

***“The experience from the
past to today”***

Annual Report 2073/74

Tribhuvan University

Institute of Science and Technology

CENTRAL DEPARTMENT OF MICROBIOLOGY

Kirtipur, Kathmandu



INTRODUCTION

Central Department of Microbiology (CDM) has made the journey of 25 years since its establishment. Eleven years following the launching of bachelors program in Tri- Chandra College, the master program was introduced in Tribhuvan University, Kirtipur on 14th November, 1990. The commencement of master program in Microbiology in Tribhuvan University was a milestone in producing competent microbiologists within the nation.

Central Department of Microbiology, conducting advanced level Microbiology education in the country was established in 1990 under Institute of Science and Technology (IOST) at Tribhuvan University, Kirtipur, Kathmandu. Since its inception, the department is offering Master's and Ph. D. Degree courses in Microbiology. Since its establishment, department is able to produce more than 553 Masters graduate and more than 5 doctoral level graduates with almost 30 graduates completing masters and a doctoral graduate every year. The department is enriched with highly qualified, skillful and competitive faculty members having specializations in various fields of Microbiology: medical and public health microbiology, microbial biotechnology, environmental microbiology, food and agriculture microbiology. The faculties of the department are involved in global/national level researches in HIV, Tuberculosis, Malaria, Child health, Vaccines, Environmental health, and Vector borne diseases. Senior faculties of the department are involved as consultants/in providing advisory to Government of Nepal in developing national guidelines/protocols/strategies; as an academicians in Nepal Academy of Science and Technology, board members of other national and international universities. The faculties also have track record of providing consultancy services to international organizations including WHO, UNICEF, UNFPA, UNDP, JICA etc. Currently, the department accommodates experts outside the university system as visiting faculties, in addition to its core faculty positions for Professor, Associate Professor, Assistant Professors. The department is continuously receiving expert level teaching supports from the faculties of Tribhuvan University Institute of Medicine, Kathmandu University, other medical colleges as and when required. In addition to the expert level faculties, department also has good support level staff in the laboratory, administration and finance to support department's day to day operation of teaching learning and research activities.

VISION AND MISSION

- Civilized society and job-oriented education are its goal.
- Developing with sound facilities for better teaching and learning activities which can enhance the globally competent education.
- Commitment to maintain and improve the academic culture and environment where the aspiring young scholars can ratify themselves.
- Facilitates the students to bring out the underlying potentials in them.

COURSE REVISION

This revision in curriculum has been done to vertically align the M.Sc. microbiology course with the four-year bachelor of science (B.Sc.) in microbiology course curriculum. The present curriculum is designed to upgrade M.Sc. microbiology degree of Institute of Science and Technology, Tribhuvan University to international level in accordance to current advances in microbiology. The new curriculum emphasizes on research-based teaching learning practice. The new M.Sc. microbiology degree programme will be semester system credit based as per international trend. The present curriculum aims to produce qualified microbiologists, molecular biologists, researchers and scientists as per national and international demand. The master's degree holders will be able to use skills of modern molecular biology techniques in basic science research or in applied research areas of microbiology. The graduates will be able to work as a qualified scientist for investigating the potential uses of microorganisms to produce antibiotics, antibodies, steroids, vaccines, hormones and other products of microbial origin. The master's degree holders will be able to work as a microbiologist and research scientist in the laboratories for monitoring, identifying and helping to control infectious diseases. They will also be able to work as qualified researchers and scientists in the institutions related to food production, crop protection and soil fertility. The master's degree holders will be eligible to be the lecturers of microbiology programme offered by Institute of Science and Technology and other institutions of Tribhuvan University or other universities for teaching, mentoring and supervising bachelors and masters' level microbiology students.

ELIGIBILITY AND ADMISSION PROCEDURES

Candidates having a Bachelor's Degree in Microbiology from Tribhuvan University or equivalent degree recognized by Tribhuvan University are eligible to apply for the M. Sc. Microbiology programme. Each applicant should appear and pass entrance examination conducted by the Central Department of Microbiology. The enrollment will be based on merit. The candidates failed to get minimum qualifying marks/pass marks in the entrance examination will not be enrolled in the program.

WHICH COURSES ARE OFFERED BY CDM?

The entire course is divided into four semesters within two academic years. The first semester course covers the disciplines of Applied Microbiology, Immunology, Microbial Genetics and Molecular Biology, Microbial Biochemistry and Biotechnology, and practical on these courses. The second semester offers track selection among four different disciplines of Microbiology for specialization. The four disciplines from second semester include Medical Microbiology, Public Health Microbiology, Food Microbiology and Agricultural Microbiology with their practical courses. The fourth semester is completely research oriented including internship and Dissertation. In the second semester students are required to choose one of the four different disciplines offered and continue with it through the Third and Fourth semesters. Although there are four discipline of Microbiology in Master level, currently Central Department of Microbiology offers two disciplines for specialization; Medical and Public Health Microbiology.

The Department also enrolls for PhD program on various discipline of Microbiology. Till date four PhD degrees have been awarded from this department.

FACULTIES:

1. Dr. Megha Raj Banjara, Head of Department
2. Prof. Dr. Anjana Singh
3. Prof. Dr. Dwij Raj Bhatta
4. Associate Professor Dr. Prakash Ghimire
5. Associate Professor Mr. Binod Lekhak
6. Ms. Reshma Tuladhar, Lecturer
7. Ms. Shaila Basnyat, Lecturer
8. Dr. Devraj Joshi, Lecturer
9. Mr. Komal Raj Rijal, Lecturer
10. Ms. Supriya Sharma, Lecturer
11. Ms. Purnima Baidya, Lecturer
12. Ms. Manita Aryal, Lecturer

STAFF:

1. Navaraj Karki (Section Officer)
2. Raiman Shakya (Main Office Assistant-Store)
3. Ramesh Ghimire (Main Account Assistant)
4. Bijaya Laxmi (Lab Assistant)
5. Bimala Pandey (Account Assistant)
6. Madhukar Thapa (Senior Lab Boy)
7. Ramesh Maharjan (Senior Lab Boy)
8. Hikmat Lal Shrestha (Senior Lab Boy)
9. Diwakar Thapa (Senior Lab Boy)
10. Ramesh Khadka (Senior Lab Boy)
11. Akal Man Maharjan (Office Assistant)
12. Shyam Tamang (Office Helper)
13. Iswori Khadka (Office Helper)
14. Pabitra Deula (Office Helper)

ACADEMIC INTAKE:

Out of 30 seats, 29 students were enrolled in academic year 2072-073. Among 29 students, the ratio of male: female is 21:8. The no. of female enrollments seems to be comparatively higher than the previous year (Figure 1).

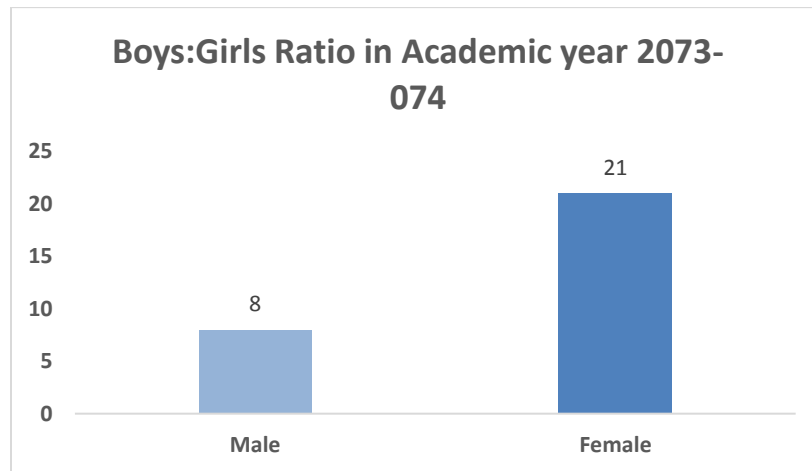


Figure 1: Male to female ratio of students enrolled in AY 2073-074

Students in Public health microbiology and medical microbiology:

The students have to select their field of interest from the second semester. Out of 29 students, 15 students have chosen to study in Medical Microbiology. The students have more charm to medical field (Figure 2).

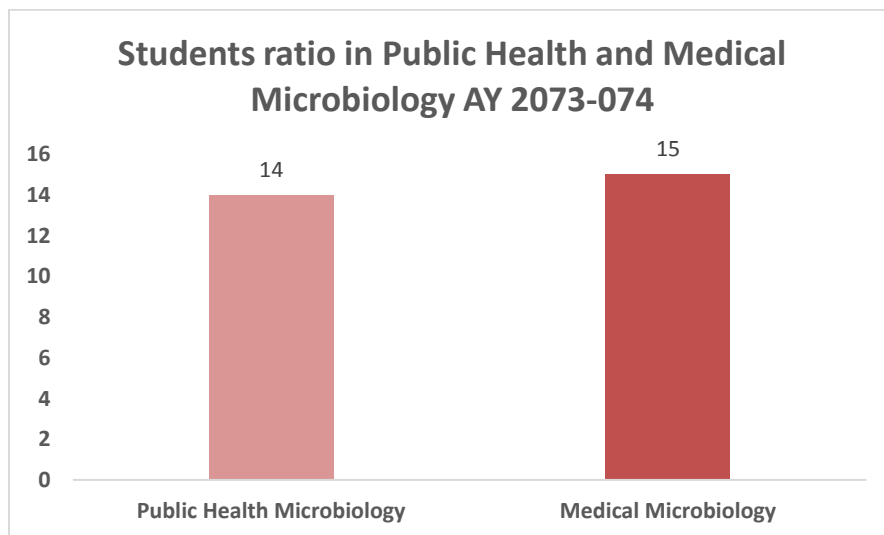


Figure 2: Number of students enrolled Public health and Medical Microbiology

PUBLICATION:

The faculty members of CDM have been publishing the journal since the last three years. The journal Tribhuvan University Journal of Microbiology (TUJM) ISSN No. 2382-5499 Volume 3 (1) has been published for the academic year 2073-074 on the occasion of Microbiology day; November 14, 2016.



ACTIVITIES:

CDM has been organizing numerous workshops, seminar and orientation programme for sharing the knowledge, disseminating the outcome of research and update with the current research and research findings within the country as well as internationally.

Guru Purnima (The Teachers' Day)

The M.Sc. Semester students (AY 2073-074) has organized the teachers' day program at CDM on the occasion of "Guru Purnima" on Aasad 25, 2074.



Photograph 1: Students celebrating "Guru Purnima" at CDM

UGC funded Programs:

Malaria Laboratory Diagnosis Capacity Strengthening Training:

The department has organized a five days training program on "Malaria Laboratory Diagnosis Capacity Strengthening Training" from June 12-16, 2017. The faculties from different colleges running M.Sc. Microbiology program throughout the country were the participant in the training. Altogether ten participants have trained on the program. The training was financially supported by UGC.



Photograph 2: Orientation program of Malaria Laboratory Diagnosis Capacity Strengthening Training



Photograph 3: Participants observing malaria parasites under microscope

Training in Reference Writing in Research:

The department has organized “Training in Reference Writing in Research” for faculties of B. Sc. Microbiology running colleges in Nepal from June 19-21, 2017. Altogether twenty-five participants have been trained in the program. The program was financially supported by UGC, Nepal.



Photograph 4: Group photo session of participants with dean sir on the training program

Extracurricular activities

- Talk program entitled “Recent Trend in Microbiology and Biotechnology” by Prof. Dr. Deshmukh
- Talk program entitled “Microbiology research for Students” by Dr. Prafulla Shede