"This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 3 of 2016 for Master's Degree Programmes and By-Laws No. 4 of 2016 for Postgraduate Diplomas and Postgraduate Certificates"

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

Prospectus

MASTER IN MEDICAL TOXICOLOGY AND
POSTGRADUATE DIPLOMA IN MEDICAL TOXICOLOGY

(To be effective from the year 2016)

SPECIALTY BOARD IN MEDICAL TOXICOLOGY
BOARD OF STUDY IN MULTIDISCIPLINARY STUDY COURSES

Contents

1. NOMENCLATURE

1.1 NAME OF THE DEGREE PROGRAMME

(a) Master in Medical Toxicology
(b) Diploma in Medical Toxicology

1.2 FULL TITLE:

(a) Master in Medical Toxicology
(b) Diploma in Medical Toxicology

1.3 ABBREVIATED TITLE:

(a) M. Med. Tox.
(b) PGDip (Med.Tox.)

2. BACKGROUND TO THE PROGRAMME

Poisoning and snakebites are major clinical problems. In some countries, the field of medical toxicology has developed into a sub specialty but in most countries the training is limited to few lectures at undergraduate level. Medical toxicology is a rapidly evolving field of science which epitomizes the need to continuously update the knowledge of practicing doctors in these countries.

Sri Lanka has an established strong international research reputation in the field of clinical toxicology which has attracted a number of international collaborative projects. It also has had a strong track record of translating research evidence into policy.

Although medical toxicology and toxinology have developed into a specialty within the medical sciences in some developed countries, undergraduate curricula do not place much emphasis on medical toxicology. This has led to less than optimal knowledge on toxicology related matters among medical professionals and has a negative impact on patient care and on the quality of research output in relation to toxicology.

Thus, the MSc in Medical Toxicology was developed as a step towards recognition of the importance of this subject stream and aimed to bridge the gap between undergraduate training and practicing of evidence based medicine in matters related to toxicology and toxinology. The PGIM commenced this training programme in 2010, under the Specialty Board in Medical Toxicology which functions under the purview of the PGIM's Board of Study in Multidisciplinary Study Courses.

Acquisition of this MSc was considered useful to:

- improve the knowledge in relation to medical toxicology and toxinology
- qualify the participants for promotion to grade 1 medical officers in the Ministry of Health in Sri Lanka
- improve research output in the fields of toxicology and toxinology
- provide a foundation for further training as a clinical toxicologist

3. JUSTIFICATION FOR CURRENT AMENDMENTS

In 2010 the PGIM started the MSc in Medical Toxicology as an online teaching course. Up to now, two batches of trainees have completed the MSc course successfully. In 2015, Wikitox, an online toxicology academic organization, proposed to expand the present course to international students. A memorandum of understanding (MOU) was signed with Wikitox in October 2015.

As some trainees, especially medical specialists, could also benefit from a shorter course covering core areas in toxicology, it was proposed to incorporate a one year PG diploma was proposed and it was incorporated into the programme. A revised curriculum was proposed to update the course and to incorporate the international students.

The title of the qualification and other details in this prospectus have also been modified to make the course consistent with the updated Sri Lanka Qualifications Framework, issued by the UGC in 2015. The MMedTox is placed at Level 9 of the SLQF, while the PgDip(MedTox) is placed at Level 8.

4. COURSE OBJECTIVES

The qualification-holder should be able to:

- explain the mechanisms of toxicity
- manage specific conditions related to toxicology and toxinology and instruct others in the same.
- discuss the broader social and regulatory context in relation to toxicology
- critically appraise medical literature and evidence in the practice of toxicology and toxinology.
- demonstrate basic knowledge in order to facilitate further learning in the field of clinical toxicology.
- engage in self directed learning and evidence based practice.

5. ELIGIBILITY CRITERIA

Applicants may be from one of the following categories:

Category 1

(a) Applicants with a basic medical degree registrable with the Sri Lanka Medical Council or equivalent statutory body in their country of qualification, and
(b) one year of clinical experience after internship.

In the case of applicants from overseas, the certificate of registration to practice as a medical practitioner and evidence of one year of clinical experience after internship should be submitted with the application.

Category 2

(a) Trainees enrolled in a recognized medical specialist training program in their country (which may be Sri Lanka, or any other country) who have completed the primary exams for that specialty. Specializations such as medicine, paediatrics, anaesthesiology, critical care or emergency medicine will be considered. Such applicants, in addition to providing evidence of success in postgraduate specialty training, would have to provide curriculum vitae, a covering letter showing relevance of this course to the applicant's current position and/ or career path and a letter of support from the applicant's current employer or academic supervisor. These documents would be reviewed by the selection committee appointed by the PGIM. The selection committee's decision will be final.

All candidates are expected to be competent in basic computer skills and should be able to organize facilities to participate in the online course. The PGIM will not undertake training of candidates in relation to basic computer skills. A workshop will be held in order to give training necessary to interact with the online learning platform (Moodle).

6. SELECTION PROCESS

Admission to the course is limited and competitive. Up to 60% of the available training slots may be filled by applicants from Category 1, on the basis of their performance at the Selection Examination. The remaining 40% of training slots may be filled by applicants from Category 2.

The Selection Examination consists of a Multiple Choice Question paper of 2 hours duration, with forty (40) Multiple Choice Questions of True/False type. Questions are derived from basic pharmacology, basic physiology, basic toxicology and general medicine. In marking answer scripts, each correct response will be awarded +1 mark; each incorrect response will be awarded -1 mark; and if no response is marked, zero. There will be no negative carry over, so that each question carries a maximum of 5 marks and a minimum of zero.

Those who obtain more than 50% in the selection examination shall be considered to have passed the selection examination. The number selected for the course is based on the rank order of those who have passed the selection examination.

Applicants from Category 2 will be accepted as eligible for admission without being required to sit for the Selection Examination, if they are enrolled into a recognized medical specialist training program in their country, and have completed the primary exams for that specialty. Specializations such as medicine, paediatrics, anaesthesiolgy, critical care or emergency medicine will be considered. Applicants/candidates, in addition to providing evidence of success in postgraduate specialty training, would have to provide curriculum vitae, a covering letter showing relevance of this course to the applicant's current position and/ or career path and a letter of support from the applicant's current employer or academic

supervisor. These documents would be reviewed by the selection committee appointed by the PGIM. The selection committee's decision will be final.

Each trainee should determine at enrolment whether they intend to enroll in the Masters (2 years) or Diploma (1 year) programme. It is possible to withdraw from the Masters programme after successful completion of the first year and be awarded the Diploma. In the case of trainees who wish to upgrade from a Diploma to a Masters qualification, an appeal for a change in enrolment must be made to the PGIM.

7. NUMBER SELECTED FOR TRAINING

Available training opportunities will be indicated by the PGIM in the public circular for the MMedTox selection examination. The number of training slots will be predetermined each year by the relevant Board and approved by the Board of Management in consultation with the Ministry of Health.

Applicants from overseas will be given a maximum of 40% of the available training slots.

8. STRUCTURE OF TRAINING PROGRAMME

8.1 DURATION

The course duration will be one year for the Diploma and two years for the Masters degree.

8.2 COURSE STRUCTURE

The course is a distance learning programme based on an online platform using the MOODLE learning management system. In addition to course work, trainees are expected to formulate a case book by critically analyzing a designated number of toxicology-related cases, in a ward setting. Each ward setting must be prospectively approved by the Specialty Board.

Diploma trainees have to complete 4 modules designated as 'core subjects' in order to sit for the final PGDip (Med.Tox.) exam, while Masters trainees have to complete the 4 core modules and 4 other modules designated as 'elective subjects' in order to sit for the final M.Med. Tox exam.

Trainees are also encouraged to attend international/national face-to-face workshops in clinical toxicology, but these will not carry additional credits.

Each module is assigned a credit weight, such that one credit is equivalent to 50 notional hours of learning. Notional learning hours include those spent on online learning activities on the MOODLE platform and on self-study off the MOODLE platform, as well as time spent on preparation for assignments, carrying out assignments and assessments.

Trainees are expected to spend at least 30 hours of learning each week on this study programme during the first year to cover the 'core subjects'. This includes online learning activities equivalent to 15 hours per week on the MOODLE platform and 15 hours of self-study off the MOODLE platform using related learning material / references.
During the second year, trainees are expected to spend at least 25 hours of learning each week to cover the 'elective subjects'. This includes online learning activities equivalent to 10 hours per week on MOODLE platform and 15 hours of self-study.

The overall structure of the study programme shall be as follows:

Total Credit / time allocations for Masters in Medical Toxicology (M-OO4)				
Unit No.	**Name of the Module**	**Type**	**Total duration of online activity**	**Total number of credits**
M-004-01	Core Toxicology	Core modules (27 credits)	10 weeks	6
M-004-02	Clinical Toxidromes		12 weeks	7
M-004-03	Investigations and monitoring		12 weeks	7
M-004-04	Regional Toxicology 1		12 weeks	7
M-004-05	Regional Toxicology 2	Four elective modules (20 credits)	10 weeks	5
M-004-06	Hazmat Chemical Disaster		10 weeks	5
M-004-07	Community Health and Environmental Toxicity		10 weeks	5
M-004-08	Addiction		10 weeks	5
M-004-09	Regulatory Sciences		10 weeks	5
M-004-10	Mixed overdoses		10 weeks	5
M-004-11	Telephone toxicology		10 weeks	5
M-004-12	Rare & Unusual Poisonings		10 weeks	5
Total Credit and time duration			86 weeks	47 credits

8.3 COURSE CONTENT

The content of each module is given in Annex 1

8.4 TEACHING-LEARNING ACTIVITIES

The online training would make use of reading materials, video demonstrations, pod casts, online presentations, discussion boards, assignments and quizzes. Each module will have several topics of designated duration (one week, in most cases) that require the trainees to actively participate and contribute. During the programme, trainees will be grouped for each topic.

8.4.1 Tutorial Group Structure and Function

Trainee will be allocated into a tutorial group. As each module consists of a series of topics, trainees will be rotated through differing roles for each topic as follows:

- Discussion leader: Initiates the discussion by attempting to provide answers or thoughts to a presented clinical scenario and related questions
- Group members: Comment and add to the discussion leader's post. In addition, each are trainee may post additional questions or discussion points.
- Discussion rapporteur: Collate the group views towards the end of the tutorial session

8.4.2 Distribution by internet

All core learning materials would be delivered by internet

8.4.3 Discussion forums

A clinical scenario and related questions will be presented at the start of each new topic.

The trainees will be expected to consider this information, and then read and critically consider the references and other resources that are provided and contribute their opinions to the discussion forum. Trainee's contributions are expected to add or build upon the discussion, not repeat previously posted responses, facts or principles. The educational model is based around a high level of interaction within the groups, whereby trainees will learn from each other.

Participation is measured against the quality of their contribution in group discussions, including delegation as leader or rapporteur. The discussion leader's post should address all the aspects of the clinical scenario and related questions. It should also highlight some areas of controversy or uncertainty. A group member's posts should not repeat the contents of the lead post, but instead it should offer further comment and insights, highlighting areas of difference of opinion, and/or ask further questions of the group on unclear or unknown topics.

The rapporteur's post should summarise the week's discussion effectively highlighting the take home messages for the topic and any areas of controversy. However, it is not acceptable to simply state an area of controversy; instead, the various opinions and reasons for and references that support such opinions should be presented. As such, to enable a useful summary to be produced at the end of each topic, all members of the group including the leader and rapporteur should contribute to the discussion.

In the discussion forum it is necessary to contribute to the group discussion but it is not necessary to be correct in order to receive good grades.

Tutors are looking for quality posts when they grade a post for purposes of assessment.

What is a "Quality" Post?

A quality post should be at least one paragraph but less than 300 words, and should add value to the discussion. It should also reference and critically discuss the course and other material, and not simply be an unsupported statement of opinion.

It should not be a simple "that is a good point - I agree". You may agree with a colleague's post, provided you say WHY you agree with appropriate references.

Areas that add value include, a critical appraisal of the literature, highlighting a seminal article, reorienting discussion that had strayed from the original clinical scenario and questions, answering a clinical or mechanistic dilemma (e.g. pathophysiology of this condition, or validity of extrapolating from known mechanism of another better described toxic substances), a clinical pearl or introduction of content leading to relevant or related discussion or questions. Making an initial and quality post in the case that the leader is slow to initiate discussion can also be considered valuable.

8.4.4 Tutors

Tutors will be allocated to oversee the web-based discussion boards within a module. The major input of the online tutor is after the discussion has been summarized by the rapporteur. Prior to that, they may offer guidance or supplementary questions to enhance learning.

8.4.5 Zero tolerance for plagiarism

All academic material submitted for online activities (e.g. discussion forums, assignments) will be perused using sophisticated software for acts of plagiarism. In the event of detecting plagiarism, action will be taken according to the degree of the violation and can amount to:

- Instructing on re-submitting the work with appropriate changes
- Reporting to the other relevant bodies dealing with disciplinary matters at the PGIM
- Failing the assessment in which the plagiarized content was intended
- Suspension from the course of study after a disciplinary inquiry according to the PGIM regulations.
- Or any other disciplinary action according to the PGIM regulations as decided by the relevant authorized body.

8.4.6 Reference materials

All the reference articles and book chapters will be provided with links on the MOODLE platform.

9. COURSE ASSESSMENT

This requires successful completion of course work and stipulated number of credits.

The course evaluation will be done in 2 parts: First Year Assessment during the 1st Year and Second Year Assessment during the second year.

9.1 FIRST YEAR ASSESSMENT

The First Year Assessment comprises of two components.

(a) Continuous Assessment of the Core Modules
(b) Part I Examination

9.1.1 Continuous Assessment of the Core Modules (50% of the final mark)

The total mark given for continuous assessments will be 150 (50 marks for forum discussions, 50 marks for mid-module assignments and 50 marks for end module assignments) and that will be scaled down to 100.

The following factors will be considered when marking these assessments

1 Discussion Forums (50/150 of the Continuous Assessment)

Trainees need to attend a minimum of 80% of the online discussions to have satisfactory attendance and be eligible to receive marks for this component. Participation is measured against the quality of their contribution in group discussions, including delegation as leader or rapporteur.

Grading of Forum Posts

A trainee needs to make a post in order to be considered to have attended that topic and the post must occur while that topic is active (prior to submission of the summary by the rapporteur). In addition, each trainee at the end of each module will be asked to nominate their 5 highest quality posts, and justify the selection. The trainee should consider their nomination in the context of the entire discussion thread e.g. a post which is comprehensive but effectively repeats something already posted is unlikely to score highly (see quality post below). Those 5 posts will be assessed by a designated tutor and an average mark (out of 100) will be given per each trainee which will be considered as the forum marks for that particular course unit.

2 Mid Module Assignments (50/150 of the Continuous Assessment)

Each mid-module assignment will be marked out of 100. The assignments should be submitted through the online platform before the stipulated deadline.

3 End Module Assignments (50/150 of the Continuous Assessment)

Each end module assignment will be marked out of 100. The assignments should be submitted through the online platform before a stipulated deadline.

9.1.2 Part I Examination (50% of the final mark)

Eligibility to sit the Part I Examination

- A candidate should obtain a minimum of 80% participation for online discussion forums of core modules.
- A candidate who is deemed ineligible to sit the Part I Examination due to less than 80% participation in online discussion forums would have to submit one or more assignment(s) designated by the Specialty Board and obtain 'pass' grade(s) (50 marks or more for each assignment) in order to be considered as eligible for sitting the exam.

Structure of the Part I Examination

The Part I Examination will consist of a Multiple Choice Question paper, based on 4 core modules. This can be attempted in any PGIM-approved centre, one of which will be in Colombo. The location of other examination centres will be provided 3 months prior to the exam and it may be necessary for the trainee to travel internationally to complete this exam.

The duration of the paper would be 2½ hours. There would be 30 questions of the single best response type and 30 of the true/ false type questions. Each true/ false type question will carry a mark out of 5 and each single best response will carry 3 marks and the total marks available for the MCQ would be scaled to obtain a mark out of 50.

Successful Candidate: First Year Assessment

In order to pass the First Year Assessment, a candidate should obtain

1. 50% or more for the continuous assessments and
2. 50% or more for the Part I Examination

Unsuccessful candidate: First Year Assessment

1. A candidate who has obtained 50% or more for the continuous assessments but has failed to achieve 50% or more in the Part I Examination is eligible to sit for the next exam.
2. A candidate who has obtained 50% or more for the Part I Examination but has failed to achieve 50% or more for the continuous assessments but would have to follow (repeat) the relevant modules as designated by the Specialty Board and attain the stipulated minimum requirements within a given period decided by the Specialty Board (The candidates would have to incur the expenses in repeating an online module as designated by the PGIM).

3. A candidate who has failed to obtain 50% or more for both the continuous assessments and the Part I Examination would have to repeat the relevant modules as designated by the Specialty Board and sit for the next examination.

A candidate would be given a maximum of six attempts over a period of 8 years, whichever comes first, to complete the Part I Examination from the date of commencing the course.

A trainee who has not passed the First Year Assessment may be permitted to follow the 'Elective Subjects' provided that the trainee has made the appropriate payments. However such a trainee is not eligible to sit the Part II Examination until he / she has passed the First Year Assessment.

9.2 Second Year Assessment

The Second Year Assessment comprises three components.

1. Continuous Assessment of Elective Modules
2. Case Book
3. Part II Examination

9.2.1 Continuous Assessment of the Elective Modules (50% of the final mark):

The total mark given for continuous assessments will be 150 (50 for forum discussions, 50 for Mid Module assignments and 50 for end module assignments) and that will be scaled down to 100.

Discussion forums will be marked and graded according to the criteria given in Section 9.1.1 above.

9.2.2 Case Book

During the course, each trainee is expected to compile a case book consisting of 8 different clinical cases in toxicology and toxicology according to the following criteria:

1. Each case to be written using a format given in the guideline (See the Annexure 2):
2. Trainees are expected to visit a medical facility of choice and witness and get involved in the management of each patient.
3. The medical facility should be prospectively approved by the PGIM.
4. The trainees should inform the PGIM at the beginning of the second year the name of the consultant and the hospital in which they intend to observe clinical cases, to facilitate the PGIM to prepare supporting documents.
5. The consultant-in-charge of the patient should supervise the case report.
6. An internal supervisor will be nominated by the specialty board for each trainee and the written case reports will be supervised by the internal supervisor. It is the duty of the trainees to send all the case reports at least 1 month before the Case Book submission date to the internal supervisor for review.

Case Book Structure: Please see the annex 2

Case Book Submission
Trainees are required to submit the case book approximately 3 months before the date of the final exam.

Case Book Assessment:
The case book will be assessed at a face-to-face *viva* examination when the trainee will defend the cases, using a structured marking scheme (Annex 3). **Candidates are expected to obtain 50% or more out of 100 marks to receive a 'pass' grade in order to become eligible to sit the final exam.**

Re-submission of the Case Book
Trainees who obtain less than 50% for the case book are expected to re-submit the case book, according to examiner recommendations, 1 month before the exam for re-evaluation.

9.2.3 Part II Examination (50% of the final mark)

Eligibility to sit the Part II Examination

- Passed the First Year Assessment
- Obtained a minimum of 80% participation for online discussion forums of elective modules.
- Obtained a 'pass' grading for the Case Book

A candidate who is ineligible to sit the Part II examination due to less than 80% participation in online discussion forums would have to submit one or more assignment(s) designated by the Specialty Board and obtain 'pass' grading(s) (50 marks or more for each assignment) in order to be considered as eligible for sitting the Part II Examination.

A candidate who is deemed ineligible to sit the Part II Examination due to failure in submitting the case book or receiving a 'fail' grade for the case book, would have to re-submit the case book three months prior to the next Part II Examination.

Structure of the Part II Examination
The Part II Examination can be attempted in any PGIM-approved center. It will comprise a Structured Essay Question (SEQ) paper of 3 hours' duration. The SEQ paper will consist of two parts.

- Part A will consist of 4 SEQs derived from the 4 core modules. All candidates are required to answer all 4 questions.
- Part B will contain 8 SEQs derived from elective modules. Each candidate is expected to answer 2 of these questions.

Each SEQ will be marked out of 100 and the total marks obtained for all SEQs will be averaged, and the average will be scaled to obtain a mark out of 50.

9.2.4 Successful candidate of the Second Year Assessment:

A successful candidate will fulfill the following criteria:

1. Obtained 50% or more from the total mark given for the continuous assessments in second year and
2. Obtained 50% or more from the total mark given for the Part II Examination.

9.2.5 Unsuccessful candidates:

1. A candidate who obtains 50% or more for the continuous assessments but fails to achieve 50% or more in the Part II Examination is eligible to sit the next exam.
2. A candidate who obtains 50% or more for the Part II Examination but fails to achieve 50% or more for the continuous assessments, would have to follow the relevant modules as designated by the Specialty Board and attain the stipulated minimum requirements within a given period decided by the specialty board. (The candidate would have to incur the expenses involved in repeating an online module as designated by the PGIM)
3. A candidate who fails to obtain 50% or more for both the continuous assessments and the Part II Examination would have to repeat the relevant modules as designated by the Specialty Board and sit the next examination.
4. A candidate would be given a maximum of six attempts over a period of 8 years, whichever comes first, to complete the eligibility requirement to obtain the Masters in Medical Toxicology.

10. AWARD OF QUALIFICATIONS

Award of the Postgraduate Diploma in Medical Toxicology

Those candidates who successfully complete the First Year Assessment but do not wish to proceed to the second year will be awarded the Postgraduate Diploma in Medical Toxicology.

Award of the Masters in Medical Toxicology

Those candidates who successfully complete First and Second Year Assessments will be awarded the Masters in Medical Toxicology.

11. CONTRIBUTORS TO PROSPECTUS

The prospectus was compiled by

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ANNEX 1 – CURRICULUM

Overall organization of study programme is as follows.

Total Credit / time allocations for Masters in Medical Toxicology (M-OO4)				
Unit No.	**Name of the Module**	**Type**	**Total duration of online activity**	**Total number of credits**
M-004-01	Core Toxicology	Core modules (27 credits)	10 weeks	6
M-004-02	Clinical Toxidromes		12 weeks	7
M-004-03	Investigations and monitoring		12 weeks	7
M-004-04	Regional Toxicology 1		12 weeks	7
M-004-05	Regional Toxicology 2	Four elective modules (20 credits)	10 weeks	5
M-004-06	Hazmat Chemical Disaster		10 weeks	5
M-004-07	Community Health and Environmental Toxicity		10 weeks	5
M-004-08	Addiction		10 weeks	5
M-004-09	Regulatory Sciences		10 weeks	5
M-004-10	Mixed overdoses		10 weeks	5
M-004-11	Telephone toxicology		10 weeks	5
M-004-12	Rare & Unusual Poisonings		10 weeks	5
Total Credit and time duration			86 weeks	47 credits

M-004-01- M-004-04 are core modules covered in the first year of the Programme

M-004-01: Core Toxicology
10 weeks / 6 credits

1. Benzodiazepines/ZZ
2. Aspirin
3. Opiates
4. TCA
5. Paracetamol
6. Citalopram
7. Lithium
8. Potassium
9. Mid-assignment
10. End Assignment

M-004-02: Clinical Toxidromes
12 weeks/ 7 credits

1. Antihistamine
2. SSRIs
3. Baclofen
4. Clonidine
5. Alcohol withdrawal
6. NMS
7. SNRI
8. MAOIs
9. Mid-assignment
10. End Assignment

M-004-03: Investigations and monitoring
12 weeks/ 7credits

1. Digoxin and yellow oleander
2. Propranolol (BBs)
3. Verapamil (CCBs)
4. Phenytoin
5. Carbamazepine
6. Valproate
7. Oral anticoagulants
8. Hypoglycemic agents
9. Iron
10. Mid-assignment
11. End Assignment

M-004-04: Regional Toxicology 1
12 weeks/ 7 credits

1. Organophosphates, Carbamates and Solvents
2. Glyphosate-surfactant and Paraquat
3. Plants 2
    - Cochicine
    - Strychine

4. Plants
5. Methanol
6. Alkali/acid
7. Carbon Monoxide
8. Other Snakes
    - Sri Lanka
    - Australia
9. Snakebite - VICC
    - Brown
    - Russels Viper
10. Snakebite - paralysis
    - Tiger
    - Krait
11. Mid-assignment
    - Envenomation
12. End Assignment
    - Pesticides

Elective Modules (Each 10 weeks and 5Credits)

2nd Year Students are expected to complete 4 selected modules

M-004-05: Regional Toxicology 2

1. New synthetic drugs - cathinones
2. Hg/As - Ayurvedic medicine
3. Lead
4. Industrial poisonings (HF chlorine gas)
5. Marine
    - ciguatera, scombroid, tetrodotoxin
    - Fish stings
6. Cyanide
7. latrodectus +? Big black spider/scorpion
8. Mushrooms

9. Mid-assignment
10. End Assignment

    Emerging poisons

M-004-06: Rare & Unusual Poisonings

1. Herbal (Aconitine/ Cardiac glycoside/ Other)
2. Alternative cancer therapy (cesium)
3. Antipsychotic
4. Flecainide - cardiac arrest
5. MCPA-bromoxinil
6. Ppost-mortem levels (orphenadrine, diflunisal?)
7. Copper cobalt THR
8. Internet (fenibutt)
9. Alcohol cannabis
10. Methotrexate (chronic)
11. Mid-assignment
12. End Assignment

M-004-07: Telephone Toxicology

1. Olanzapine oxazepam (aggressive delirous patient)
2. Colchicine (early presentation refusing treatment
3. Barbiturate OD (terminal cancer)
4. With ingestion of plants in the garden (abrus, ricin, glory lily, fox-glove?
5. Foreign body (lead sinker? lithium battery?)
6. Unknown - coma ?stroke (clozapine)
7. Unknown - acidosis (ethylene glycol)
8. Snakebite:non-envenomed
9. Cardiac arrest (hydroxychloroquine)
10. Grandma's tablets (glibenclamide amlodipine paracetamol SR)
11. Mid-assignment
12. End Assignment

M-004-08: Mixed Overdoses

1. Mirtazapine moclobemide, alprazolam, zopiclone, topiramate
2. Webster pack OD - rivastigmine, SR paracetamol, theophylline ??????
3. Metformin NSAIDs acute renal failure
4. Warfarin late paracetamol
5. MDMA and amyl nitrite
6. Amlodipine valsartan hydrochlorothiazide
7. Lithium benztropine
8. Digoxin atenolol diltiazem
9. Fluvoxamine quetiapine bupropion
10. Ibuprofen paracetamol codeine caffeine pseudoephedrine mefenamic acid doxylamine
11. Mid-assignment
12. End Assignment

M-004-09: Addiction

1. Overview Clinical Skills/ Neurobiology of Addiction
2. Comorbidity
3. Prescription and OTC Drug Misuse
4. Alcohol - Part 1
5. Alcohol - Part 2
6. Smoking and Tobacco 1 and 2
7. Opioids - Part 1
8. Opioids - Part 2
9. Cannabis
10. Stimulants
11. Mid assessment
12. Final Assessment

M-004-10: Hazmat Chemical Disaster

1. Toxicology of some Major industrial Chemicals
2. Combustion Toxicology
3. Major Chemical Incidents
4. Management of Hazmat incidents Roles of Different Agencies

5. Public health response to Chemical emergencies
6. UN GHS system classification and labeling of Chemicals
7. Safety Data Sheets (SDS)
8. Chemical Principles – Fire and Explosions
9. Legislation pertaining to Chemical Control
10. ALOHA

M-004-11: Regulatory Sciences

1. Epidemiology of Poisoning and Principles of Forensic Toxicology
2. Principles of Occupational Toxicology and Classification of Chemicals
3. Mode of Entry of Chemicals and Hazards, Risks and Risk Management
4. Exposure Limits, Regulatory Frame work and Poisoning Prevention
5. Issues Related to Control of Poisoning and Psychiatric and Social Determinants
6. Food Toxicology

M-004-12: Community Health and Environmental Toxicology

1. Community Health
    - Basic Concepts of Epidemiology, Measures in Epidemiology and Epidemiological Study designs.
    - Global Epidemiology of Poisoning
    - Epidemiology of Poisoning in Developing Countries and Sri Lanka
    - Prevention of Poisoning
2. Environmental Toxicology

ANNEX 2- CASE BOOK STRUCTURE

1. The case book should contain minimum of eight chapters pertaining to eight different clinical cases relevant to Toxicology and Toxinology. The cases should be real encounters in the hospital ward setting and the trainees are expected to gather relevant data and evidence pertaining to the clinical encounter. These data may be in the form of photographs, clinical notes, investigation findings, or other information which should be obtained after prior written approval from the relevant authorities as well as from the patients wherever relevant.

2. Format of the cases: describe each case as it occurred in terms of resuscitation, decontamination, antidote administration, investigations, in ward care and monitoring, psychiatric assessment and follow up after discharge. Critically evaluate the management and discuss optimum management, citing evidence from literature.

3. Each chapter should include a reflection on the said experience and a critical evaluation of the management with suggestions for further improvement based on evidence based medicine. Trainees should do appropriate referencing to journal articles wherever possible when such evaluations are made.

4. The case book should include
    a. A front page: Format is annexed (Annex 4)
    b. Declaration by the student
    c. Declaration by the supervisors
    d. Table of contents
    e. Chapters (one chapter for each case discussion). Each chapter should contain the case report written according to instructions given above, a summary of the case at the end of the chapter and a bibliography with appropriate citations made within the case report.

5. If the candidate has published a relevant case report in a peer reviewed/ indexed journal within the course of the study, two cases will be exempted from the case book. The published case report should be included in the case book. That is, if a student has published one case report then he/she will have to include six case discussions only.

6. The word count of the case report should be between 2500-3000.

7. References should be included according to the Vancouver style.
   Examples are given below.

Published articles	Hou WR, Hou YL, Wu GF, Song Y, Su XL, Sun B, et al. cDNA, genomic sequence cloning and overexpression of ribosomal protein gene L9 (rpL9) of the giant panda (*Ailuropodamelanoleuca*). Genet Mol Res. 2011;10: 1576-1588.

	Devaraju P, Gulati R, Antony PT, Mithun CB, Negi VS. Susceptibility to SLE in South Indian Tamils may be influenced by genetic selection pressure on TLR2 and TLR9 genes. MolImmunol. 2014 Nov 22. pii: S0161-5890(14)00313-7. doi: 10.1016/j.molimm.2014.11.005 *Note: A DOI number for the full-text article is acceptable as an alternative to or in addition to traditional volume and page numbers.*
Web sites or online articles	Huynen MMTE, Martens P, Hilderlink HBM. The health impacts of globalisation: a conceptual framework. Global Health. 2005;1: 14. Available: http://www.globalizationandhealth.com/content/1/1/14.
Books	Bates B. Bargaining for life: A social history of tuberculosis. 1st ed. Philadelphia: University of Pennsylvania Press; 1992.
Book chapters	Hansen B. New York City epidemics and history for the public. In: Harden VA, Risse GB, editors. AIDS and the historian. Bethesda: National Institutes of Health; 1991. pp. 21-28.

ANNEXURE 3 - PORTFOLIO MARKING SCHEME FOR MASTERS IN MEDICAL TOXICOLOGY

Student Index No :
Batch No :
Date :

Category		Marks				
Structure & style:		**1**	**2**	**3**	**4**	**5**
1	Maintaining confidentiality					
2	Organization of material					
3	Clarity of written expression (correct grammar etc)					
4	Use of appropriate language					
5	Style of referencing					
Content						
6	Accurate description of cases					
Accurate interpretation of,						
7	Resuscitation					
8	Decontamination					
9	Antidote administration					
10	Investigations					
11	In ward care and monitoring					
12	Psychiatric assessment					
13	Follow-up after discharge					
14	Use of relevant references / citations					
15	Integrating information					
Discussion:						
16	Critical evaluation of the management					
17	Citing evidence from literature					
18	Discussing the optimal management					
19	Challenges in achieving the optimal management					
20	Self-reflection of the learning experiences					

Total marks ☐

Final result ☐

CASE BOOK

MASTERS IN MEDICAL TOXICOLOGY

FULL NAME OF THE STUDENT

STUDENT ID NUMBER: PGIM/XXXXX/XX-XXXXX

POST-GRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO

SRI LANKA

Month Year (e.g. August 2015)

CASE BOOK

Case Book submitted to the Post Graduate Institute of Medicine, University of Colombo, Sri Lanka in Partial Fulfillment of the Requirements for the Degree of Masters in Medical Toxicology

By

Dr.X.XXXXXXXXX

Supervised by:

Dr.X.XXXXXXXXXXXXXX.

Dr.xxxxxxxxxxxxxxxxx

POST-GRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO

SRI LANKA

MONTH YEAR (e.g. FEBRUARY 2014)