UNIVERSITI TEKNOLOGI MARA
Fakulti Perubatan

DOCTOR OF PUBLIC HEALTH
(MD 931)

Candidate's Manual

Department of Public Health Medicine
Faculty of Medicine
UiTM Sungai Buloh, Selangor

Contents

BACKGROUND

Doctor of Public Health (DrPH) MD931 is a medical post-graduate mixed mode programme conducted minimum in six semesters. The aim of the programme is to provide an in-depth training in the field of public health medicine for medical doctors. The programme provides specialised training in the field of public health medicine at doctorate level (DrPH) for qualified Master of Public Health (MPH) graduate as a pre-requisite for the gazettement of a Public Health Medicine Specialist.

THE PROGRAMME LEARNING OBJECTIVES

Upon the completion of the programme, graduates are expected to:

i. demonstrate comprehensive, systematic, and advanced understanding on the knowledge of public health.
ii. manage emerging issues and challenges of public health through evidence-based practices.
iii. perform highly advanced practical skills in managing public health related issues.
iv. perform effective teamwork competency with peers, community and agencies.
v. communicate efficiently and effectively through various mediums, audiences and situations.
vi. create effective solution using digital technology to support public health related work and studies.
vii. create solutions from research and statistical analysis in the field of public health.
viii. display effective leadership with full responsibilities and accountability.
ix. integrate good personal skills for independent and lifelong learning through continuous academic or professional development.
x. initiate entrepreneurial ventures in the field of public health.
xi. practice professional and ethical conduct in work and research-based activities.

SCOPE

Degree in Doctor of Public Health includes the following specialisation:

- Environmental Health
- Epidemiology & Biostatistics
- Family Health
- Health Management & Economics
- Occupational Health

DURATION OF STUDIES

The minimum period of study for this programme is 6 semesters. The maximum period allowed is 10 semesters. Candidate needs to do coursework, field attachment and produce a thesis during the study period. The distribution of the duration of studies is shown in Table 1 below:

Table 1: Duration of studies

	Full time	
	Minimum	**Maximum**
No. of weeks	138	230
No. of semester	6	10
No. of years	3	5

ENTRY REQUIREMENT

Candidates must have the following requirements:

- Possess a recognized medical degree (MBBS or MD or equivalent degree) from a university recognized by the Senate of Universiti Teknologi MARA (UiTM) and pass the Master of Public Health with minimum **CGPA 3.2** or equivalent approved by the Senate.

AND

i. Obtained full registration with MMC.
ii. Minimum 1 year sexperience after housemanship, either in hospitals or other health institutions. Priority will be given to applicants with working experience in the field of public health medicine.
iii. Candidates should obtain a TOEFL score of 550 for paper-based or 213 for computer-based or IBT score of 79-80 or an IELTS certificate with at least Band 6.0.
iv. Fulfil all university requirements and regulations.
v. Approved by Senate.
vi. Passed the entrance evaluation and an interview or any form of assessment deemed necessary by the Public Health Medicine Conjoint Committee.

Note: Candidates from Ministry of Health (MOH) Malaysia are selected on the basis of passing the entrance exam organized by the National Public Health Medicine Conjoint Board. Following selection, students sponsored by MOH requires the ministry approval to proceed with the programme.

APPLICATION

Application should be made online via www.ipsis.uitm.edu.my to Institute of Graduate Studies (IGS, UiTM).

Each application will be referred to The Post-Graduate Centre Faculty of Medicine, UiTM and Department of Public Health Medicine of Medical Faculty for further action. Candidate may be called for an interview to assess their public health experience and commitment in pursue DrPH programme before accepted. The result will be submitted to IGS for further action.

Candidate who failed and dismissed/status is withdrawn as university student is allowed to re-apply for the same programme, after a semester (1) on the condition that the same research is not carried out.

REGISTRATION

Student's Registration:

Graduate students must register every semester on the specified date. Graduate students who fail to register after the last specified date without the university's approval will be imposed a fine of RM250.00 and RM10.00 will be added to each flowing working day.

Graduate student status will be withdrawn if the students did not register within fourteen days **(14)** inclusive of Saturday and Sunday from the last day of registration.

Course Registration:

Student should register for the current semester's courses within the stipulated time stated in the postgraduate academic calendar. Student must follow all courses registered as stipulated in the schedule of the programme.

FEE STRUCTURE

The fee structure is as follows: RM52,326.00 for 6 semesters

PROGRAMME STRUCTURE

Curriculum Content and Structure

The classification and the component of the programme and its value is shown in Table 4 below:

Table 4: The subject classification of DrPH Programme

No.	Subject Classifications	Credit Value	%
1.	Courses / Modules: • Core • Elective	 24 4	 26.4 4.4
2.	Thesis and Fieldwork	63	69.2
	Total Credit	**91**	**100.0**

1. Coursework

Student needs to complete and get **at least 28 credit hours or units** from coursework. Student shall select the courses that he/she intends to take after discussing and get advice from the academic advisor / supervisor. Student is encouraged to take **at least ONE (1) elective module in each semester.**

Candidate must attend all lecture / tutorial / seminar / visit for the courses that had been registered. Attendance **not less than 80%** without written permission from the faculty is required and considered as entry requirement to sit for the final examination. Candidate with attendance less than 80% are not allowed to sit for the course and will be given FAIL status (F grade) with a ZZ status (Barred from taking the final examination).

1.1 Type of coursework:

- **Core courses** – a compulsory course for students as required by the respective programmes.
- **Elective courses** – courses selected by students from a list of courses offered by the respective programmes

2. Teaching and Learning Approaches

These are developed via all avenues of teaching such as lectures, tutorials, hands-on in computer laboratory, seminar presentations, assignments, field visits, research project presentation, research project dissertation write-up and self-learning.

Students are assessed by the followings:

- Attendance of **NOT LESS THAN 80%** for all required classes such as lectures / seminars / journal club during the course work. Students with attendance of less than 80% will not be allowed to sit for the End of Module Examinations.

a) Assessment System

Assessment system for this programme will consist of continuous and final assessments. Continuous assessment will be between 40% to 60% and final assessment will be between 40% to 60%.

b) Continuous Assessment

It is defined by each module and will include assessments such as written assignments, individual presentation, group presentation and field visit reports.

c) Final Assessment

This will be the written examination at the end of each semester that measures the knowledge and critical thinking skills of the candidates. The written examination will be in the form of essay questions, short notes questions or problem-based questions. Duration of examination will be one hour per unit course offered. For example, a 3 units course will have a three hours examination. Final assessment can include assignments that need to be submitted at the end of the particular semester.

Regulations of the Programme

i. It is compulsory for all candidates to sit for the final examination for each course at the end of each semester.
ii. It is compulsory for candidates to attend lectures, supervision sessions as well as other learning activities such as seminars, journal club, tutorials, practical sessions or field visits.
iii. Candidates who fail to achieve 80% of the attendance without written permission from the Faculty are not allowed to sit for the final assessment and will be given an F grade with a ZZ status.
iv. A fail status is given to students who obtain a grade less than B.
v. A candidate who fails a course may repeat the course up to 2 times during the duration of study.
vi. A candidate who obtained a CGPA of less than 2.67 for any semester will be terminated from the University.

vii. A candidate who was absent for the assessment of all the registered courses for the semester without the approval of the University will be terminated from the University.

3. Field attachment

The candidate is required to do field attachment during **Semester 4 and 5** (update based on Public Health Conjoint Board Committee meeting Rujukan KKM(KA)09/62/02/07/092 jld4 – Dated: 19 March 2012). This attachment provides the candidate with some work and field site exposure at the Government and Non-Government agencies related to public health medicine. The candidate will prepare the field attachment proposal under the guidance of the academic supervisor and will be placed under supervision of a field supervisor appointed for the field attachment. Upon completion of the attachment posting, the field supervisor shall evaluate and prepare a report of the candidate based on the experience gained throughout the attachment posting journey.

A logbook will be provided to each candidate to record all observation and monitoring work during the posting. The candidate may proceed to Semester 6 upon full evaluation by the academic supervisor, field supervisor as well as logbook fulfilment and final semester assessment.

The candidate must produce a **complete report of field attachment** which includes:

i. **Field supervisor report** on field attachment.
ii. **Fieldwork assignment.**
iii. Candidate report on their field attachment achievement together with their reflective writing via the **fieldwork logbook**.

4. Research and thesis

Proposal for research work shall start at the **first** semester. Candidate should develop a comprehensive good quality research proposal under the guidance of the academic supervisory relevant to any domains of public health medicine that may be of interest of the candidate. The research execution shall be planned together with the supervisors and the research proposal must be **approved** by the evaluation committee of the **Faculty Defence of Research Proposal (DRP)** and the **Faculty Research and Ethics Committee (FREC).**

ASSESSMENT AND EVALUATION

Candidate assessment for courses attended shall include continuous assessment (CONASS) and examination.

1. Coursework Assessment:

1.1 Grade and Grade Point

Grade and Value of Grade for coursework will be given as Table 5 below:

Table 5: The Grade and Grade point

GRADE	MARKS	NOTES	GRADE VALUE
A+	90 – 100	Pass with Distinction	4.00
A	80 – 89		
A-	75 – 79	Pass with Credit	3.67
B+	70 – 74	Satisfactory Pass	3.33
B	65 – 69		3.00
B-	60 – 64	Conditional Fail	2.67
C+	55 – 59		2.33
C	50 – 54		2.00
C-	47 – 49	Fail	1.67
D+	44 – 46		1.33
D	40 – 43		1.00
E	30 – 39		0.67
F	0 – 29		0.00

1.2 Fail Status

- A fail status is given to students who obtained a grade less than B for a core course.
- A fail status is given to students who obtained a grade less than C for an elective course.
- Student who fail in their examination and obtain a CGPA or less than 3.00 are required to repeat the course.

1.3 Status of probation

- Probation (P) status is given to a student with unsatisfactory performance
  i. Probation 1 (P1) – student with CGPA of above 2.80 and less than 3.00 for the semester
  ii. Probation 2 (P2) – Students with a CGPA of above 2.80 and less than 3.00 with a P1 status in the previous semester

Requirement for Repeat Courses:

- A student who fails in a course
- A student who fails in a Core course must repeat the course
- A student who fails in an elective course can repeat the same course of an equivalent course in the plan of study
- A student is allowed to repeat a core or elective course twice (2 times) during the duration of study.

2. Thesis examination

Thesis examination consists of two (2) components:

i. written thesis and
ii. oral examination (*viva voce*).

Candidates have to pass both components. One (1) internal and one (1) external examiner will examine the thesis.

3. Academic Conferment:

The degree in **Doctor of Public Health (DrPH)** shall be awarded to candidates who fulfil the following:

- Achieving a minimum of CGPA of 3.00; and
- Achieving a minimum grade of B in all core courses stated in the programme of studies
- Achieving in a minimum grade of C in all the elective courses as stated in the programme of studies
- Satisfactory completion of filed attachment
- Pass the thesis examination
- Pass the viva and has made necessary corrections
- Fulfil all University requirements and regulations
- Approved by the Senate

COURSES OFFERED

There are 27 modules offered of which **SIXTEEN (16)** are core courses and **ELEVEN (11)** are elective courses. The summary of information for each course is shown in Table 6 below:

Table 6: The courses offered in DrPH Programme

	Course	Semester 1					Semester 2			
		Code	Course	Coordinator	Credit		Code	Course	Coordinator	Credit
YEAR 1 (PART 1)	Core	DPH911	Protocol Development in Medical Research	Dr Nurhuda	3		DPH941	Public Health Interventions	AP Dr Siti Sara	2
		DPH912	Epidemiology of Communicable Disease	Prof Dr Mariam	2		DPH942	Public Health Policies and Planning	AP Dr Leny	2
		DPH913	Intermediate Biostatistics	AP Dr Rodi	3		DPH943	Water and Air Quality	Dr Ikhsan	2
		DPH914	Health Economics	AP Dr Leny	2		DPH944	Epidemiology of Non-Communicable Disease	Dr Zahir	2
		DPH915	Maternal and Perinatal Health	AP Dr Nik Nairan	2		DPH945	Primary Healthcare	AP Dr Nik Nairan	2
							DPH946	Occupational Health Services	Prof Dr Siti Munira	2
	Core						DPH932	Thesis and Fieldwork I*	Dr Ely	6
	Elective	DPH919	Quality in Healthcare	AP Dr Leny	2		DPH949	Health Resources Management	Dr Meram	2
		DPH920	Healthcare Marketing	AP Dr Leny	2		DPH950	Health Informatics	AP Dr Taufik	2
		DPH921	Occupational Medicine	Dr Kamarulzaman	2		DPH953	Occupational Risk Assessment	Dr Ely	2
		DPH924	Environmental Sanitation and Engineering	Dr Ikhsan	2		DPH954	Food Safety and Quality Control	Dr Ikhsan	2
		DPH927	Health Promotion	Dr Aimi	2		DPH957	Gender and Health	AP Dr Nik Nairan	2
		DPH952	Ergonomics	Prof Dr Siti Munira	2					
YEAR 1-3 (PART 2)	Core	DPH932	Thesis and Fieldwork I (S2)*	Dr Ely	6					
		DPH933	Thesis and Fieldwork II (S3)	Dr Ely	9					
		DPH934	Thesis and Fieldwork III (S4)	Dr Ely	15					
		DPH935	Thesis and Fieldwork IV (S5)	Dr Ely	15					
		DPH936	Thesis and Fieldwork V (S6)	Dr Ely	18					

A component of Part 2, but execution in Part 1, Semester 2

SYNOPSIS OF COURSES

RESEARCH METHODOLOGY

MODULE: PROTOCOL DEVELOPMENT IN MEDICAL RESEARCH
Code: DPH911 (3 Credit) - Major

This course will facilitate candidates with the appropriate knowledge and leadership skill in planning and recognizing feasibility and organizational issues, contributors and factors that impact in protocol development and conducting a quality research.

References:

1. Rothman, K.J.; Greenland, S. & Lash, T.L. (2008). *Modern Epidemiology*, 3rd Edition. Philadelphia, USA: Lippincott, Williams & Wilkins.
2. Elwood, M. (1998) *Critical Appraisal of Epidemiological Studies and Clinical Trials*. 2nd Edition. Oxford University Press
3. Levy, P. (1999). *Sampling of Populations: Methods and Applications*. John Wiley & Sons. London
4. McNeil, D. (1996). *Epidemiology Research Methods*. John Wiley & Sons. England

ENVIRONMENTAL HEALTH

MODULE: WATER AND AIR QUALITY
Code: DPH943 (2 Credit) – Major

This course will facilitate candidates with the appropriate knowledge on a variety of anthropogenic stressors and pollution, their sources in the natural and workplace environments, their modes of transport and transformation, their ecological and public health effects, and existing methods for environmental disease prevention and remediation

References:

1. Yassi A. (2001). *Basic Environmental Health*. Oxford University Press.
2. Wallace, Robert,B and Kohatsu, Neal (2008). *Public Health and Preventive Medicine*, New York, McGraw Hill, Section IV
3. Thad Godish (2004). *Air Quality*. Third Edition. CRC Press
4. Department of Occupational safety and Health (2005). *Code of Practice for Indoor Air Quality*.
5. Gordon McGranahan, Frank Murray (2003). *Air Pollution and Health in Rapidly Developing Countries*. Earthscan

MODULE: ENVIRONMENTAL SANITATION AND ENGINEERING
Code: DPH924 (2 Credit) – Elective

This course will facilitate candidates with the appropriate knowledge in identifying and managing needs of proper sanitation and engineering in health. Candidates trained will have appropriate skills on environmental sanitation and engineering issues and be able to develop, assess critically and formulate solutions for it. Skills on identifying, analysing, evaluating and managing health issues related to sanitation will be developed through this module. Graduates will also be familiarized with environmental laws and regulations.

References:

1. Salvato JA, Nemerow NL, Agardy FJ (2003). *Environmental Engineering*. John Wiley & Sons Inc., New Jersey, USA. ISBN 0471418137.
2. Mihelcic JR (2009). *Field Guide to Environmental Engineering for Development Workers: Water, Sanitation, and Indoor Air*. ASCE Press, Virginia, USA. ISBN 0784409854.
3. Victor Marcus Ehlers, Ernest William Steel (2009). *Municipal and rural sanitation*. 3rd Edition. McGraw-Hill Book Company Inc. New York, USA
4. Adelaide M. Lusambili (2008). *Environmental Sanitation and Gender among the Urban Poor*. VDM Verlag Dr. Müller. ISBN 3836456796.
5. Robert A. Corbitt (1998). *Standard handbook of environmental engineering.* 2nd edition. McGraw-Hill Book Company Inc. New York, USA. ISBN-10: 0070131600.

MODULE: FOOD SAFETY AND QUALITY
Code: DPH954 (2 Credit) – Elective

This course will facilitate candidates with the appropriate knowledge in identifying and managing risk on food. Candidates trained will have appropriate skills on risk-benefit analysis and be able to develop, assess critically and formulate solutions for it. Skills on identifying, analyzing and evaluating food quality will be developed through this module. Graduates will also be familiarized with laws and regulations on foods

References:

1. Ronald E. Hester, Roy M. Harrison (2001). *Food safety and quality*. Royal Society of Chemistry, Thomas Graham House, Cambridge, UK. ISBN 0854042709.
2. Bridget Hutter (2011). *Managing Food Safety and Hygiene: Governance and Regulation as Risk Management*. Edward Elgar Publishing Incorporated, Massachusetts, USA. ISBN 0857935704.
3. Norman G. Marriott (1999). *Principles of Food Sanitation*. 4th edition. Aspen Publishers, Maryland, USA (1999). ISBN 0834212323
4. Judy Davis, Laurie Curtis, Richard Lawley (2008). *The Food Safety Hazard Guidebook*. Royal Society of Chemistry, Thomas Graham House, Cambridge, UK. ISBN 9780854044603.
5. Mahendra Rai, Michael Chikindas (2011). *Natural Antimicrobials in Food Safety and Quality*. CAB International, Cambridge, UK. ISBN 1845937694

EPIDEMIOLOGY & BIOSTATISTICS

MODULE: EPIDEMIOLOGY OF COMMUNICABLE DIASEASE

Code: DPH912 (2 Credit) - Major

This course will equip candidates with enhanced knowledge and skills in epidemiology and prevention of communicable diseases of public health importance. Candidates will be exposed to specific details of epidemiology and prevention / control programmes so that they would be able to analyze the differences and uniqueness of each scope of communicable diseases. Throughout the course, candidates will need to plan and communicate scientific evidence in relation to prevention and control of communicable diseases

References:

1. Roger Webber (2009). *Communicable Disease Epidemiology and Control: A Global Perspective*. CABI.
2. David L. Heymann (2004). *Control of Communicable Diseases Manual*. 18 Ed, American Public Health Association.
3. World Health Organization: Communicable disease control in emergencies. A field manual. (website: http://www.who.int/infectious-disease-news/IDdocs/whocds200527/whocds200527chapters/

MODULE: EPIDEMIOLOGY OF NON-COMMUNICABLE DIASEASE

Code: DPH944 (2 Credit) - Major

This module will equip candidates with updated and in-depth knowledge and management in non-communicable diseases worldwide. Overall perspectives on non-communicable diseases of priority will be emphasized which include cardiovascular diseases, metabolic syndrome, cancer, injury, mental health, substance abuse, smoking and genetic diseases. It also complements research skills essential in managing the relevant interventions and evaluation programs, as well as on preventable risk factors underlying these diseases. Throughout the course, candidates will need to plan and communicate scientific evidence in relation to prevention and control of those diseases.

References:

1. Louis Galambos, Jeffrey L. Sturchio (2013). *Non communicable Diseases in the Developing World: Addressing Gaps in Global Policy and Research*. JHU Press.
2. Olusoji Adeyi, Owen Smith, Sylvia Robles (2007). *Public Policy and the Challenge of Chronic Non communicable Diseases*. World Bank Publications.
3. William W. Eaton (2012). *Public Mental Health*. Oxford University Press, USA.

MODULE: PUBLIC HEALTH INTERVENTIONS
Code: DPH941 (2 Credit) - Major

This course will equip candidates with enhanced knowledge and skills in public health interventions at different levels of populations. Candidates will be exposed to public health surveillance, crisis preparedness in health, networking and evaluation of preventive interventions. They shall be able to take full advantage of local, national and international health related agencies (inter-sectorial coordination) for solving local health problem. Candidates will be able to assess and analyzed critically the current preventive intervention strategies for further enhancement

References:

1. L Rychetnik, M Frommer, P Hawe, A Shiell (2002). *Criteria for evaluating evidence on public health interventions.* J Epidemiol Community Health; 56:119-127.
2. Sally Guttmacher , Patricia J. Kelly , Yumary Ruiz-Janecko (2010). *Community-Based Health Interventions* [Paperback]. Wiley and Sons.
3. David Royse, Bruce A. Thyer, Deborah K. Padgett (2009). *Program Evaluation: An Introduction* [Paperback] 5th edition Brooks Cole.

MODULE: INTERMEDIATE BIOSTATISTICS
Code: DPH913 (3 Credit) - Major

Intermediate Biostatistics module comprises basic statistical theory until immediate level pertaining in medical data. Candidate is expected to gain knowledge and apply it to solve medical research problems and hypothesis until immediate level of biostatistics. It also complements the research methods course which is essential for investigating clinical and population-based health problems and conducting their doctorate research project. This course will facilitate candidates with relevant knowledge and applications of advance statistics to solve medical research problems and hypothesis. It also complements the research methods course which is essential for investigating clinical and population-based health problems and conducting their doctorate research project.

References:

1. Bernard Rosner (2011). *Fundamentals of Biostatistics*. 7th edition. Harvard University and Harvard Medical School
2. Dawson and Trapp (2004). *Basic and Clinical Biostatistics*. Lange Series.
3. Wayne W. Daniel (2010). *Biostatistics: Basic Concepts and Methodology for the Health Sciences*. International Student Version, 9th Edition. John Wiley & Sons Ltd.
4. Sabine Landau & Brian S. Everitt (2004). *Handbook of Statistical Analyses using SPSS*. Chapman & Hall/CRC Press.
5. SPSS inc., IBM Company (2010). *Introduction to Statistical Analysis with PASW* Statistics. IBM Company.

FAMILY HEALTH

MODULE: MATERNAL AND PERINATAL HEALTH

Code: DPH915 (2 Credit) – Major

This course will facilitate candidates with enhanced knowledge in managing and critically analyze various aspects of maternal and perinatal health problems in the population. Candidates trained will acquire skills in identifying and solving health problems pertaining to maternal and perinatal health. This will also enable candidates to plan, implement and evaluate existing family health programs

References:

1. Ehiri J. (2009). *Maternal & child health. Global Challenges, Programs and Policies*. Springer. Arizona
2. National Academy of Sciences (2003). *Reducing birth defects. Meeting the challenge in the developing world*. National Academies Press, Washington, U.S
3. Kuller J, Norton M E. (2005). *Gynecologic and obstetric investigation: Prenatal testing & screening, New Frontiers, New Challenges*. S. Karger Publication, Basel, Switzerland
4. Greer IA, Nelson-Piercy C, Walters B. (2007). *Maternal medicine: medical problems in pregnancy*. Elsevier. Philadelphia, U.S
5. Bhatia J (2005). *Perinatal nutrition. Optimizing Infant Health and development*. Marcel Dekker, N.Y, U.S.

MODULE: PRIMARY HEALTH CARE

Code: DPH945 (2 Credit) – Major

This course will enable candidates to develop skills in identifying, analyzing, solving and evaluating primary healthcare problems at the population level. Candidates trained will have knowledge and skills and be able to develop, assess and critically analyze programs and services on primary healthcare

References:

1. Trisha Greehalgh (2007). Primary health care: Theory and Practice. Oxford, UK, Radcliffe Press, Blackwell Publishing
2. V. Zweigenthal (2001). *Primary Health Care: Textbook* (Paperback). ISBN: 1868916049
3. Anne Murray and Jill Clendon (2011). *Community health and Wellness*: *Primary health care* (paperback)
4. Valorie A. Crook (2002). *Primary health Care: People, Practice and Place*. ISBN 978075467270
5. Diana Guzys (2005). *An introduction to community and Primary Health Care (Paperback).* ISBN: 9780729541657.

MODULE: GENDER AND HEALTH
Code: DPH957 (2 Credit) – Elective

Women and men's current health issues and problems are very important components in family health. This course will enable candidates to develop skills in identifying, analyzing, solving and evaluating gender health problems at the population level. Candidates trained will have knowledge and skills and be able to develop, assess and critically analyze programs and services on gender and health at all levels of healthcare.

References:

1. M.L Narasiah (2004). *Gender Inequality and Poverty*. Discovery Publishing House, New Delhi.
2. National collaborating for women's and children's health (2004). *Fertility: assessment and treatment for people with fertility problems*. National Institute for clinical excellence. Royal College of Obstetricians and Gynaecologist, U.K.
3. Belen AH (2008). *Infertility in practice*. Informa Healthcare, London, U.K
4. Department of Reproductive Health and Research (2011). *Family planning: a global handbook for Providers*. WHO
5. Merill RM (2010). *Reproductive epidemiology. Principles and Methods*. Jones and Bartlett Publishers, LLC, Boston, MA.

HEALTH MANAGEMENT

MODULE: HEATH ECONOMICS
Code: DPH914 (2 Credit) - Major

The module explains the appropriate health economics knowledge in managing, analyzing and decision-making on various aspects when managing healthcare and healthcare related organizations. Candidates trained will have skills and be able to develop, assess, analyzed critically and make projections on the organization's needs. Skills on identifying, analyzing, solving and evaluating health problems at the population base level will also are built-in among the graduates through this module.

References:

1. Sherman Folland, Allen C. Goodman and Miron Stano (2014). *Economics of Health and Health Care.* 7th Edition. Pearson Education, Inc.
2. Barbara McPake, Charles Normand (2013*). Health economics: An International Perspective.* Third Edition. Routledge Taylor and Francis Group.
3. Charles E. Phelps (2013). *Health Economics*. Fifth Edition. Pearson Series.
4. Daniel Jackson (2011). Health Economics Made Easy. Scion Publishing Limited.
5. Mark Pauly, Thomas G. McGuire, Pedro Rita Barros (2012). *Handbook of Health Economics*. Volume 2. North Holland.

MODULE: PUBLIC HEALTH POLICIES AND PLANNING
Code: DPH942 (2 Credit) - Major

This module will facilitate candidates with the appropriate knowledge in Public Health Policies and Planning. Candidates trained will have skills in policy planning and development, planning for healthcare facilities and services, Decision making analysis and forecasting besides identifying issues pertaining to Public Health Policies and Planning. Candidates are expected be able to develop, assess, analysed critically and make projections on the organization's needs and plan for it

References:

1. L. Michele Issel (2014). *Community Health*. Third Edition. Jones and Bartlett Publishers.
2. Alan Z.Zuckerman (2011). *Healthcare Strategic Planning*. Third Edition. ACHE Management Series.
3. Bonni C. Hodges, Donna M. Videto (2005). *Assessment and Planning In Health Programs*. Jones and Bartlett Publishers. (2005)
4. Bruce Clements (2009). *Disasters and Public Health: Planning and Response*. Elsevier Inc.
5. Andrew Green (2007). *An Introduction to Health Planning for Developing Health Systems*. Oxford University Press.

MODULE: QUALITY IN HEALTHCARE
Code: DPH919 (2 Credit) – Elective

This module provides knowledge in manage, analyze and make a decision on the various aspects of health care quality decision making and quality of health care services and health care organizations that are related to health. Candidates who are trained will have the skills and are able to develop, assess, analyse critically and forecast the needs of the Organization and various control activities in this module.

References:

1. Introduction to Healthcare Quality Management. Patrice L/. Spath. Second Edition. Health Administration Press. 2013
2. The Healthcare Quality Book: Vision, Strategy, and Tools. Elizabeth R. Ransom, Maulik S. Joshi, David B. Nash, Scott B. Ransom. Second Edition. Health Administration Press. (2008)
3. Taking the Lead in Patient Safety: How Healthcare Leaders Influence Behavior and Create Culture by Thomas R. Krause, John Hidley and Diane C. Pinakiewicz. John Wiley & Sons, Inc. (2008)
4. Measuring Health Care: Using Quality Data for Operational, Financial, and Clinical Improvement (Wiley Desktop Editions). Yosef D. Dlugacz PhD. Jossey-Bass. (2006)
5. Measuring Quality Improvement in Healthcare: A Guide to Statistical Process Control Applications. Raymond G. Carey, Robert C. Lloyd. American Society for Quality (2001)

MODULE: HEALTHCARE MARKETING
Code: DPH920 (2 Credit) – Elective

This module provides an explanation and knowledge in marketing, to analyze and make decisions on various aspects of health care and health care organizations related to healthcare related organisations. Candidates who are trained will have the skills and are able to develop, assess, analyse critically and forecast the needs of an organization. Skills to identify, analyse, solve and evaluate marketing problems in basic-level assessment of the health of the population will be built among graduates through this module.

References:

1. Jones & Bartlett Learning (2010). *Essentials of Healthcare Marketing*. Eric N. Berkowitz. Third Edition.
2. Eliss A. Resnick, Michael Siegel. Third Edition. (2012). *Marketing Public health: Strategies to Promote Social Change*. Jones & Bartlett Learning.
3. Charles R. McConnell. (2009). *Umiker's Management Skills for the New Health Care.* Supervisor Jones and Bartlett Publishers.
4. John P. Kotter (2010). *Our Iceberg Is Melting: Changing and Succeeding Under Any Conditions*. Macmillan Publishers Ltd.
5. John L. Fortenberry Jr. (2010). *Health Care Marketing: Tools and Techniques.* Jones and Bartlett Publishers.

MODULE: HEALTH RESOURCES MANAGEMENT
Code: DPH949 (2 Credit) – Elective

This course will facilitate candidates with the appropriate healthcare resources management knowledge in managing, analyzing and decision-making on various aspects when managing healthcare and healthcare related organizations. Candidates trained will have skills and be able to develop, assess, analyzed critically and make projections on the organization's healthcare resources needs. Skills on identifying, analyzing, solving and evaluating healthcare resources problems at the population base level will also are built-in among the graduates through this module.

References:

1. Charles R. McConnell (2009). *Umiker's Management Skills for the New Health Care Supervisor*. Jones and Bartlett Publishers.
2. John P. Kotter (2010). *Our Iceberg Is Melting: Changing and Succeeding Under Any Conditions*. Macmillan Publishers Ltd.
3. L. Fleming Fallon Jr., Charles R. McConnell (2007). *Human Resource Management In Health Care: Principles And Practice*. Jones and Bartlett Publishers.
4. Bruce Fried, Myron D. Fottler (2008). *Human Resources in Healthcare: Managing for Success*. Third Edition. Health Administration Press.
5. William Bridges, Susan Bridges (2009). *Managing Transitions: Making the Most of Change.* Third edition. Da Capo Lifelong Books.

MODULE: HEALTH INFORMATICS
Code: DPH950 (2 Credit) – Elective

This module will facilitate candidates with the appropriate health informatics knowledge in managing, analyzing and decision-making on various aspects of managing healthcare and healthcare related organizations. Candidates who are trained will have the skills and are able to develop, assess, analyse critically and forecast the needs of an organisation appropriate in managing health analyze and make decisions according to the procedures of the various aspects of health care management and health care related organizations. Candidates who are trained will have the skills and are able to develop, assess, analyse critically and forecast the needs of the organization. Skills to identify, analyse, solve and evaluate the health problems of the population through Health Informatics foundation will also be built among graduates through this module.

References:

1 Robert E. Hoyt (2012). *Health Informatics: Practical Guide For healthcare And Information Technology Professionals*. Fifth Edition.
2 Stephan P. Kudyba (2010). *Healthcare Informatics: Improving Efficiency and Productivity*. CRC Press.
3 Karen A. Wager, Frances W. Lee, John P. Glaser (2013). *Health Care Information Systems: A Practical Approach for Health Care Management*. 3rd Edition. Jossey-Bass. (2013)
4 Michelle A. Green, Mary Jo Bowie (2010). *Essentials of Health Information Management: Principles and Practices.* 2nd Edition. Delmar Cengage Learning.
5 Ann Peden (2011). *Comparative Health Information Management*. 3rd Edition. Delmar Cengage Learning.

OCCUPATIONAL HEALTH

MODULE: OCCUPATIONAL HEALTH SERVICES
Code: DPH946 (2 Credit) – Major

This course will facilitate candidates with relevant knowledge and applications in OHS, its management, implementation and evaluation. This component of the module is an important module which gives an overview of every aspect of OHS in a workplace. This includes work organization, workplace surveillance, health surveillance, counselling, workplace health promotion, work ability and rehabilitation, first aid/accident management, occupational health and primary health. It also covers delivery, administration, management and the medical aspects of occupational health services. In addition, it serves as an applied knowledge for those planning to pursue as an occupational health physician in the industry.

References:

1. Levy, B. S. (2010). *Occupational and environmental health: recognizing and preventing disease and*

injury. 6th Edition: Lippincott Williams & Wilkins.
2. Guidotti, T. L., Arnold, M. S., Lukcso, D. G., Green-McKenzie, J., Bender, J., Rothstein, M. A., Stecklow, M. (2012). *Occupational health services: a practical approach*: Routledge.
3. Palmer, K. T., Cox, R. A., & Brown, I. (2013). *Fitness for work: the medical aspects*: 5th Edition. Oxford university press.

MODULE: OCCUPATIONAL MEDICINE

Code: DPH921 (2 Credit) – Elective

This course will facilitate candidates with enhanced knowledge on identification, management and prevention of occupational diseases and injuries. It will facilitate candidates with appropriate skills in preparing medical report pertaining to occupational diseases and injuries for the purpose of compensation, job placement and fitness of work. Leadership skills and teamwork in workplace management for occupational diseases and injuries will also be included in this course.

References:

1. Baxter, P. J., Aw, T.-C., Cockcroft, A., Durrington, P., & Harrington, J. M. (2010). *Hunter's diseases of occupations*: CRC Press.
2. Aw, T.-C., Gardiner, K., & Harrington, J. M. (2013). *Occupational health: pocket consultant:* John Wiley & Sons.
3. David K, Ken T (2011). *Textbook of Occupational Medicine*. Practice 3rd edition: World Scientific

MODULE: ERGONOMIC

Code: DPH952 (2 Credit) – Elective

This module provides a broad-based introduction to ergonomic principles and their application in the design of work, equipment and workplace. Consideration is given to musculoskeletal disorders, manual handling, and ergonomic aspects of the environment, social and legal issues. Study of this subject is essential for occupational health physicians and those furthering in this subject to become competent health ergonomic assessors

References:

1. Nicholson, A. S., & Ridd, J. E. (2014). *Health, Safety and ergonomics*: Butterworth-Heinemann.
2. Salvendy, G. (2012). *Handbook of human factors and ergonomics*: John Wiley & Sons.
3. Wilson & Corlett (2005). *Evaluation of Human Work*: Taylor and Francis.

MODULE: OCCUPATIONAL RISK ASSESSMENT
Code: DPH953 (2 Credit) - Elective

This is a study of methods for assessing potential hazards associated with workplace health environment. It will also expose postgraduate students to evaluate techniques for the development of comparative rankings of problem areas. This course will enhance the ability of those candidates pursuing in advance occupational health (doctorate level) to put forward with appropriate control measures and manage any of the identified problems at the managerial level.

References:

1. Sadhra, S., & Rampal, K. (1999). *Occupational health risk assessment and management*: Wiley-Blackwell.
2. Viner, M. D. (2015). *Occupational Risk Control: Predicting and Preventing the Unwanted*: Ashgate Publishing, Ltd.
3. Friis, R. H. (2015). *Occupational Health and Safety for the 21st Century*: Jones & Bartlett Publishers.

HEALTH PROMOTION

MODULE: HEALTH PROMOTION
Code: DPH927 (2 Credit) - Elective

This course will provide candidates the appropriate knowledge and skills to become future practitioners in health promotion. Candidates will develop skills to effectively implement and evaluate health promotion intervention programs whilst identifying the issues and challenges to enhance the quality and validity of health promotion practices. Core elements such as evaluation skills, communication, critical thinking, and decision making in developing and continuing health promotion programs would be built in throughout this course.

References:

1. Randall R. Cortell, James T. Girvan and James F Mckenzie (2011). *Principles and Foundations of Health Promotion and Health Education* (5th Edition).
2. James F Mckenzie, Brad L. Neiger & Rosemary Thackery (2012). *Planning, Implementing & Evaluating Health Promotion Programs A Primer* (6th Edition).
3. Sherri Sheinfield & Joan Arnold (2006). *Health Promotion in Practice*.
4. Joanna Aboyoun Hayden (2013) *Introduction to Health Behavior Theory* (2nd Edition).
5. Naomi Modeste, Teri Tamayose & Helen Hopp Marshak (2004). *Dictionary of Public Health Promotion and Education: Terms and Concept*.

THESIS AND FIELDWORK

THESIS AND FIELDWORK

Codes: DPH932, DPH933, DPH934, DPH935 and DPH936 (63 Credit)

These courses will facilitate candidates with adequate knowledge in designing and conducting public health research. The courses will also offer an opportunity to critically evaluate the adequacy and scientific merit of research protocols and develop an appreciation on ethical aspects of conducting research involving human subjects. At the end of these courses, candidates are expected to finish the write up of the research in thesis format and publish at least 2 (two) journal articles in a peer review or an index journal. Students will also be assigned to field work attachment at various identified Public Health facilities. At the end of the field work attachment, candidates are expected to acquire and develop skills in managing and solving Public Health matters.

References:

1. Horowitz, L. (1986). *A Writer's Guide to Research*. Writer's Digest Books.
2. Berry, R., & Berry, R. (1986). *How to write a research paper* (No. LB 2369. B47 1986).
3. Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.
4. Bausell, R. B. (1986). *A practical guide to conducting empirical research*. HarperCollins Publishers.
5. Cottrell, R. R., & McKenzie, J. F. (2010). *Health promotion and education research methods: Using the five-chapter thesis/dissertation model*. Jones & Bartlett Publishers

SUPERVISOR

Candidate's research and thesis work will be supervised by an academic supervisor or supervisory team. In a supervisory team, the main supervisor shall bear the main responsibilities while the co-supervisor will be assisting the main supervisor. The main supervisor will also be responsible in advising candidate in courses/workshops participation and other relevant matters related to the research context.

The main supervisor is an academic staff employed by the UiTM. Any academic staff that has been seconded to other places, resigned, retired from the university or other qualified individual from other institution can only become co-supervisor, with exception in cases with special agreement. If due to unavoidable circumstances, main supervisor or co-supervisor could not perform the duty, another teaching staff shall be appointed to carry out supervisory duties.

Supervisor shall submit one confidential report regarding the progress of the candidate at least one in each 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.

LIST OF ACADEMIC STAFF

Head of Department:

Dr. Zahir Izuan Azhar
MBBS (UM), MPH (UKM), DrPH (UKM)

- **ENVIRONMENTAL HEALTH**

Dr. Mohamad Ikhsan Selamat
B.Med.Sc (UKM), MD (UKM), MCom. Med (Env. Health) (USM)

- **EPIDEMIOLOGY & BIOSTATISTICS**

Prof. Dr. Mariam Mohamad
B.Med.Sc (UKM), MD (UKM), M.Comm. Health (Epid & Biostat) (UKM)

Assoc. Prof Dr. Mohamad Rodi Isa
MBBS (UM), DAP&E (SEAMEO-TROPMED, Msia), MPH (UM), DrPH (UM)

Dr. Zahir Izuan Azhar
MBBS (UM), MPH (UKM), DrPH (UKM)

Dr. Nurhuda Ismail
MD (UKM), MPH (UM), DrPH (UM)

Assoc. Prof. Dr. Chen Xin Wee
MD (USM), MPH (USM), DrPH (Epidemiology) (USM)

- **FAMILY HEALTH**

Assoc. Prof. Dr. Nik Nairan Abdullah
MBChB (Otago, NZ), MPH (Family Health) (UM), PhD (Community Health) (UKM)

Dr Dalila Roslan
MBBCh BaO (Galway, Ire), MPH (UKM), DrPH (UKM)

Dr. Raudah Mohd Yunus
MBChB (Alexandria, Egypt), MPH (UM), DrPH (UM)

- **HEALTH MANAGEMENT & ECONOMICS**

Dato' Dr. Khalid Ibrahim
MBBS (UM), MHHSM (London, UK)

Assoc. Prof. Dr. Ahmad Taufik Jamil
B.Med.Sci (UKM), MD (UKM), MComm. Health (Health Management) (UKM), MSc (IT) (UPM)

Assoc. Prof. Dr. Leny Suzana Suddin
MD (USM), MPH (UKM), DrPH (UKM)

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- **OCCUPATIONAL HEALTH**

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Dr. Kamarulzaman Muzaini
MBBS (UiTM), MPH (UiTM), DrPH (UiTM)

- **HEALTH PROMOTION**

Dr. Aimi Nadira Mat Ruzlin
BSc (Bio-Health Sc), MPH (Melbourne), PhD (USM)

OTHERS

a) List of Relevant Journals

American Journal of Epidemiology
American Journal of Public Health
Asia Pacific Journal of Cancer Prevention
Asia Pacific Journal of Public Health
BMJ Open
BMC Cancer
BMC Infectious Diseases
BMC Public Health
British Medical Journal
Bulletin of the World Health Organization
Epidemiologic Reviews
International Journal of Epidemiology
International Journal of Environmental Health Research
International Journal of Infectious Diseases
International Journal of Occupational and Environmental Health
International Journal of Public Health Research
Journal of Community Health
Journal of Environmental Health
Journal of Environmental and Public Health
Journal of Epidemiology and Community Health
Journal of Mental Health
Journal of Toxicology and Environmental Health
Journal of Occupational Medicine
Lancet
Malaysian Family Physician
Malaysian Journal of Medical Sciences
Malaysian Journal of Nutrition
Malaysian Journal of Public Health Medicine
Malaysian Journal of Science
Medical Journal of Malaysia
Occupational and Environmental Medicine
Preventive Medicine
PLOS One
Sains Malaysiana
Scandinavian Journal of Work, Environment and Health
Social Science and Medicine
Southeast Asian Journal of Tropical Medicine and Hygiene
The International Journal of Tuberculosis and Lung Diseases
The New England Journal of Medicine

b) List of Relevant Websites

i. Ministry of Health Malaysia website - www.moh.gov.my
ii. World Health Organization website - www.who.int
iii. Center of Disease Control, USA website - www.cdc.gov
iv. National Institute of Occupational Safety and Health Malaysia website - www.niosh.com.my
v. Department of Occupational Safety and Health Malaysia website - www.dosh.gov.my
vi. Department of Environment Malaysia website - www.doe.gov.my
vii. Department of Statistics Malaysia website - www.statistics.gov.my
viii. Institute for Medical Research Malaysia website – www.imr.gov.my
ix. National Institutes of Health Malaysia website – www.nih.gov.my
x. Institute for Public Health Malaysia website – www.iku.gov.my

c) List of Relevant Databases Subscribed by UiTM for Literature Search

i. Science Direct
ii. SCOPUS
iii. SpringerLink
iv. Web of Science (WoS)

CONTACT ADDRESS

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