

Guide BOOK



UNIVERSITI
KEBANGSAAN
MALAYSIA
National University of Malaysia

MASTER OF
COMMUNITY HEALTH SCIENCE

EXECUTIVE PROGRAMME



Department of Community Health,
UKM Medical Centre.

BACKGROUND

Community health is one of the disciplines in science which aims to increase the standard of physical, mental and social health in individual, family and society level through organized cooperation from individual, family, society and health and among the medical services providers. Community health practice emphasized the management of resources and facilities to achieve optimum standard of physical, mental and social health by the population.

Community health scope include functions such as community planning, organizing, coordinating and monitoring to ensure a comprehensive health service to fulfill the needs of society, in which it could be accessed, accepted and used by all the members of the society . An individual who is responsible to the community health, whether national, state, district or a special unit of a specific service, must have extended training in community health. These individuals include doctors, nurses, scientists, engineers, lawyers, economists, social or administrative officers, and others.

In recent years, community health has been recognized as one of the disciplines which developed tremendously at an international level. Many higher learning institutions in developed country and developing countries, offer community health studies at post graduate level i.e. Masters level and doctorate level.

Community health specialization develops from time-to-time, following the development and needs of a country. Scopes of specialization offered under Masters of Community Health Sciences are the basic specialization in community health. Currently, specialization such as medical statistics and epidemiology, toxicology, industrial hygiene, geriatric health, health promotions and international health will be new development under this programme, following the needs of its stakeholders and country.

OBJECTIVES OF THE PROGRAMME

1. To give the chance for candidates to graduate from various field of studies to further study in community health at the masters level.
2. To fulfill the need of quality community health professionals in Malaysia, suitable with the needs of a developed country.
3. To widen the contribution of knowledge and expertise from various fields towards community health as a science with various disciplines.
4. To increase and to produce more applied research and consultation in community health through offering of this postgraduate programme.
5. To enable Universiti Kebangsaan Malaysia (UKM) to contribute as a centre of erudite material, research and expertise in community health towards the development of the society, government, its' private sector, mass media and other agencies.

SCOPE

Masters of Community Health Sciences include the following specialization:

- Hospital Management and Health Economics
- Occupational Health

DURATION OF STUDIES

The programme is conducted in 5 to 7 semesters (30 - 42 months).

ENTRY REQUIREMENT

Candidate who wishes to apply this postgraduate programme must require the following -

Bachelor Degree in pure science, applied science or professionals from Universiti Kebangsaan Malaysia (UKM);

or

Bachelor Degree in pure science, applied science or professionals from other universities that's recognized by the Senate of Universiti Kebangsaan Malaysia (UKM);

Those who had Bachelor Degree in other fields of studies will be considered to enroll into this postgraduate programme if they have work experience relevant to the specialization.

Local and international candidates must apply through the Secretariat of Postgraduate Studies and International Relations.

APPLICATION

Application must be made through the specific forms (online website forms and hardcopy of results) and forwarded to the Dean of Centre for Graduate Studies

Applications should enclose with it the necessary academic documents. Every application must be first referred to the Post-Graduate Committee of Medical Faculty. The result must then be forwarded to the Dean of Centre for Graduate Studies for further action.

Candidates screened for acceptance into the programme, must possess a CGPA of 3.00 and above (or equivalent) from recognised universities or experiences deemed fit for admission into the programme. Candidates who have been accepted but not yet registered could postpone their study for not less than one semester and not more than two semesters with proper formal written application to the Dean of Centres of Graduate Studies.

Candidates must also submit proof of proficiency in spoken and written English is required. An eligible candidate must have IELTS band of 6.0 or above, or TOEFL score of at least 550 (with proof) taken within the last three year prior application.

They must also show proof of good financial standing for the entire period of the course. Candidate must have own medical protection policy cover. Candidate must have health insurance cover. Screening for Hepatitis B, Hepatitis C and HIV infection is a must. Proof of the status is required.

Foreign students who underwent this programme must undertake Bahasa Melayu courses and pass those courses within their first semester.

REGISTRATION AND PAYMENT

- **Registration early of the semester**

Candidates who had been accepted to enroll must pay the entire fee and register on early of every semester for the whole duration of study. Candidates are not allowed to register after the first four weeks once the semester had started. Candidates who have not registered for the semester and do not have permission to postpone their registration could be disqualified as a candidate.

- **Form of Registration**

Candidate must register with Universiti Kebangsaan Malaysia (UKM) for the whole duration of programme for 3 semesters.

Candidates who are working must prove that he/ she had gained permission from their respective employers to join this programme.

- **Suspension of Registration**

Candidate, who registers can apply to suspend his/ her registration based on reasonable excuse. Duration of suspension will not count as part of the required study duration.

Candidates must apply via a formal written letter to the head of department and copy to the Dean for Centre of Postgraduate Study UKM, for suspension for that semester within 4 weeks of initial online registration. Candidate will not be obliged to pay for that suspended semester. If candidate had paid within the 4 weeks period, he/she may claim for reimbursement from the Centre of Postgraduate Studies.

Suspension is allowed for not less than one semester and not more than two semesters for the whole duration of study.

Candidate approved for registration suspension is not considered as a registered university student, hence, he/ she is not entitled to use any of the university facilities except for getting advice regarding to continue his or her study. All activity the student underwent during postponement, is on the sole responsibility of the student.

PROGRAMME STRUCTURE

Course work

- **Compulsory registration**

Compulsory registration of the first semester core courses which are compulsory for all candidates irrespective of their specialization.

In the second and third semesters, specialization courses (based on field of studies) are also compulsory for the candidates to register.

- **Elective registration in the second and third semesters**

Elective registration means registration of elective courses in other fields which is not the core in their specialization. This is based on students and supervisors recommendations. Elective courses are taken to ensure the candidate fulfills the minimum 40 credits units that is required for his/her Masters Degree requirements.

- **Audit registration**

Candidate may register to follow any elective courses as an audit. Candidate, who chooses a course as an audit, is not required to fulfill the requirements related to attending lecture, examinations and so on. Those courses registered under audit are not counted the credit hours for determining the work load for each semester and there fore; is not counted in the official UKM transcript results.

Workload

- **Workload for course work**

A candidate needs to fulfill at least 40 units to obtain the masters degree. The total minimum and maximum units of course work allowed for any semester is the minimum of 12 units to the maximum of 20 units except for during the first semester; whereby they have to sit for total of 18 units.

In the final semester, students have to go through, successfully defended their research dissertation and come up with the final dissertation report and proof of one manuscript submitted for publication consideration in a ISI journal.

- **Workload for Research and Dissertation Report Preparation**

Research proposal work must start at the first semester. This may carry on to the second semester for data collection (after ethical approval) and be ready before the end of third semester. Dissertation report title must be determined with the academic adviser/ supervisor and that are relevant to the candidate's specialisation.

Selection of course work

Candidate must select the courses that he/ she intend to take after discuss and obtain relevant advices from the academic adviser / supervisor.

Requirement for attending lecture

Candidate must attend all lecture/ tutorial/ seminar for the courses that had been registered. Attendance taking is compulsory for courses grading. Attendance not less than 80% is required and considered as entrée requirement to sit for the final exam. Candidates with attendance less than 80% are not allowed to sit for the particular course and will be given **FAIL (F)** status. Colleagues and friends are not allowed to sign in or participate on candidates behalf.

Requirement for changing/ dropping a course

Candidate who had registered for any of the course from beginning of the semester, but do not follow and had not applied to drop that course within 4 weeks of initial course registration, will also be given a **FAIL (F)** status for that particular course. Students who had not apply to drop the course, are still expected to pay for that semester even though he/she did not attend the course.

Examination result of a candidate who attended lectures and sat for the exam, but did not register for the course, will not be counted and taken into any consideration.

Change, Addition or Deregister of Courses

Candidate is allowed to change, to add or to deregister courses that have been registered after getting advice and support by their academic adviser/ supervisor within the first four weeks of each semester. Change, addition and deregister of the course should fulfill the requirement of minimum and maximum credit hours for each semester.

Candidate are still allowed to change after the first 4 weeks, latest by 10 weeks, with the permission of the Dean of Faculty/Dean of Postgraduate Centre. By doing so, the candidate is **PULLING OUT (TD)** of the programme and given a TD grade and will not be given consideration in exam marks or grade. Application of such from candidates i.e. after 4 weeks, still needs to financially fully pay for the whole semester.

Candidates who register for a course early in the semester, however did not attend the lectures, participate in the course activities and did not apply for deregistration; will be given grade E for that particular course.

Transfer of Credit

At the moment, candidates are allowed to transfer credits from other universities of similar recognised standards by the Senate. Candidates must formally write in to the Dean of Faculty of Medicine/ Centre of Postgraduate Centre in the first semester.

Candidate who are involved in students mobility outbound programme, can apply to change credits to programmes that they ensue in the mobility programme.

Maximum numbers of credits allowable are 12 credits or three courses with at least grade B (or equivalent to CGPA of 3.00) The credit transfer from the providing organisation must be relevant to the courses in MCHS (determined by the department) and must not be more than FIVE years duration prior to the current MCHS registration.

DISSERTATION

Candidate cannot present their research dissertation without the supervisors' consent and prior approval. Candidates are also NOT allowed to present their research dissertation that has already been submitted either to this university, but he or she can include any part from the work, with the condition that references are cited clearly.

If agreed by the academic adviser/ supervisor or postgraduate committee, the candidate must publish papers related to the work while he/ she is carrying out the research with the condition the papers must include acknowledgment to the university. Manuscripts that may have an impact on the hospitals quality and good name, must be sent for approval to the Deans' Office for prior approval.

A Masters' of Community Health Sciences report must not exceed 50,000 words. The total of words is excluding footnote, citation, appendix, formula, table, diagram, picture and so on.

Permission to write the dissertation of more than the length limitation, could be obtained by applying to the Dean of Centre of Graduate Studies at least three months before submission of thesis for examination.

Dissertation report may be written in English or Bahasa.

Dissertation report must be planned with the supervisors and research proposal must be sent to the Department of Postgraduate Committee for prior approval.

Regulations about thesis preparation as in *Buku Panduan Menulis Tesis Universiti Kebangsaan Malaysia (Gaya UKM)*.

A candidate is required to submit his or her final dissertation report 4 weeks before the five semester final exams for marking purposes.

Dissertation reports could be published after getting the University's permission.

SUPERVISOR

Candidates who carry out research and thesis preparation will be guided by either a supervisor or with co-supervisors.

When appointed as co-supervisor, the main supervisor will bear the main responsibilities whereby the co-supervisor will become an assistant to the main supervisor.

Supervisor will also be responsible in advising candidate in taking up courses and matters about its progress.

Supervisor's status

Supervisor must consist of an academic staff that is fully employed by UKM. Academic staff that had been seconded to other places, resigned, retired from the university, or other qualified individual from other institution can only become co-supervisor, in cases with special agreement.

Supervisor may abstain from supervising their MCHS candidate if he/she is not up to standard set by supervisors. However, this must be backed up by a written supervisory report by the main supervisor and supported by students' 6 monthly progress report.

Change of Supervisor and Post-Graduate Committee

If due to unavoided circumstances, supervisor or co-supervisor could not perform the duty, another teaching staff will be appointed to carry out supervisory duties.

Supervisor report

Supervisor shall submit one confidential report on the progress of the candidate at least once in a semester for the whole duration of the study to the Faculty's Post-Graduate Committee, and a copy of the report to the Dean of Centre of Graduate Studies.

Candidates' assessment for Masters Courses who followed the courses will include continuous assessment and examination. Candidates will need to pass these two both aspects.

MCHS Course Work Assessment:

- **Grade and Grade Point**

The final grade of candidates are counted in the final semester after their completion of final written examinations, completed continuous assessments and successful defence of dissertation. Candidates need to fulfill a minimum of 3.0 CGPA in order to obtain their Masters Degree. The following are excerpts from Buku Peraturan Siswazah UKM 2011.

Grade and Value of Grade for course work will be given as below

| Grade, marks equivalent and Description | Values for Grade (Meaning) |
|--|---|
| A = 80 dan ke atas (Lulus Dengan Cemerlang/Excellence) | A = 4.00 |
| A- = 75-79 (Lulus Dengan Cemerlang/ Very Good) | A- = 3.67 |
| B+= 70-74 (Lulus Dengan Kepujian /Pass with honours) | B+ = 3.33 |
| B = 65-69 (Lulus Dengan Kepujian/ Pass with honours) | B = 3.00 |
| B- = 60-64 (Lulus/Pass) | B- = 2.67 |
| C+ = 55-59 (Lulus/Pass) | C+ = 2.33 |
| C = 50-54 (Lulus/Pass) | C = 2.00 |
| C- = 45-49 (Gagal/Fail) | C- = 1.67 |
| D = 40-44 (Gagal/Fail) | D = 1.00 |
| E = Kurang 39 (Gagal/Fail) | E = 0.00 |
| L/K | Lulus (Pass)/Kandas (for courses w.out Grade) |
| TL | Tidak Lengkap (Incomplete Grade) |
| AU | Audit |
| TD | Tarik Diri (Withdraw) |
| SM | Sedang Maju (In Progress) |
| TP | Tangguh Peperiksaan (Suspension) |

- **Incomplete Grade /TL (tidak lengkap)**

With the agreement of the supervisor, a particular course could be graded as 'TL' (tak lengkap) if the candidate did not manage to complete their work (especially on dissertation report) or did not sit for the examination (even though the candidate may have registered for that particular course exam).

The agreement from the lecturer must be obtained not later than the last day of eleventh week of that semester. Requirement during this course must be completed within the time that had been specified by the lecturer but not later than last date of next semester examination, for giving any grade. After the duration, if the candidate had completed the work required of him/her, thus, "TL" grade can be changed to another grade which is agreed upon by the supervisor /lecturer for the work which had been completed. This must be agreed upon by the Postgraduate Committee at the department level. The committee consist of the Head of Department, the Postgraduate Committee Coordinator, the MCHS Programme Coordinator and the candidate's supervisors.

At the faculty level, it must be considered and approved by the postgraduate examiner body consists of the Vice Chancellor, Dean of Centre of Graduate Studies, Dean of the Medical Faculty, Head of Department/ MCHS Programme Coordinator and candidate's supervisor will consider the result of a candidate and once satisfied, they will endorse the result to the Senate and award the Masters' Degree.

Conditions for Repeating the Course Works

Candidates who obtained a passing mark of 'C' in a particular course, may choose to repeat their course in the immediate following semester. The repeat marks will be used in the final Masters' transcript. The candidate need to register for the repeat course during the exam registration prior exams date. However, it is possible for the student not to attend any classes if none is offered in that particular semester and just sit for the exam paper on scheduled dates. Candidates are allowed to repeat two maximum courses per semester that they failed.

The students may only choose to repeat only one time only and the last (repeat) mark will be taken for final results and transcript consideration. Candidate who failed in the registered courses, need to repeat the examination for that courses.

If he or she still continuously fails for 2 consecutive semesters (i.e. 1 year), the candidate will be dismissed from studies. He/ she, with reasonable excuses may apply for another try to sit for the exam, but must be written formally to the Head of Department; reviewed and APPROVED through the Faculty for this repeat purposes. The department or the Faculty may decide to omit doing so, if the candidates performance has not been promising and of no significant improvements in his/her studies. The supervisors' feedback will be important in substantiating this.

Conditional Pass (Lulus Bersyarat)

The following table is the the cummulative grade values, students achievement level and students status; if students are passable or 'conditional pass' (CGPA 2.0-<3.0). In conditional pass status, then the student have to repeat certain courses to obtain the minimum CGPA of 3.0 and above.

| CGPA | Status in Programme | Suitability to continue in programme | Suitability to be awarded Masters Degree |
|----------|-----------------------|--------------------------------------|--|
| ≥ 3 | Pass | Fit to continue | Fit |
| 2-<3 | Conditional Pass | Trial | Not fit |
| <2 | Fail and discontinued | Not fit | Not fit |

Award of Degree

The master degree shall be awarded to candidates who fulfilled the following criteria:

- Complete a total of 40 units or more and obtained a minimum CGPA of 3.0 and above.
- Pass all the compulsory and specialization courses.
- Made all required payment.

Dismission of Candidate

With the agreement of the Senate, a candidate who follows the postgraduate programme could be dismissed at any time if the progress of the candidate is not satisfactory.

This is if the candidate provided falsifying informations at entry and during the whole course of study in the purpose of obtaining the degree; is incapacitated mentally or physically; harrassed, blackmailed, threatened emotionally or physically the academic supervisors or lecturers, internal or external examiners related with passing the exams marks or dissertations; did not keep up to the good quality and standards as required by the department and university; manipulated the research ettiques and fabrication of study results and had extended beyond the acceptable maximum time limit for a masters degree as deployed by the university.

General

Senate are entitled to take appropriate action on a candidate if he or she is found to give untrue or incorrect information

Senate could allow any exemption that is relevant to their opinion apart from the requirements of this Table.

Every application and appeal regarding the Act and this Table from a registered candidate shall be submitted to the Dean of Centre of Graduate Studies through his or her supervisor or academic adviser. Dean of Centre of Graduate Studies will refer their application or appeal to Medical Faculty Post-Graduate Committee to obtain their opinion or endorsement which will later reach the Dean of Centre of Graduate Studies. If necessary, the Dean of Centre of Graduate Studies will refer the results to the Senate to obtain approval or endorsement before announcing it to the candidate.

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| COURSES OFFERED |
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COMPULSORY COURSE (Semester 1 and 2)

FK 6143: Research Methodology

FK 6163: Basic Medical Statistics

FK 6183: Basic Epidemiology

FK 6313: Principle of Health Management

FK 6513: Principles of Family Health

FK 7213: Principle of Environmental Health and Occupational Health

COURSES (Semester 2 and 3)**Name of Courses****Subspecialty: Hospital Management and Health Economics**

FK 6342 Management of Health Information in Health Care System

FK 6343 Hospital Management

FK 6352 Organizational Behaviour and Management of Health Personnel

FK 6363 Health Economics

FK 6493 Planning and Evaluation of Health Program

FK 7121 Occupational Safety And Health Legislation

FK 7282 Occupational Safety & Health Risk Assessment and Management

Subspecialty: Occupational Health

- FK 6953 Environmental and Industrial Toxicology
- FK 7121 Occupational Safety And Health Legislation
- FK 7131 Industrial Hygiene
- FK 7141 Ergonomics
- FK 7161 Epidemiology of Occupational Health
- FK 7124 Occupational Health Medicine
- FK 7193 Occupational Health Practicum
- FK 7282 Occupational Safety & Health Risk Assessment and Management

SEMESTER 5**Name of Courses**

- FK 7296 Research Dissertation
- FK 7396 Public Health Practicum

SYPNOSIS OF COURSES**FK 6143: METODOLOGI PENYELIDIKAN (RESEARCH METHODOLOGY)**

The course mainly focuses on the method of conducting medical research. Throughout the course the students will be guided by the lecturers to prepare research proposal, which will be presented at the end of the course. The main topics in research methodology including hypothesis generation, searching for information, research design, proposal writing and plan of analysis will be discussed. At the end of the module, students will submit a complete proposal for their study.

References

- Polgar Colton, T. 2000. *Statistics in Medicine*. Little Brown and Co. Boston. 4th Ed.
- Dawson,B. & Trapp, R.G. 2001. *Basic and Clinical Biostatistics*. 3rd Edition Prentice-Hall International Inc.
- Geoffrey, R. &David, L. S.2000. *Biostatistics: The Bare Essentials*,Second Edition
- Geoffrey, R. M., David, D.&David, F. 2005. *Essentials of Research Design and Methodology*.Essentials of Behavioral Science. Prentice Hall Inc.
- John, W. C.2002. *Research Design Qualitative, Quantitative, and Mixed Methods Approaches (2nd Edition)* , Sage Publications

FK 6163: ASAS STATISTIK PERUBATAN (BASIC MEDICAL STATISTICS)

This course is an introduction to medical statistics. It covers methods of data collection, grouping and presentation, student's t value, chi square, correlation, linear regression and ANOVA. This course introduces microcomputing in the analysis of health research data. This course comprises 2 hours of lectures and a 2-hour practical session each week.

References

Beth, D., Robert G. T. & Robert, T. 2004. *Basic & Clinical Biostatistics*. Lange Medical Books / Mc Graw – Hill. Medical Publishing Division.

Colton, T. 2000. *Statistics in Medicine*. Little Brown and Co. Boston. 4th Ed.

David, G. 2005. *Introduction to the Practice of Statistics*. 4th Edition Prentice-Hall International Inc.

Dawson, B. & Trapp, R.G. 2001. *Basic and Clinical Biostatistics*. 3rd Edition Prentice-Hall International Inc.

Geoffrey, R. & David, L. S. 2000. *Biostatistics: The Bare Essentials*, Second Edition.

FK 6183: PRINSIP EPIDEMIOLOGI (BASIC EPIDEMIOLOGY)

This course covers all the basic concept of epidemiology in public health including the principles and methods in epidemiology. It covers the distribution and determinants of diseases and application of epidemiological method in preventing and controlling diseases. This course will also emphasize a few aspects of study design and interpretation from cross-sectional, case control, cohort and experimental study.

References

Armenian, Haroutune, K. 1998. *Epidemiology and Health Services*. New York : Oxford University Press.

Last, J.M. 2001. *A Dictionary Of Epidemiology*. Oxford: Oxford University Press

Leon, G. 2004. *Epidemiology*. 3rd Ed. Philadelphia: Elsevier Sanders.

Kenneth, J., Rothman. 1998. *Modern Epidemiology*. Philadelphia: Lippincott-Raven Publishers

Kenneth, J., Rothman. 2002. *Epidemiology : An Introduction*. Oxford : Oxford University Press.

Richard, F., Lawrenson, R. 2004. *Lecture Notes : Epidemiology and Public Health Medicine*. 5th Ed. Malden: Blackwell Pub.

Robert, F.H. & Sellers, T.A. 2004. *Epidemiology For Public Health Practice*. 3rd Ed. Sadbury: Jones & Bartlett

FK 6313: PRINSIP PENGURUSAN KESIHATAN (PRINCIPLES OF HEALTH MANAGEMENT)

This course is aimed at preparing candidates with basic knowledge of management in the practice of public health and to provide guidance and competency in making important decisions in solving public health problems. This course covers biological, social, psychological and environmental aspects which influence health, health status, analysis of health needs and demands and also healthcare systems. This course also discusses concepts, methods and techniques of modern management in healthcare including problem identification, decision making, planning, implementation, monitoring, and evaluation of programs and health services including health research methodology. Aspects of organization, management and staff functions, communication and organizational development are also discussed. This course covers 2 hours of lectures and 1 hour of discussion each week.

References

Blum, H.L. 2000. *Planning for Health Services for the Eighties*. Human Science Press. New York, 4nd. Ed.

Heiriegal, D. & Slocum, J.W. 1999. *Management*. Addison-Wesley Publishing Co. Massachusetts. 6. Ed.

Levey S. & Loober, N.P. 1999. *Health Care Administration & Management Perspective*. J.B. Lippincott Co. Philadelphia.

Robbin, S.P. 2002. *Management Concepts and Practice*. Prentice-Hall Inc. New Jersey

Shonell, S.M. & Kaluzky, A.D. 2000. *Health Care Management: A Text in Organizational Theory and Behavior*. John Wiley and Sons, New Jersey, 4nd. Ed.

FK 6513: PRINSIP KESIHATAN KELUARGA (PRINCIPLES OF FAMILY HEALTH)

This is a three (3) unit module. The main aim of this module is to broaden students' knowledge and experience in family health, especially with regards to the health of individuals, family as the core unit and society as a whole. This course will focus on the 'family life-cycle' approach which has been well adapted worldwide. This lifecycle approach connects children, mother, father, grandparents in a system that as a whole shape the health of individual family members. And the family or household in turn interacts with the various actors or factors in the community. In order to provide a more comprehensive view of the concept of basic family health, this course will be divided into three main sub-modules:

- Family and health
- Family and nutrition
- Family and health promotion

The first sub-module which is the family and health sub-module basically concentrates on basic principles of health related to individual member of the family life-cycle. In addition to this, it also includes the discussion on issues relating to reproductive hazards and workplace, legal issues, genetic and intra-uterine determinants as well as family and population planning. The second sub-

module focuses on issues related to nutrition of family and community as well as its related programmes. The final sub-module introduces the concept of health promotion and education in relation to family health seeking behaviours. This course will be delivered in the form of weekly lectures and tutorials. Tutorial videos may be viewed at:

- Corporate video on LPPKN or website <http://www.lpkn.gov.my>
- Corporate video on Family health development division: <http://www.moh.gov.my/MohPortal/>,
<http://fh.moh.gov.my/>
- Corporate video on health promotion or website : <http://infosihat.gov.my/Pautan.html>,
<http://www.dph.gov.my>

Note: All students need to visit the website for WHO, UNICEF, UNFPA and other health organizations to get more information globally.

References

1. Helen M.Wallace and G.I.Ebrahim (eds) (2001) Maternal and child health around the world. London. Macmillan.
2. Indra Pathmannathan et al. (2003) Investing in maternal health: learning from Malaysia and Sri Lanka. Washington D.C: The world bank.
3. Margaret,B.Ar Buckley and Charlotte,A.Herrick (2006) Child and Adolescent Mental Health: interdisciplinary system of care. Sudbury Mass:Jones and Bartlett publisher.
4. Bonnie Brandl et al. (2007) Elderly Abuse detection and intervention: a collaborative approach. New York: Springer.
5. Long term care for older people (2005) Paris:OECD
6. Doling,J., Jones, F.C.Maltby,T. (2005) Ageing matters: European Policy Lessons from the East. Aldershot, Hants, England, Burlington, VT:Ashgate.
7. Quinn,W.H. (2004) Family solutions for youth at risk: applications to juvenile delinquency, truancy and behaviour problems. New York: Brunner Routledge.
8. Sloan,E. (2002) Biology of women. Albany, New york: Delmar Thompson Learning.
9. Condon,M.C. (2004) Women'sHealth: body, mind,spirit:an integrated approach to wellness and illness. Upper sadle river N.J.: Prentice Hall.
10. Lips,H.M (2006) Anew psychology of women: gender, culture and ethnicity,Boston:Mc Graw Hill.

**FK 7213: PRINSIP KESIHATAN PERSEKITARAN DAN KESIHATAN KERJA
(PRINCIPLES OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH)**

This module is a three (3) unit course. Its main aim is to provide basic knowledge and skills in environmental health and occupational health to the candidates. For the environmental health, candidates will be introduced to factors and criteria involved in determining and assessing impact of human exposure to environmental contaminants. This includes ecology, water pollutants, air, soil, food and other natural and man-made sources. For the occupational health component, candidate will learn about occupational hazards and the management of health risk in the workplace. Candidate will also be exposed to the occupational health legislation and services. The course will be covered by twice weekly 2 hour lecture sessions.

References

Koh, D., Chia, K.S & Jeyaratnam, J. 2002. *Textbook of Occupational Medicine Practice*. Singapore: World Scientific

La Dou, J. 2004. *Current Occupational and Environmental Medicine*, 3rd Edition. New York: Lange Medical Books.

Lippmann, M., Cohen, B.S. & Schlesinger, R.B. 2003. *Environmental Health Science : Recognition, Evaluation and Control of Chemical and Physical Health Hazards*. Oxford University Press, New York,

Nebel, B.J. & Wright, R.T. 1998. *Environmental Science*. Prentice Hall, Inc., New Jersey .

Noor Hassim Ismail. 2002. *Program Perlindungan Pendengaran Pekerja*. Kuala Lumpur. Persatuan Keselamatan dan Kesihatan Pekerjaan Malaysia.

HOSPITAL MANAGEMENT AND HEALTH ECONOMICS

FK 6342: MANAGEMENT OF HEALTH INFORMATION IN HEALTH CARE SYSTEM

This course discusses on compiling and usage of data in health care system for the purpose of planning, research and problem-solving in health & service areas. Focus will be channelled towards strategy and technical analysis, alternative selection, efficiency assessment and usage of computers in the field of health care management. This course is a 1-hour lecture and a session of 2-hour practical per week.

References:

Wickham,F. Lee DBA,John P, Glaser & Burns.2005.Managing healthcare information systems: Approach for health care executives.

Mervat Abdelhak,Sara Grostick Mary,2007. Health information:management of a strategic .

Merit 2002. Information management for health care professional health information management series.

Mc Lachlan G. and Shegog R.A. (eds). Computers in the Service of Medicine.Vol.I-III. Oxford University Press, 1986

FK 6343: PENGURUSAN HOSPITAL (HOSPITAL MANAGEMENT)

This course emphasises on hospital management procedures from physical and services planning, all aspects of administration, financing and costs control and marketing of the hospital. This course will provide basic efficiency skills among students to help develop in them a quality management team, so that they will be capable to discharge all management functions effectively in the field of human capital, finance and goods, hospital's micro planning and to portray a corporate and quality image of the hospital administration. Candidates will also acquire skills on information management for administrative purpose. This course will also be of assistance to planners from all levels of health administration.

References:

Montague Brown and Howard L.L. Hospital Management System-multi unit Organization and Delivery of Health Care. Aspen System Corporation Germantown, Maryland, 1971.

Pena J.J and Valerie A. Hospital Management- Winning Strategies for the 80s. Aspen Publication, Rockville, Maryland, 1985

Blum, H.L. 2000. *Planning for Health Services for the Eighties*. Human Science Press. New York, 4nd. Ed.

Heiriegal, D. & Slocum, J.W. 1999. Management. Addison-Wesley Publishing Co. Massachusetts. 6. Ed.

Levey S. & Looaba, N.P. 1999. *Health Care Administration & Management Perspective*. J.B. Lippincott Co. Philadelphia.

Robbin, S.P.2002. *Management Concepts and Practice*. Prentice-Hall Inc. New Jersey

Shonell, S.M. & Kaluzzy, A.D. 2000. *Health Care Management : A Text in Organizational Theory and Behavior*. John Wiley and Sons, New Jersey, 4nd. Ed.

**FK 6352: TINGK AHLAKU ORGANISASI DAN PENGURUSAN PERSONEL KESIHATAN
(ORGANIZATIONAL BEHAVIOUR AND MANAGEMENT OF HEALTH PERSONNEL)**

This course touches on theory and practical on manifestation, assessment and controlling of behaviours and situations within the health services organisation. Emphasis is given to leadership aspects, motivational, communication and group dynamics within the health organisation. It also discusses the co-relation between health care organisation and staff including occupational analysis, efficiency, effectiveness, training and expansion of the health personnel. This course covers a 2-hour lectures and an hour discussion session each week.

References:

Adam, E.I & Elsert, R.J. 1999. Production and Operation Management, Concept, Model and Behaviour. Prentice- Hall International Edition, New Jersey, 5 rd Ed.

Sehermerhon, J.R. Hunt, J.G & Osborn, R.N. 2000. Managing Organisational Behaviour. John Wiley and Sons, New York

Fottler, M.D., Hernandez, S.R & Joiner, C.L. 2000. Strategic Management of Human Resources in Health Services Organization. John Wiley and Sons, 4nd Ed.

Stephen, M. S.&Arnold, D. K.. 2005 . *Health Care Management: Organization Design and Behavior* Prentice Hall Inc. Seth B.G 2005. *Principles of Health Care Management: Compliance Consumerism and Accountability in the 21st Century*. Prentice Hall Inc

Latiff K. 2009. Organisational Survival and Growth. PPUKM.

FK 6363: EKONOMI KESIHATAN (HEALTH ECONOMICS)

This course covers theory of microeconomics analysis and its application in health service and problems associate with it in organisation, delivery and financial in health service; economical analysis as a basic tool in decision making to an individual and community at large; demand and offer in health and medicine, analysis of resources; preparation and process of health budget. This course will also discuss aspects of accounting, value expectation theory, financial modelling, analysis of economics impact, financial resources, financial extrapolation cost-effective analysis and cost-benefit in planning and evaluating of health services. It will also emphasise on computer usage in health economics. This course will be conducted for 2 hours of lecture and 1 session of practical for 2 hours each week.

References:

Drummond, M.F., Sculpher, M.J., Torrance, G.W. & O'Brien, B.J. 2005. *Methods for the Economic Evaluation of Health Care Programmes*. Third Edition. United Kingdom: Oxford Medical Publications.

Creese, A. & Parker, D. 1994. *Cost Analysis in Primary Health Care: A Training Manual for Programme Managers*. Geneva: World Health Organization.

Getzen, T.E. 2003. *Health Economics: Fundamentals and Flow of Funds*. Second Edition. New York: John Wiley & Sons, Inc

Sharifa Ezat W.P., Syed Aljunid. 2011. Economic Burden of Cervical Cancer in Malaysia. VDM USA.

FK 6493: PERANCANGAN DAN EVALUASI PROGRAM KESIHATAN (PLANNING AND EVALUATION OF HEALTH PROGRAM)

This course discusses concepts and basic health planning, which takes into account factors of morbidity, mortality, demography, resources, essential health needs, institutional aspects, political, rules of law, socio-cultural and economical in planning of the health programme; devices, basic procedures and techniques in determining health problems and evaluation of health status; decision-making & prioritise problems in planning; and observation & evaluation aspects of the health programme. This course consists of a 2-hour lecture and a 2-hour session of practical each week.

References:

- Blum, H.L. 2000. *Planning for Health Services for the Eighties*. Human Science Press. New York, 4nd. Ed.
- Heiriegal, D. & Slocum, J.W. 1999. *Management*. Addison-Wesley Publishing Co. Messachusetts. 6. Ed.
- Levey S. & Looorba, N.P. 1999. *Health Care Administration & Management Perspective*. J.B. Lippincott Co. Philadelphia.
- Robbin, S.P.2002. *Management Concepts and Practice*. Prentice-Hall Inc. New Jersey
- Shonell, S.M. & Kaluzzy, A.D. 2000. *Health Care Management : A Text in Organizational Theory and Behavior*. John Wiley and Sons, New Jersey, 4nd. Ed.

OCCUPATIONAL HEALTH

FK 6953: TOKSIKOLOGI PERSEKITARAN DAN INDUSTRI (ENVIRONMENTAL AND INDUSTRIAL TOXICOLOGY)

This course discusses problems of toxic substances from the environment and industry and its effects to human beings and living things. It covers types of toxic materials, classification of toxicological effects, toxicological assessment, chemical and biological mechanism of toxic substances, and its dissemination through the environment. The principles and procedures on controlling of materials and toxic wastes will also be explained. Candidates will be assigned to conduct library research and make reports on certain toxic substances. This course covers a 2-hour lecture weekly and a 2-hour practical fortnightly.

References:

Klassen, C.D, Amdur, M.O. and Doull, J. (Eds.) Toxicology : The Basic Science of Poisons, 3rd Edition. Macmilan Publishing Company, New York, 1986.

Hodgson, E. and Levi, P.E. (Eds.). A Textbook of Modern Toxicology. McGraw-Hill, Singapore, 2000.

Lippmann, M.(Ed.) Environmental Toxicants : Human Exposures and Their Health Effects. Van Nostrand Reinhold, New York, 1992.

Manahan, S.E. Toxicological Chemistry, 2nd Edition. Lewis Publishers, Chelsea, 1992.

Williams, P.L. and Burson, J.L. (Eds.). Industrial Toxicology: Safety and Health Applications in the Workplace. Van Nostrand Reinhold, New York, 1985.

FK 7121: PERUNDANGAN KESELAMATAN DAN KESIHATAN (OCCUPATIONAL SAFETY AND HEALTH LEGISLATION)

The aim of this course is to introduce the students to the occupational safety and health legislation in Malaysia. Factories And Machinery Act 1967 and Occupational Safety and Health Act 1994 will be the basis of discussion in this course. Students will also be exposed to other legislation related to occupational safety and health and compensation of injury due to work and disability assessment. This module will be delivered via lectures and self learning packages (SLP). Students are given the topic, objectives and references. They are expected to prepare and participate actively in the discussion session.

References

1. Occupational Safety and Health Act 1994 and Regulations
2. Factories and Machinery Act 1967 and Regulations
3. Employees' Social Security Act 1969 and Regulations
4. Pesticides Act 1974
5. Atomic Energy Licensing Act 1984 and Regulations

FK 7131: HIGEN INDUSTRI (INDUSTRIAL HYGIENE)

The aim of this course is to introduce the students with the principles of industrial hygiene. It includes the anticipation, recognition, evaluation and control of hazards in the work place. Emphasis is given to the control measures such as engineering method, administrative methods and personal protective equipments

Reference:

1. Fundamentals of Industrial Hygiene, 5th Ed. Plog BA, Quinlan, PJ, eds. National Safety Council , 2002.
2. NIOSH Pocket Guide to Chemical Hazards. US Department of Health and Human Services, Public Health and Service, Centers for Disease Control and Prevention, Publication No. 2005-149. National Institute for Occupational Safety and Health , 2005
3. AIHA Emergency Response Planning Guidelines, American Industrial Hygiene Association , 2002
4. ACGIH Threshold Limit Values and Biological Exposure Indices, Publication No. 0106. American Conference of Governmental Industrial Hygienists, 2006.
5. The Occupational Environment: Its Evaluation, Control, and Management, 2nd Ed. DiNardi SR. American Industrial Hygiene Association, 2003.

FK 7141: ERGONOMIK (ERGONOMICS)

This course covered study of accomodation of work to suit human's physiology, anatomy as well as psychology. It also discusses on the prevention and control of ergonomic-related diseases.

Reference:

1. Kroemer KHE & Grandjean E. 2001. Fitting the task to human, 5th Ed. Tailor and Francis Ltd.
2. ILO. 2003. Ergonomics checkpoints. MDC Publishers.
3. ILO. 2004. Work Improvement in Small Enterprise. International Labour Office.
4. Violante F, Armstrong T & Kilbom A. 2000. Occupational Ergonomics: Work-related Musculoskeletal Disorders of the Upper Limb and Back. London: Taylor & Francis.
5. Lony F.J. Psychology fo Work Behavior. The Dorsery Press, Homewood, Illinois, 1985.

FK 7161: EPIDEMIOLOGI KESIHATAN PEKERJAAN (EPIDEMIOLOGY OF OCCUPATIONAL HEALTH)

This course included of epidemiology of occupational health and epidemiological methods in occupational health research/ study.

Reference:

1. Karnoven M. and Mikheer M.I. Epidemiology of Occupational Health. World Health Organization, Copenhagen, 1987.
2. Checkoway H, Pearce N & Crawford-Brown DJ. 2004. Research Methods in Occupational Epidemiology. 2nd Ed Oxford University Press.
3. McDonald C. 2000. Epidemiology of Work Related Diseases, 2nd Ed. London: BMJ Publishing Group
4. Chorney W. & Fragala G. 1999. The Epidemic of Health Care Work Injury: An Epidemiology. Florida: CRC Press LLC
5. Occupational & Environmental Medicine Online Journal. <http://oem.bmjournals.com/>

FK 7124: PERUBATAN PEKERJAAN (OCCUPATIONAL MEDICINE)

This course covers the basics of diagnosis, prevention, treatment and rehabilitation of work-related diseases which result from biological, physical, chemical or psychological factors in the work place. Occupational diseases with disability assessment according to the body systems are emphasized.

References

1. LaDou, J. 2004. Current Occupational and Environmental Medicine, 3rd Edition. New York: Lange Medical Books.
2. Adams PH, Baxter PJ Aw TC & Cockrof Harrington JM. 2000. Hunter's Diseases of Occupations, 9th Ed. Oxford University Press.
3. Rom WN. 1998. Environmental and Occupational Medicine, 3rd Edition. Lippincott Williams & Wilkins.
4. Stellman JM. Encyclopedia of Occupational Health and Safety, 4th Ed. 1998. International Labour Office.
5. Levy BS. 2000. Occupational Health, Recognizing and Preventing Work Related Diseases and Injury, 4th Ed. Philadelphia: Lippincott Williams & Wilkins
6. Koh, D, Chia KS & Jeyaratnam J. 2002. Textbook of Occupational Medicine Practice. Singapore: World Scientific.

7. Noor Hassim Ismail. 2002. Program Perlindungan Pendengaran Pekerja. Kuala Lumpur. Persatuan Keselamatan dan Kesihatan Pekerjaan Malaysia.

FK 7193: PRATIKUM KESIHATAN PEKERJAAN (OCCUPATIONAL HEALTH PRACTICUM)

This course provides knowledge and basic skills that are required from an occupational safety and health practitioner. Students will be trained to perform and analyse the results of occupational safety and health activities such as exposure monitoring and medical surveillance.

Reference:

1. Stellman JM. Encyclopedia of Occupational Health and Safety, 4th Ed. 1998. International Labour Office.
2. LaDou, J. 2004. Current Occupational and Environmental Medicine, 3rd Ed. New York: Lange Medical Books.
3. Noor Hassim Ismail. 2002. Program Perlindungan Pendengaran Pekerja. Kuala Lumpur. Persatuan Keselamatan dan Kesihatan Pekerjaan Malaysia.
4. Hyatt RE, Scanlon PD, Nakamura M. 2003. Interpretation of Pulmonary Function Tests, 2nd Ed. Lippincott Williams & Wilkins
5. Suter A. 2003. Hearing Conservation Manual, 4th Ed. Council for Accreditation in Occupational Hearing Conservation(CAOHC) ,

FK 7282: PENAKSIRAN DAN PENGURUSAN RISIKO KESELAMATAN & KESIHATAN PEKERJAAN (OCCUPATIONAL SAFETY AND HEALTH RISK ASSESSMENT AND MANAGEMENT)

This course focuses on the concept of risk and risk assessment models in occupational safety and health. It also covers the occupational safety and health risk management which includes the risk communication, cost-benefit analysis and assessment on the effectiveness of control measures.

Reference:

1. Sadhra SS & Rampal KG. 1999. Occupational Health Risk Assessment and Management. London: Blackwell Science.
2. Wells G. 1996. Hazard Identification and Risk Assessment. Redwood Books.
3. DOSH. 2000. Assessment of the Health Risks Arising from the Use of Hazardous Chemicals in the Workplace.
4. Reese CD. 2003. Occupational Health and Safety Management: A Practical Approach. Lewis Publication.

**FK 7296/FK 7396: RESEARCH DISSERTATION/PRATICUM PUBLIC HEALTH
(in SEMESTER 5)**

The course is an extension from the FK6143 Research Methodology course in semester 1. The course focuses on the method and application of conducting medical research and proper literature review. Throughout the course the students will be guided by their supervisors (with or without co-supervisors) to consolidate their research proposal, data collection, data analysis and data presentation. These which will be presented at the end of the course with the presence of viva examiners elected from across the country.

The main topics applied during research methodology i.e. hypothesis generation, research design, proposal writing, ethics approval, data analysis using appropriate statistical manipulations and presentation of study output will be further discussed.

In the final semester, students have to go through the research dissertation and come up with the final dissertation report and proof of one manuscript submitted for publication.

REFERENCES

Polgar Colton, T. 2000. *Statistics in Medicine*. Little Brown and Co. Boston. 4th Ed.

Dawson, B. & Trapp, R.G. 2001. *Basic and Clinical Biostatistics*. 3rd Edition Prentice-Hall International Inc.

Geoffrey, R. & David, L. S. 2000. *Biostatistics: The Bare Essentials*, Second Edition

Geoffrey, R. M., David, D. & David, F. 2005. *Essentials of Research Design and Methodology*. Essentials of Behavioral Science. Prentice Hall Inc.

John, W. C. 2002. *Research Design Qualitative, Quantitative, and Mixed Methods Approaches (2nd Edition)*, Sage Publications

Lemeshow S., Hosmer D.W., Klar J., Lwanga S.K. 1990. *Adequacy of Sample Size in Health Studies*. Publisher WHO & John Wiley and Sons.

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