry & research institute placement are positive responses of this course. Course covers applied and basic aspects of Biochemistry, Botany, Microbiology, Zoology and Molecular Biology.

Infrastructure & Facilities

Department consists three functional class rooms, three M.Sc. Laboratories, One research laboratory and proposed one computer, reading cum Library room. For basic practical in biological sciences the procurement of good number of minor equipments and few sophisticated equipment is in process. Besides above facilities, Laboratory facilities and faculty of various department of biological Sciences (Biochemistry, Botany, Chemistry, Microbiology, Statistics & Zoology) are conducting theory & practical. Their infrastructures are available for this course.

Highlight

Presently two full fledged faculties at Reader level are looking the course. Few eminent faculties and scientists from Esteem University , institute and industries are visiting faculties of the course. Now the Department is geared up and has been established gradually as an independent department with all basics Laboratory facilities, Library, Some sophisticated instruments and computer with internet facility. The long suspended M.Phil course in the subject is likely to be started shortly.

Courses Offered

Course Name	: M.Sc. in Life Sciences
Course Type	: Grant in Aid
Intake	: 20
Eligibility	: B.Sc. with second class with "B" group.
Subject Offered/ Specialization/Elective	: M.Sc
Duration	: Two years full time course. : Pattern- Semester I - IV
Course Commencement	: June
Admission Process	: By Merit.
Fees	: Grant in Aid Structu
Course Offered at future career Opportunity	:1) R & D and Q & C at research institute & Pharmaceutical industry 2) Abroad opportunity. 3) Course match with CSIR-UGC-NET Life Science Syllabus.

Department	Semester	Course		No. of Hours per week				Course credits
		No	Name	Lectures	Others	Practicals	Total	
Life Science	1	LSC401	Physical and Biological Chemistry	3	1		4	4
		LSC402	Principles of Microbial Sciences	3	1		4	4
		LSC403	Molecular Cell Biology	3	1		4	4
		LSC404	Developmental Biology and Toxicology	3	1		4	4
		LSC405PR	Practical – I +Viva voce			6	6	4
		LSC406PR	Practical – II +Viva voce			6	6	4
			Total	12	4	12	28	24
	2	LSC407	Principles of Plant Sciences	3	1		4	4
		LSC408	Mammalian Physiology	3	1		4	4
		LSC409	Ethology and Evolution	3	1		4	4
		LSC410	Food Science and Food Microbiology	3	1		4	4
		LSC411PR	Practical – III +Viva voce			6	6	4
		LSC412PR	Practical – IV +Viva voce			6	6	4
			Total	12	4	12	28	24
	3	LSC501	Immunology and Immunotechnology	3	1		4	4
		LSC502	Analytical and Separation Techniques	3	1		4	4
		LSC503	Biostatistics, Bioinformatics and Bioinstrumentation	3	1		4	4
		LSC504EA	1.Applied Botany	3	1		4	4
LSC504EB		2.Fermentation Technology						
LSC504EC		3.Molecular Biology and						

4		Animal Biotechnology					
	LSC504ED	4.Molecular Endocrinology and Reproductive Physiology					
	LSC505PR	Practical – V +Viva Voce			6	6	4
	LSC506PR	Practical – VI +Viva Voce			6	6	4
		Total	12	4	12	28	24
	LSC507PT	Dissertation / Project Work				20	16
	LSC508S	Seminar / Field /Industrial visit				4	4
	LSC509M	Assignment / Group Discussion				4	4
		Total				28	24

Course Name : **M. Phil in Life Science**

Course Type : **Ph.D. in Life Sciences (Grant in Aid)**

Intake : According to the faculty status who are recognized Guide for Ph.D. in Life Science.

Eligibility : M.Sc. with 55% in any biological Sciences.

Subject offered : Life Sciences.

Specialization : Special field of research guide.

Duration : Minimum 2 Years extendable into 5 Years.

Course started : Since Last 15 years

Admission process : By merit according to consent of recognizing guide at department & affiliated research institutes.

Fees : Grant in Aid

Future career Opportunity:

Research/ Scientific Officers/Personnel at various centre eligible for Post Doctoral in Sciences and Agricultural and Paramedical fields.

Faculty,

Name : Dr. Nayan K. Jain

Qualification : M.Sc., Ph.D.

Designation : Professor & Head

Areas of Specialization : Zoology – Molecular Cell Biology, Toxicology, Stem Cell Research Animal Behaviour, Instrumentation, Ocular Morphophysiology, Reproductive Physiology

Contact No. : 26301491 (O) 23621101 (R)

Name : Dr. H. A. Modi
Qualification : M.Sc., M.Phil., Ph.D.
Designation : Associate Professor
Contact : 26301491 (O) 9925981651 (M)
Areas of Specialization : Microbiology – Enzyme biotechnology, Mushroom technology, Bioconversion & Bioremediation technology, Bio control

NEWLY INTRODUCED SELF FINANCED POST GRADUATE COURSE FROM JUNE 2010

M. Sc. In FOOD SCIENCES AND NUTRITION

Gujarat University understands present and future needs of Society, at State, Country and Global levels. In connection of this, University proposes a full fledged Master/ Post graduate course in Food Science and Nutrition. Ultimately it will help the students to be equipped with knowledge and capacity to choose the profession in this field. There is wide future scope in this field. Graduated students along with chefs they can advice or also run food joints, restaurants, which serve balanced diets based on person to person needs (*i.e.* designer based meals, recipes). They can work as dieticians or nutrition consultants. The faculty also provides consultancy services to the needy people at counselling Centre/clinics and provides expertise to food industry/hospital/others on invitation.

Dr. Nayan K. Jain

Course Director, M. Sc. in Food Science; Professor & Head, Life Science Department,

Good living is aim of every human kind, health is not only issue, but good and balanced foods are necessities of ever one. This can be also effective at every variation in physiological conditions of people during diseases/disorders. Society is also developing in fast face. To keep the face with these development, human physiological processed are also altered, which should be talked by well trained persons scientifically.

Central government also encourages for starting food processing industries by giving 100% subsidy as well as other tax benefits to young entrepreneurs who wants to start fermented food based manufacturing units as well as food processing units for solving the problems of employment. This course will helpful in motivating as well as giving training to young students for developing entrepreneurship amongst the students and will become self sustainable themselves and will also offer jobs to skilled, semi skilled and unskilled people.

This course will help in motivating as well as giving training to young students to get better job prospect and also come up as self sustainable young entrepreneurs. Professional with these background and skilled can design the diets according to varied condition, diseases and environmental conditions.

Eligibility:

Second Class B. Sc with any branch of Biological Sciences/Home Science/Clinical Nutrition & Dietetics / Food Science and Nutrition/Dietetics.

Examinations:

Each component in the curriculum (Theory, seminar, assignment, viva-voce) is an independent entity.

Student Intake Capacity: Maximum 20 (15 regular +5 Special fee)

Admission will be confirmed only on payment of necessary fees in a given time.

Fees:

Regular Rs. 20,000 and Special fee Rs. 30,000/-

Examination fee: Rs. 1000/- to be collected per semester

Full amount would be paid at the commencement of each semester. No part payment is allowed under any circumstances. Fee refund policy: Once paid will be refunded as per university rules.

Teaching Faculty:

Experienced senior faculties of School of Sciences, Gujarat University are core faculties of this course. Eminent academician of other university, Scientists from research institutes are also supportive faculties. Teaching and practical will be carried out by faculty and by eminent experts/scientist from industries/institutions and from other universities as visiting faculty.

Eminent Scientists, Academician, Doctors and Entrepreneurs of this field are also going to deliver their expertise talks during course.

		No	Name	Lectures	Others	Practicals	Total	
Food Science & Nutrition	1	FSN401	Nutritional Biochemistry	3	1		4	4
		FSN 402	Functional Properties of Food	3	1		4	4
		FSN 403	Molecular Cell Biology	3	1		4	4
		FSN 404	Human Nutrition and Nutrients	3	1		4	4
		FSN 405PR	Practical – I +Viva voce			6	6	4
		FSN 406PR	Practical – II +Viva voce			6	6	4
			Total	12	4	12	28	24
	2	FSN 407	Nutrition for Fitness	3	1		4	4
		FSN 408	Nutritional Physiology	3	1		4	4
		FSN 409	Food Production Development & Marketing	3	1		4	4
		FSN 410	Food Science and Food Microbiology	3	1		4	4
		FSN 411PR	Practical – III +Viva voce			6	6	4
		FSN 412PR	Practical – IV +Viva voce			6	6	4
			Total	12	4	12	28	24
	3	FSN 501	Community Health Nutrition	3	1		4	4
		FSN 502	Research Methodology	3	1		4	4
		FSN 503	Clinical Nutrition & Dietetics	3	1		4	4
		FSN 504	Nutrition In Critical Care, Food Safety and Law	3	1		4	4
FSN 505PR		Practical – V +Viva Voce			6	6	4	
FSN 506PR		Practical – VI +Viva Voce			6	6	4	

