

CENTRAL UNIVERSITY OF SOUTH BIHAR



Master of Science in Life Science (M.Sc. in Life Science) Programme Syllabus *(Effective from Academic Session 2018-2019)*

Department of Life Science
School of Earth, Biological and Environmental Sciences

CBCS Course Structure of Master of Science in Life Science (M.Sc. in Life Science)**Total Credits: 96 Cr.****Core Credit**

First Semester (Total Credits =24Cr.)				
Course Code	Name of Courses	Credits		
<i>Core Credit (20 Cr.)</i>		L	T	P
MSLSC1001C04	Cell Biology	3	0	1
MSLSC1002C04	Biochemistry	3	0	1
MSLSC1003C04	Genetics	3	0	1
MSLSC1004C04	Methods in Biology	3	0	1
MSLSC1005C04	Microbiology	3	0	1
<i>One Elective Course (4Cr.)</i>				

Second Semester (Total Credits =26Cr.)				
Course Code	Name of Courses	Credits		
<i>Core Credit (18 Cr.)</i>		L	T	P
MSLSC2001C04	Metabolism	3	0	1
MSLSC2002C04	Molecular Biology	3	0	1
MSLSC2003C04	Recombinant DNA Technology	3	0	1
MSLSC2004C04	Molecular Enzymology	3	0	1
MSLSC2005C02	Summer Internship (External / Internal)	0	0	2
<i>Two Elective Course (4×2=8Cr.)</i>				

Third Semester (Total Credits =24Cr.)				
Course Code	Name of Courses	Credits		
<i>Core Credit (20 Cr.)</i>		L	T	P
MSLSC3001C04	Developmental Biology	3	0	1
MSLSC3002C04	Physiology of Plant System	3	0	1
MSLSC3003C04	Physiology of Animal System	3	0	1
MSLSC3004C04	Biology of Immune System	3	0	1
MSLSC3005C04	Dissertation	0	0	4
<i>One Elective Course (4Cr.)</i>				

Fourth semester (Total Credits =22 Cr.)				
Course Code	Name of Courses	Credits		
<i>Core Credit (18 Cr.)</i>		L	T	P
MSLSC4001C18	Dissertation	0	0	18
<i>One Elective Course (4Cr.)</i>				

Elective Baskets

Elective Code	Name of Courses	L	T	P
MSLSC1001E04	Plant Genetic Engineering	2	1	1
MSLSC2001E04	Structural Biology	3	1	0
MSLSC3001E04	Stress Biology	2	1	1
MSLSC4001E04	Biochemistry of proteins	2	1	1
MSLSC4002E04	Human Genetics and Genome Analysis	4	0	0

All Elective courses may not be offered at any given time. An elective will run if opted by 33% of the students enrolled in the programme.

Inter department core/elective course and related practical may be opted by a student from school

Skill Based Courses (Non Credits)

The Life Sciences course includes several excursions. This work finishes in an independent project to study and map an area chosen by the student. Many of the field excursions take place out of term time, so students must be available outside term.

Skill Based Courses	Name of Courses	L	T	P
MSLSC4001S00	Experimental Design their own research project	0	0	0
MSLSC4002S00	Health and safety - Laboratory and field (Swachh Bharat Mission)	0	0	0
MSLSC4003S00	Local village fieldwork and farming system	0	0	0

Swayam course (Non Credits)

<u>Swayam course code</u>	Name of Courses	L	T	P
MSLSC1001S00	Proteins and Gel-Based Proteomics	0	0	0
MSLSC1002S00	Principles of Downstream techniques in Bioprocess	0	0	0
MSLSC1003S00	Fundamentals of optical and scanning electron microscopy	0	0	0
MSLSC4004S00	Sustainable River Basin Management	0	0	0
MSLSC4005S00	Artificial Intelligence: Search Methods for Problem Solving	0	0	0

Anytime during the entire coursework, Educational/Industrial tour or Excursion may be made to visit institutes/ industries/ laboratories based on availability of funds or otherwise. If excursion takes place, student has to submit a report (10 marks) within a week that will be the part of continuous assessment of a specific course.

* In addition, students are encouraged to take non-credit courses of their specific interests in other Science Centre/Programme of CUSB.

* The M.Sc. dissertation work should be taken place for one year after allotment of supervisor.