

**LOYOLA COLLEGE KUNKURI**  
**Dist – Jashpur (C.G.)**  
**Department of Microbiology**  
**ANNUAL REPORT**  
**Session – 2018-19**

**Mission**

- To enhance the quality education by uplifting the hidden skills of students.
- To emerge as a global centre of learning , academic excellence and innovative research work.
- To deliver exceptional result in all educational aspects.
- To develop attitude for lifetime learning.
- To orient students towards research.

**Vision**

- To achieve high standard of excellence in performing research work.
- Imparting of quality microbiological education and the inculcating the spirit of research through innovative teaching and research methodologies .
- To provide an atmosphere where student can learn up to level best and understand the use of microbiology in daily life as well as professional life .
- To promote innovative studies and research work .
- To empower students through quality education in microbiology.
- To establish a platform for creation and distribution of knowledge of microbiology in real life.

**A Brief Note on Department of Microbiology**

It was established in the year 2005. The department of microbiology is well equipped with all essential equipments and with extra infrastructure which support student to perform maximum research work with accuracy faculties are qualified , experienced energetic and are passionate about teaching profession . Microbiological journals are Available in the library for student's reference

### **Strength**

- We are committed continuous self improvement to achieve excellence in all our endeavors.
- We are committed to innovation in our teaching research and outreach to our communities.
- We conduct various activities in every academic year to excel our students.

### **Department highlights**

**Name of department** : Microbiology

**Number of staff** : 03

**Faculty members** : (1) Asst. Prof. Dr. Swati Pandey (H.O. D.)  
 (2) Asst. Prof. Firdous Bano  
 (3) Mr. Anup Kumar Chouhan ( lab. Tech.)

### **Faculty profile :**

S.N.	Name of faculty	Qualification	Teaching experience	Allotted classes
01	Dr. Swati Pandey	M.Sc., Ph.D.	07 years	B.sc. I / II / III
02	Firdous Bano	M.Sc.	01 years	B.Sc. I / II/III

### **Laboratory facilities :**

- Well equipped spacious laboratory with sophisticated test and measuring instruments and equipments.

<b>Name of instrument</b>	<b>Quantity</b>
Laminar air flow	01
Autoclave	02
Incubator	03
B.O.D.(incubator)	01
Hot air oven	02
water bath	02
Centrifuge	01
Spectrophotometer	02
Electrophoresis unit	02
U.V. Transilluminator	01
Colony counter	01
pH meter	01
Weighing balance	01
Microscope	13
Computer setup	01
Glass pipette	10
Micro pipette	08
Hot magnetic stirrer	01
Refrigerator	01

### **Library facilities :**

- The library is well equipped with all essential reference books of various subjects including cell biology, immunology, biochemistry , genetic engineering , general microbiology , Eukaryotic microbiology , bacteriology and virology etc. for student's convenience.

<b>Name of Title</b>	<b>Writer name</b>	<b>Number of books</b>
Microbiology	Powar and Daignawala, S.S.Purohit, T.A. Brown , Presscott, Pelczar, U. Satyanarayana, Lehninger, Dubey and Maheshwari , S.B. Primrose , Immunology by Dolsy and Fatima, Bruce alberts etc.	300

**Degree course:**

<b>Course</b>	<b>Paper / Paper code</b>	<b>Subject</b>
<b>B.Sc. I</b>	Paper first / (30 A)	General microbiology
	Paper second / (30 B)	Biochemistry and Immunology
<b>B.Sc . II</b>	Paper first / (30 A)	Microbial physiology and genetics
	Paper second / (30B)	Principles of Bioinstrumentation and Techniques
<b>B.Sc. III</b>	Paper first / (30A)	Molecular biology and genetic engineering
	Paper second / (30B)	Environmental and medical microbiology

- No. of students in B.Sc. I = **28**

- No. of students in B.Sc. II = **06**
- No. of students in B.Sc. III = **14**
- Each paper contains five units each unit holds ten marks for exam. The syllabus is approved by the Sant Gahira Guru Sarguja University, Ambikapur , C.G. The annual examination is conducted by the University once a year. The syllabus is well designed according to competitive exam NET , SET, GATE etc.

### **List of Practicals Performed :**

#### **B. Sc. I :**

- 01 . Basic information about Autoclave, Hot air oven, Laminar air flow, and other laboratory instruments.
- 02 . Preparation of Solid and liquid culture media.
03. Enumeration of bacterial numbers by serial dilution and plating.
05. Isolation of single colony on solid media.
06. Simple and differential staining..
08. General and specific qualitative test for carbohydrates , amino acids and lipids.

#### **B.Sc. II :**

01. Determination of antibiotic resistance by plating method.
02. Assaying of microbial enzymes - Catalase, Protease, Peroxidase, Cellulose and Amylase .
03. Exercise on Paper ,thin layer , column chromatography.
04. Exercise on paper and gel electrophoresis.
05. Determination of pH of various water and soil sample.
06. Testing of Lambert beer's law..
07. Isolation of resistant bacteria from soil and water sample.

#### **B.Sc.III :**

01. Isolation of bacteria from air and soil (crop fields).
02. Isolation of fungi from air and soil.
03. Relationship between O.D. and C.F.U.
04. Measurement of fungal growth by dry weight and wet weight method.
05. Study of rhizosphere and phyllospheric microbes from economically important plants.
06. Biodegradation study of some organic molecules
07. Microbial assessment of potable water.
08. Determination of BOD, COD and DO.
09. Determination of Blood group by slide agglutination test. TLC/ DLC
10. Determination of hemoglobin ..
11. Isolation of Rhizobium from root nodules.

**Activities conducted :**

<b>Date</b>	<b>Activity</b>	<b>Details</b>
2 <sup>nd</sup> July 2018	Welcome of first year students	<b><i>Orientation lecture</i></b> by Principal Dr. Fr. Telesphor Lakra .
09 <sup>th</sup> July 2018	Commencement of first year classes	Regular classes started for first year students according to their syllabus.
16 <sup>th</sup> July 2018	Commencement of 2 <sup>nd</sup> and 3 <sup>rd</sup> year classes	Regular classes started for second and third year students according to their syllabus.

1 – 10 August 2018	First year unit test	The department conducted unit wise test for student's better preparation.
Progressive from August to December 2018	Regular classes and practical work for all three year students according to their syllabus	From August onwards , practical experiments started for all three year students with unit wise test .
03 – 11 October 2018	Quarterly examination	The dept. organized quarterly examination for all three year students in order to strengthen their concept.
20 – 27 October 2018	Educational visit	The dept. visited Mumbai as educational trip .
14 – 30 January 2018	Model examination	The dept. organized Model exam. For all year students for their better performance in main annual examination
February to March 2018	Remedial classes	The department organized remedial classes after completion of syllabus for all three year students.
March 2018	Final practice for practical examination and doubt classes	The department focused on the student's practical performance and also organized doubt classes for students.

## **Other innovative practices:**

### **Carrier Guidance programme :**

The department took an initiative to provide Carrier guidance to the life Science students once a month so that they can have knowledge and Ideas of their related fields and subjects

### **Quiz competition :**

The department used to organized quiz competition event for all three year students after completion of their syllabus . The idea was to enlighten their knowledge and verbal skill .

**Picture . 01 : Orientation lecture by Principal Dr. Fr. Telesphore Lakra .  
welcoming first year students.**



**Picture.02 : Microbiology 2<sup>nd</sup> year student performing her practical in  
Laminar air flow room.**





**Picture .03 ,04 and 05 : Eductional tour to Mumbai . Dept. of Microbiology and Biotechnology.**



**Picture: Sant. Xavier College Mumbai , Students during National Seminar.**



