



NEPAL OPEN UNIVERSITY
FACULTY OF SCIENCE, HEALTH AND TECHNOLOGY
MANBHAWAN, LALITPUR, NEPAL
MSc IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH
2076 (2020)

Introduction

Established in 2016, Nepal Open University (NOU) has developed the curriculum for producing qualified resources of master level in Environmental and Occupational Health (EOH) areas. Viewing the necessity of the country to maintain an ever-increasing need and demand for EoH professionals, this course has been designed for the first time in Nepal. The two-year masters' degree EOH program under the Faculty of Science, Health and Technology at NOU focuses on preventing environmental and occupational health related diseases and promoting health through education, research, professional services and community development. The program also seeks to analyze and describe the linkages of health, environment and occupation, and to facilitate effective decision making. The EOH program educates, challenge, mentor, and inspire tomorrow's leaders in environmental or occupational health, and have internationally recognized expertise in addressing pressing global challenges in public health sectors and the environment and occupation health areas.

EoH aims to equip individuals with the specialized skills and advanced knowledge required for professional practices or research in environmental and occupational health and safety (OHS). EOH seeks to identify how exposure to different substances and hazards in the natural and built environment affects human health and seeks to train in the theories, concepts and practices of exposure evaluation and health risk assessment. This interdisciplinary program prepares the students to examine the causes and consequences of full ranges of environmental and occupational hazards where people live, work and play through the analytical and practical skills necessary to protect the local, regional, and global environment while achieving sustainable development. Furthermore, the program will consider the historical, institutional, legal, organizational, functional, policy, and theoretical issues to scholars and practitioners of EOH.

NOU delivers the curriculum of teaching about climate change, air, water, housing, food, waste disposal, environmental degradation and health, and occupational health and safety in the line of public health. Our program prepares students to contemplate the causes and consequences of environmental changes and occupational health and safety (OHS) and how public health professionals can intervene to improve the environment whether at home, in the workplace, or

the broader community. Delivering an excellent postgraduate experience will offer an opportunity to question and reflect on how the world can impact on public health, whilst developing the skills and knowledge necessary to understand these risks and how to intervene and manage them effectively. On completing this course, a student will have a detailed understanding of risks and issues on EOH in national and international perspectives and how to mitigate impacts using technical, scientific, or legal interventions and to evaluate and monitor health policies, programs and practices related to maintain a healthy environment.

Aims and Objectives of the Program

The course is designed for graduates or those looking to make a career change to acquire the professional skills necessary to investigate and manage occupational and environmental health hazards to reduce their exposure and promote healthy living. The course aims to enhance the quality of human health, based on the sustainable environment and job-related services. Besides, the fundamental knowledge through workshops and seminars in the methods of EOH, the course is aimed to develop the comprehensive knowledge and practices of exposure evaluation and health risk assessment from environmental changes. Graduates will lead and influence the development of high standards of environmental health and safety.

- Equip students with the knowledge, technical know-how, and practical skills through interdisciplinary sharing-learning, observation and quasi-experiment of the concerned subjects;
- Provide students the learning opportunities in contemporary and frontier fields of EoH by utilizing knowledge of health, environment, science and society; thereby developing their skills and expertise for EoH friendly development practices and prosperous EoH interventions;
- Produce knowledgeable, skillful and capable human resources that are updated and informed and are ready to take challenges to apply new ideas and innovations at various professions including local government authority, local officials and development practitioners,
- Develop professionals capable of stepping out the conventional practices and explore new opportunities to make the development interventions relevant in the current context.

Admission Eligibility

For admission eligibility to the course, an applicant must have completed the following prerequisites:

Criteria 1: Applicant must have completed a Bachelor's Degree (at least three years) or equivalent in any discipline related to basic or natural sciences or engineering or health sciences or medicine or nursing from a recognized university; or

Criteria II: Bachelor's degree (at least three years) in other disciplines with evidence of a minimum of five years working experience in the government sector, academic institutions I/NGOs or other agencies in environmental health or occupational health setting.

Applicants are selected from a merit list of entrance examination conducted by the NOU.

Degree Award

Degree award to the students enrolled admitted in EOH program will be based on their admission criteria as.

- Students enrolled through admission eligibility criteria I will be awarded in Master of Science in Environmental and Occupational Health.
- Students enrolled through admission eligibility criteria II will be awarded in Master's Degree in Environmental and Occupational Health.

Scope of the Subject and Faculty Recruitment

EOH requires the faculties whose degrees and or research focuses on health concerns of environmental changes, hydrology and meteorology, epidemiology, biology, exposures, occupational illness, industrial hygiene, risk assessment, chemical, physical, biological and biomechanical hazards, infectious disease, mental health, environmental justice, climate change, urban health, health disparities, and health policy.

The faculty required for the course will be Program Director, Course Coordinator and Faculties on full time and part-time basis.

Students will have a broad range of opportunities to learn from and to take part in seminars, workshops, and research. Graduates find employment within various organizations as an environmental epidemiologist, risk assessors, climate change experts, occupational health specialists, and food safety experts. Employment is found in the private sector (environmental consultants and occupational health professionals), provincial or national public health agencies, and environmental institutes and agencies.

Course Delivery

- Deliver online courses where the instructor and student and, student and student will connect virtually to build-up systems for interaction.
- Use of e-learning approach integrated into teaching and learning strategies through the use of professional online databases, the video-audio system of learning. This system will provide the learners with the interface between synchronous and asynchronous interaction.
- Learners' future career is secured through quality education mediated by technology in a blended mode: a combination of online and face-to-face interaction at the service center. The blended model includes a mix of lectures, seminars, workshops, webinars, etc.
- Students will also participate in seminars, workshops, discussions and critiques of academic papers, case study scenarios and general discussions of academic and ethical issues.
- Where relevant, the students will also be connected with relevant organizations working on development and natural resources management; so that they get opportunities to interact and learn from the other practitioners.

Evaluation

During the semester, 40% percent marks will be allocated for the internal assessments. This includes participation in workshops, seminars, attending lecturer's classes and reviewing the reading materials and case studies, term papers and project work assignments. The respective instructor and professor will be responsible for this formative evaluation. After the completion of the semester, 60% of marks will be allocated to evaluate the understanding and knowledge of the student on the subject matter. The student should appear in the designated examination center and take up the proctored examination.

Course Structure

The Masters of Science in EoH is divided into four semesters across two academic years. The course carries 63 credits (36 credits theory ~ around 60% and 27 credits for skill development including research ~ around 40%) with 1575 full marks and 1755 lecture hours.

Course Structure Matrix of Environment and Occupational Health

Semester I (Compulsory)	Semester II (Compulsory)	Semester III Specialized (Optional)	Semester IV (Compulsory)
EOH 501. Environment and Health	EOH 551. Occupation and Health	EOH 601. Food, Health and Environment	EOH 651. Project Work
EOH 502. Environmental Pollution and Health	EOH 552. Occupational Health; Policy and Legal Frameworks	EOH 602. Ecotoxicology and Health Risk Assessment	
EOH 503. Climate Change and Health	EOH 553. Occupational Health Safety	EOH 603. Biostatistics and Research Methodology	
EOH 504. Waste Management and Health	EOH 554. Occupational Hygiene	EOH 604. Environmental Epidemiology OR EOH 604. Occupational Epidemiology	EOH 652. Research Paper writing [†]
EOH 505. Environmental and Occupational Health Practicum-I	EOH 555. Environmental and Occupational Health Practicum-II	EOH 605. Environmental and Occupational Health Practicum-III	EOH 699. Dissertation
4x3+3=15	4x3+3=15	4x3=12+3+2 =17	2+2+12=16 Total = 63

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†At least one manuscript draft on the thesis topic is mandatory before the thesis defense.

The first semester offers four compulsory and a skill development course with 15 credits. The theory course includes basic knowledge of environmental and occupational health, environmental pollutions and health, climate change and health and waste management and health. The environmental and occupational health practicum-I that includes either case study or seminar.

The second semester also offers four compulsory theory and skill development courses with 15 credits. The theory course includes occupation and health, occupational health; policy and legal frameworks, occupational health safety, occupational hygiene and environmental and occupational health practicum-II that include a filed based study.

The third semester offers four specialized (two compulsory and two optional courses) and one skill development course with 17 credits. The compulsory course includes food safety, environment, ecotoxicology and health risk assessment, biostatistics and research methodology and environmental and occupational health epidemiology and occupational epidemiology. The practicum based courses includes academic writing such as proposal and term papers

The fourth semester offers skill development (project work and research paper writing) dissertation (research) with 16 credits. The dissertation area includes inter/intra domain pollution, climate change, food security; ecotoxicology, waste management; occupational, environmental health safety and ergonomics, gap assessment. Students must complete and submit the dissertation work within six months as regular, and one year as a part-time student. In special cases, the research committee may extend the duration of the dissertation with the consent of the relevant authority.