



Course Outline and Policies

For Health Services Academy Islamabad

Course title:	Certificate in Antimicrobial Resistance
Instructors:	Subject experts Dr Ahmad Hussien Tareq, Dr Nasim Akhtar and other Field Experts
Instructor CV/Profile	<p>Dr Ahmad Hussien Tareq, Pharmacist and PhD from Nanyang Technological University, Singapore and Massachusetts Institute of Technology, USA with expertise in Antimicrobial resistance during PhD. At the moment Associate Professor in HSA and technical lead of health and Population think tank.</p> <p>Dr Nasim Akhtar is the Head of Infectious diseases Wards and COVID-19 wards in Islamabad Biggest tertiary hospital PIMS. She is IPC Master trainings and lead multiple roles as Infectious diseases lead nationwide and also members of international organizations including IDSA.</p> <p>Dr Nomita Awan is the lead of Tuberculosis sites, Clinical since decades and actively working in the area of IPC and TB for patient management.</p>
Course Fee	Pakistani Candidates: PKR 20,000/- Overseas Candidates: USD 150/-

Class details	
Class Timing	Online
Session Day(s)	Weekdays
Duration	One Month

Course Description
<p>Antimicrobial resistance is considered as one of the greatest public health challenges of current century. Its importance due to COVID-19 and massive abuse and misuse of antibiotics have worsen this challenge. Globally, five priority actions areas to be adopted by each country from its policy to health facility. It needs massive training of healthcare providers in this specialized and complex problem. The course aims to teach healthcare professionals and fill the gaps.</p>

Course Objective

The basic objective of antimicrobial resistance course is to give basic understanding of this complex problems and ways to manage curb this menace that is rampaging across our health system. Our ability to manage infections depends on judicious use of antibiotics to safe guard public health of our population against drug resistant infections. Through this course we aims to teach the health professionals and enthusiast about different aspects of AMR and how to curb it.

Course Learning Outcomes

Knowledge Outcomes

- Principles of pharmacovigilance
- Role and importance of pharmacovigilance
- Maintain a robust monitoring system for new safety issues.
- Implement effective approaches to minimize risk.
- Install procedures for rapid decision making and triggering actions in case of (immediate) safety concerns
- Improve patient care and safety in relation to the use of medicines and all medical and paramedical (services that support medical work, such as nursing, first aid, radiography) interventions.
- Improve public health and safety in relation to the use of medicines.

Abilities Outcomes

- Acting to protect public health (including regulatory action).
- Managing information on products under additional monitoring, and products that have been withdrawn.
- Identifying and reducing the risk of medication errors before and after the authorization of a medicine.

Skills Outcomes

- Assessing and coordinating studies after marketing through post-authorization safety studies and post-authorization efficacy studies.
- Carrying out inspections to ensure company pharmacovigilance systems comply with good pharmacovigilance practice.
- Communicating in a clear, effective and timely manner about safety-related issues to relevant stakeholders.
- Interacting with and engaging key stakeholders, including patients, healthcare professionals.
- Continuous development and improvement of systems (including IT infrastructure), guidelines and standards, and promotion of research to address knowledge gaps

Teaching and Learning Methodology

This course will build on presentations, videos, readings, case studies and assignments. This course rests on several components – self-study, case discussions, interaction, as well as implementing Strategies to practice and application in the subject area:

- Self-Study:
- Student-Instructor Interaction online.
- Discussion of selected questions, finding of examples, answering of questions etc.
- Group Discussions.
- Group project to practice and for application of concepts.
- Preparation of short assignments.
- Final report/project and discussion on a selected topic.

Session	Modules	Session Topic	Assessment
1	AMR awareness for healthcare providers	<ul style="list-style-type: none"> • Introduction to antimicrobials resistance • Why it is a global concern and severity of threat • Present situation of AMR, prevalence and lack of information • AMR stewardship program • Antimicrobials prescribing guidelines introduction 	17%
2	Mechanisms and clinical implications of AMR	<ul style="list-style-type: none"> • Mechanism of emerging resistance in AMR • Priority pathogens list in AMR surveillance. • Diagnostics tests for identifying microbes • Antimicrobial susceptibility, Point of care and advanced diagnostics techniques • Use of surveillance data & data-coordination 	17%
3	AMR stewardship training	<ul style="list-style-type: none"> • Introduction to Antimicrobial Stewardship • Components & importance of Antimicrobial stewardship • Inpatient and Outpatient Antimicrobial Stewardship and differences • Standardized practices related to Stewardship & Group work 	17%
4	AMR infection prevention and control	<ul style="list-style-type: none"> • Standard precautions for IPC in healthcare • Healthcare facility acquired infection • Environment of care (Hygiene and aeration) • Waste management, disinfections and transmission based precautions • Drug resistant pathogens (MRSA, VRE, CRE) 	17%

5	Rational drug practice to control AMR	<ul style="list-style-type: none"> • Rationale prescribing Practices of antimicrobials • Prescribing policies and regulations of use of antimicrobials • Empirical therapy Vs Rationale practices • Tackling AMR in community, Healthcare facilities • Tackling AMR in food and livestock sector 	17%
6	AMR during COVID-19	<ul style="list-style-type: none"> • Enhanced antibiotic resistance as a collateral of COVID-19 pandemic effect • Bacterial co-infections and AMR prevalence in COVID-19 • Massive use of antimicrobial as prophylaxis in COVID-19 treatment • Guidelines to use antimicrobials in COVID and similar outbreaks • Way forward to manage AMR during and post COVID-19 • Case study related to AMR in COVID-19 settings 	15%

EVALUATION AND GRADING

The performance of participants is evaluated through continuous observation of the student's performance in the Diploma – the extent to which he/she participates in discussions and the case studies and exercises.

There will be quizzes, monthly hourly exams, and final exams at the end of the program. The total marks for passing the Diploma will be 60 out of a total of 100 marks.

Participants, who do not meet attendance or any other eligibility criteria, will not be allowed to appear in the final examination.

In the rating of participants, the following grading plan is used:

A+	95 - 100
An	87 - 94
B+	81 - 86
B	72 - 80
C+	66 - 71
C	60 - 65
F	below 60 (Fail)

Prerequisite Skills and Knowledge to take this Course

Academic Conduct

At HSA academic honesty is mandatory. Absolutely no plagiarism/ cheating in any examination, quiz, assignment, report, and/or presentation by any student is tolerated.

Attendance Policy

- Students are required to regularly attend all lectures, computer laboratory sessions, seminars and fieldwork as may be specified. In case, a student accumulates more than the allowed number of absences, he will not be eligible for the Diploma for Professional Development.
- The provision of absences is only for emergencies.
- If absent on the final examination the certificate will not be issued.
- Students who are unable to appear for the final exam are required to submit a written application stating the reason for not appearing for the exam. HSA reserves the right to approve or deny such applications. If approved, the student will be allowed to sit for the exam within one month. Failure to do so, the student will only be given a Certificate of Attendance.
- The attendance on the first day of the Diploma is a must.
- A student must attend 80% of the classes to be eligible for the certificate.
- Students are required to be in time for their sessions. After 10 minutes of the start of class, the entrant will be marked late.
- Maximum of 4 late attendances will be allowed. Decision will be made by the faculty.
- It is expected that the students will always maintain proper dress code.

CONDUCT AND DISCIPLINE

A disciplinary action, leading to rustication, will be taken against students whose conduct is found objectionable at any time during study. The faculty and Vice Chancellor HSA will be the decision maker.

