

Course outline

1. Course title: Fundamental of Occupational Health and Occupational Medicine

2. Duration: 3 August - 2 September 2021 (42 hours)

3. Background and rationale:

Worker's health is an important issue to support productivities of the countries. Only a small proportion of the global workforce has access to occupational health services for primary prevention and control of diseases and injuries caused or aggravated by work. The 60th World Health Assembly endorsed a Global Plan of Action on Workers' Health for 2008-2017 and urged WHO member states to devise national policies and plans for its implementation. Only one third of countries cover more than 30 percent of their workers with occupational health services. Policy- and standard-setting ministries lack capacity for enforcement and monitoring. One third of countries has no ministry of health staff dedicated to workers' health. While most countries have some human resources for health, academic training needs to be scaled up. Although half the countries have national workers' health profiles with data on occupational diseases, injuries, and legislation, information about communicable and noncommunicable diseases among workers and about lifestyle risks are the least-covered topics. Most countries have national institutions carrying out research and training, but the distribution of such entities is uneven across country groups. Awareness about workers' health problems remains low, both in the media and among the general public. Workers' health issues feature in policies concerning management of chemicals, emergency preparedness and response, employment strategies, and vocational training. However, workers' health is seldom considered in policies regarding climate change, trade, economic development, poverty reduction, and general education. Although most countries had some strategies, standards, and targets for coverage of occupational health services, only one third covered more than 30% of their workers with such services. While ministries of health are traditionally strong in legislation, policy- and standard-setting for occupational health services, in most countries these ministries lacked sufficient capacity to deal with workplace inspection and monitoring of workers' health trends.

Human resources in occupational health and occupational medicine are limited, ministries of health had no staff dedicated to workers' health. Most countries had some human resources for occupational health. However, academic training in occupational health needs to be scaled up at both undergraduate and postgraduate levels. As expected, mostly those in the low income group, human resources for occupational health were not at all

sufficient. Several countries reported that occupational health was not included in undergraduate training in medicine (10%), nursing (16%), public health (10%), engineering (19%), and physical science (31%). In those countries where occupational health was included in undergraduate training, this training was usually rated as “insufficient.” Only in the Western Pacific Region were satisfied with the level of inclusion of occupational health in undergraduate training in medicine.

The proportion of countries with occupational health degree programmes in medicine was highest in the European and American regions and lowest in the South-East Asian and African regions. As country incomes rose, so did the proportion of countries offering such programmes. Therefore, several countries particularly, the developing countries need to build up occupational health and occupational medicine practice and that strengthening human resource capacity are a crucial issue.

Conducting this course, will fill a gap of occupational health and occupational medicine practice and additionally, some countries attending, this course will inspire their idea of implementing these practices.

Division of Occupational Medicine, Department of Community Medicine has incorporated well with various clinical specialties in the faculty, other public health and occupational health professions. There are 8 years of experience in conducting the Master degree in Occupational Medicine and the residency training programmes in Preventive Medicine (Occupational Medicine). Together with 15 years of experience in running a short course in occupational health and safety management for hospital personnel. This course produced 3059 health workers (from 640 hospital) across Thailand. Recently in 2017, our division held the international conference on occupational health titled “10th International Joint Conference on Occupational Health for Health Workers: Health & wellbeing in the healthcare sector; addressing current threats to workers” there were 177 participants from 12 countries participated in this conference. Therefore, our division has both academic qualification and facilities to run this course. Furthermore, in the next semester year, the division will start the Master program in Occupational Health and Occupational Medicine (International), if the proposed course is qualified, the participants enrolled will help to gain future international students.

4. Objectives: At the end of the course, participants should be able to...

- 4.1 understand the basic concepts of occupational health and occupational medicine;
- 4.2 the tasks and structure of occupational health service;
- 4.3 the practice which will need occupational medicine;
- 4.4 the most important hazards for injuries and illness at workplace globally;
- 4.5 the major of occupational diseases;
- 4.6 the difference steps in health risk assessment at the workplace;
- 4.7 the association between workplace exposure and health effect;
- 4.8 and the main steps in preventing exposure to health hazards in the work environment.

5. Course contents

Course Outline

Topic	number of section
Occupational Medicine	17
Occupational Health	5
Occupational Medicine and Occupational Health	6

Occupational Medicine

- 1) Principle of occupational health and occupational medicine (L)
- 2) Occupational health for health worker (L)
- 3) Effect of workplace hazard on health (I) (II) (L)
- 4) Occupational Toxicology (L)
- 5) Occupational medicine service in hospital setting (L)
- 6) Comparisons of occupational health service among developing and developed countries (L)
- 7) Medical fitness for work (L)
- 8) Medical surveillance program in occupational medicine (L)
- 9) Case study : Occupational diseases (L)
- 10) Return to work medical assessment (L)
- 11) Functional capacity evaluation (L)
- 12) Diagnosis of occupational or work related diseases (L)
- 13) Impairment assessment guidelines (L)
- 14) Basic industrial hygiene; and important knowledge to safety officer and

occupational health doctor (L)

15) Competencies of occupational physician and occupational health professions (L)

16) Presentation of occupational health service plan of individual participants (P)

17) Case study of medical surveillance program (student presentation)

Occupational Health

1) Global situation of occupational health (L)

2) Occupational health and safety management (L)

3) International OHSMS, ISO 45001 and OSH0AS 18001

4) Medical emergency in workplace / Injury and illness classification in workplace/Emergency in workplace (L)

5) Factory visit ; Occupational health service (L)

Occupational Medicine and Occupational Health

1) Hazard Identification of the workplace (L)

2) Walk through survey (F)

3) Health risk assessment (L)

4) Walk through survey in hospital (F)

5) Factory visit for walk through survey (F)

6) Research in occupational health and occupational medicine (L)

6. Teaching methods

Online via virtual meeting platform as Zoom

7. Participants Criteria

physicians, nurses, occupational safety, public health officer, physiotherapist and other health professions

8. Lecturers

No.	Name-Surname	Affiliation	Qualification
1	Assoc. Prof. Naesinee Chaiear	Div of Occupational Medicine, Dept of Community Medicine, Faculty of Medicine, Khon Kaen University	- Doctor of Medicine; MD - M.MedSc (Occupational health) - Ph.D. (Occupational health) - Thai Board in Preventive (Occupational Medicine)
2	Dr. Phanumas Krisorn	Div of Occupational Medicine, Dept of Community Medicine, Faculty of Medicine, Khon Kaen University	- Doctor of Medicine; MD - MSc (Occupational Medicine) - Thai Board in Preventive (Occupational Medicine)
3	Dr. Warisa Soonthornvinit	Div of Occupational Medicine, Dept of Community Medicine, Faculty of Medicine, Khon Kaen University	- Doctor of Medicine; MD - MSc (Occupational Medicine) - Thai Board in Preventive (Occupational Medicine)
4	Assoc. Prof. Suda Vannaprasaht	Department of Pharmacology, Faculty of Medicine, Khon Kaen University	- Doctor of Medicine; MD - Dip.Thai Board of Internal Medicine (Toxicology)
5	Dr.Warren Silverman		-Board Certified, Internal Medicine -Doctorate, Medicine and Surgery Albany Medical College Albany -Bachelor of Science, Biology Rensselaer Polytechnic Institute

No.	Name-Surname	Affiliation	Qualification
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6	Assoc. Prof. Dr. Naruemon Leelayuwat	Department of Physiology Faculty of Medicine Khon Kaen University	- B.Sc. (Physical Therapy) - M.Sc. (Exercise Physiology) - Ph.D. (Physiology)
7	Dr. Thanaphop Na Nakhonphanom	Div of Occupational Medicine, Dept of Community Medicine, Faculty of Medicine, Khon Kaen University	- Doctor of Medicine; MD - MMedSc (Health Informatics) - MSc (Health Informatics)

9. Course co-ordinators : Assoc. Prof. Naesinee Chaiear

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