



كلية الطب
وحدة ضمان الجودة



Faculty of Medicine
Quality Assurance Unit

**Program Specification for Professional Diploma in
Hospital Infection Control for Medical Health
Providers**

(According to currently applied **Credit point bylaws**)

Department of Clinical Pathology

Faculty of Medicine

Assiut University

2020-2021/2021-2022

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Program Specification for Professional Diploma in Hospital Infection Control for Medical Health Providers.

1. Basic Information

- **Program Title: Professional Diploma in Hospital Infection Control for Medical Health Providers.**
- **Nature of the program: Single.**
- **Responsible Department: Clinical Pathology Department, infection control unit.**
 - **Program Code :HIC491**
- **Academic Director: Prof. Dr. Hebat Allah Gamal Rashed (Head of microbiology unit, clinical pathology department Assiut university hospitals & General director of infection control unit Assiut university hospitals)**
- **Coordinator (s):**
 - **Principle coordinator: Prof. Dr. Hebat Allah Gamal Rashed**
 - **Assistant coordinator : Dr. Asmaa Mohamed Abd El Aziz (Head of infection control unit in Assiut university hospitals)**
- **Date of Approval by the Faculty of Medicine Council of Assiut University:23-4-2020**
- **Date of most recent approval of Program by the Faculty of Medicine Council of Assiut University:29-11-2020**

- **Requirements from the students to achieve the required ILOs are clarified in the joining log book.**
- **Admission Requirements (prerequisites) if any :**
 - I. **General Requirements:**
 - Medical Health Providers (Medical doctors and Dentists, Pharmacists, High Nurses).
 - Medical doctors , Dentists & High Nurses should finish their training year .
 - II. **Specific Requirements:**
 - Fluent in English (study language)
- **FEES:** As regulated and approved by the Department and Faculty councils.

2. Aims

This Program is aimed to:

A-Provide students with expert knowledge and guidance in developing the skills and practical experience to understand the basic principles and practice of hospital infection prevention and control.

B-Provide health professionals the principles of how understand pathogenic organisms may be spread in healthcare setting and factors that influence the outcome of an exposure, implement strategies for Standard and Transmission-Based Precautions in healthcare settings and recognize the role of antimicrobial stewardship in reducing the emergence of antimicrobial resistance.

C-Apply among candidates; development of understanding policies, strategies and procedures relating to the prevention and control of infections among candidates and also addresses the National Guidelines on infection control and hygiene regarding to Emergencies units, postoperative care units, critical care and ICU units and other areas related to patients care.

3a. Intended learning outcomes (ILOs):

K. Knowledge and understanding:

Trainees will be able to

K1- Describe the Principle Basic Infection Prevention Concepts.

- Infection control program and Organizational Structure.
- Principle of microbial pathogenicity and host response.
- Normal Flora of the body and Innate Immunity and acquired.
- Transmission cycle.

- Risk factor for infection transmission
- Antimicrobials and Antibiotic Stewardship.
- Roles of the Clinical Microbiological laboratory in Infection Control.
- Employee/Occupational Health.
- Antisepsis, disinfection and sterilization.
- Waste management.
 - Risk assessment

K2- Demonstrate strategies and procedures in surveillance System

- General Principles of Epidemiology.
- Evaluate ongoing surveillance activities.
- Prepare surveillance reports.
- Design quality improvement activities based on generated surveillance information.

K3- Illustrates policies, strategies and procedures relating to the prevention and control of infections include the following:

- Catheter Associated Urinary Tract Infection.
- Intravascular Device Associated Infections.
- Ventilator Associated Pneumonia.
- SSI AUC'.
- Pressure Ulcer.
- Dialysis Infection.
- Prevention in Oncology and Other Immunocompromised Patients
- IPC surgical unite (before surgery, operation and after surgery).
- Safe care in ophthalmology services.
- Solid Organ Transplantation and transplant unite.
- Hematopoietic Stem Cell Transplantation.
- IPC in Obstetrics and Gynecology.
- Perinatal Neonatal & Pediatric care

- Dental Services
- Emergencies units, postoperative care units, critical care and ICU units

K4- Describe the Rules Required for Hospital Infection Control During Construction and Renovation.

K5- Demonstrate and design the Role of infection control in :

- Ambulatory Care and postmortem care.
- Pharmacy Services.
- Water system.
- Infection control in the kitchen and laundry.

K6- Describe Air system and material used in hospitals.

K7- Evaluate Quality management , patient safety and Integration of them in IC.

K8-Apply and design problems solving, and conduct annual action plan

S- Practical skills (Hand on training):

S1-Apply Organizational structure of infection control team, job description for each category

S2- Apply annual planning ,on job training , continuous education& training, writing reports with accurate remarks (daily, monthly ,annual),recommendations ,correction plans, regular meetings, outbreak planning if present & risk assessment plan.

S3- Apply Policies, strategies ,checklist forms and procedures relating to the prevention and control of infections.

S4-Perform incidence reporting of needle stick injury& how to manage injury

- S5-Display Vaccination program for HCWs
- S6-Display Hand hygiene different techniques & compliance rate calculation
- S7 - Display Aseptic techniques.(skill lab on models & clinical rounds)
- S8-Apply Personal protective equipment Measures (assess quality ,donning &doffing of PPE& calculate requirements)
- S9-Conduct and apply Sterilization & Disinfection measures.(types & levels of disinfectant, sterilant & indicators of sterilization)
- S10-Provide Environmental cleaning regular tables for monitoring
- S11- Apply Surveillance program evaluation for HAIs
- S12- Apply Statistical tests of significance.
- S13 – Conduct and evaluate Environmental laboratory & infection control in lab including antibiotic stewardship policy
- S14- Perform regular Clinical rounding in ICU, NICU, Emergency room, operation room ,dental setting, dialysis unit, department ,kitchen ,laundry, ambulance ,postmortem services, sterilization center, waste collection& transport system, clinical pharmacy ,transplant unit& isolation room
- S15-Determine the Rules Required for Hospital Infection Control and monitoring during Construction and Renovation & Air system used in hospital.

G- General skills:

- G1. Perform practice-based improvement activities using a systematic methodology (share in audits and use logbooks).
- G2. Appraises evidence from scientific studies.
- G3. Maintain therapeutic and ethically sound relationship with patients.
- G4. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.
- G5. Provide information using effective nonverbal, explanatory, questioning, and writing skills.
- G6. Work effectively with others as a member of a health care team or other professional group.
- G7. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society
- G8. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices
- G9. Work effectively in relevant health care delivery settings and systems.
- G10. Practice cost-effective health care and resource allocation that does not compromise quality of care.
- G11- Participate in interactive skills, group work, experience & leadership skills

3b.Competencies:

The trainee are able to be expert in updated principles medical knowledge with ethics in researches and competent in patient care and professional skills in practice and behavior in the following era :

A -Basic Infection Prevention Concepts.

B-Strategies and procedures in surveillance System.

C- Policies, strategies and procedures relating to the prevention.

D- Infection Prevention & Control during Construction and Renovation Infection.

E-Role of infection control in service areas
 F-Air system and material used in hospitals.

4. Program External References (Benchmarks)

HSSI – Educating Health Care & Safety Professionals

<https://hss-institute.org/>

Comparison between Professional Diploma and External Reference (HSSI: Health Sciences & Safety Institutes)		
Item	Professional Diploma in IC	Diploma in Infection Control (HSSI)
Goals (Aim)	Matched	Matched
ILOs	Matched	Matched
Duration	<ul style="list-style-type: none"> • Tuition Hours: Matched • Total hours: different 	<ul style="list-style-type: none"> • Tuition Hours: Matched • Total hours: different
No. of Modules	Different (6)	Different (2)
Requirements	Different	Different
Program (Course) structure	Different	Different
List of references	Different	Different
Accreditation process	Ongoing	Done (Accredited in UK)

5. Program Structure

A. Duration of program: (one academic year (one day/week)) and/ or 180 hours (30 weeks * 6 hours/week)

B. Structure of the program:

Total number of the credit points: 30 credit points

Didactic 9 credit points (30%) about 9 weeks including power point presentation for material and 21 credit points (70 %) of total 30 CP for practical work about 21 weeks including (project, clinical rounding in hospital, skill lab & assignments)

C- Course Grading in assessment:

- 5% Attendance
- 15% Quizzes and Assignments
- 20% Project
- 10% Midterm written exam
- 50 % Final exam (20% written exam and 30% practical exam)

6. Contents and Matrix

Didactic of modules A-F	Covered ILOs	Practical skills(Hand on training)	Covered ILOs
A-Basic Infection Prevention Concepts. -Introduction: Infection control program and Organizational Structure. - Basic Microbiology for Infection Prevention and Control. - Principle of microbial pathogenicity and host response. - Normal Flora of the body and Innate Immunity and Acquired immunity. -Transmission cycle and risk factor for infection transmission. - Antimicrobial Policy. -Standard treatment guide line and antimicrobial stewardship. -Multidrug Resistant Organisms	K1-K8	Didactic (lectures, and project) -Skill lab training. -Direct observation - Perform under supervision of senior staff. -Hand on workshops. - Briefed research. - Group homework.	S1-S15 G1-G11

<p>(MDROs).</p> <ul style="list-style-type: none"> -Roles of the Clinical Microbiological laboratory in infection control. - Laboratory safety. - Laboratory Diagnostics. Employee/Occupational Health. - Healthcare Worker vaccination and indication of stop of work. - Hand hygiene. - Monitoring for adherence to hand hygiene policy. -Personal protective equipment. -Needles , other sharps and occupation safety blood borne pathogens. -Isolation and Isolation systems. - Transmission based precautions (Contact, droplet and airborne). - Protective environment. -Antisepsis and sterilization. -Antisepsis. -Aseptic technique. -Disinfection. -Environmental services cleaning disinfection. -Principles, product selection and Evaluation. -Sterilization. -Waste management. -Quality concepts. 			
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<p>- Risk assessment.</p> <p>B-Strategies and procedures in surveillance System</p> <p>- General Principles of Epidemiology.</p> <p>- Evaluate ongoing surveillance activities.</p> <p>- Prepare surveillance reports. - Design quality improvement activities based on generated surveillance information-</p> <p>-Surveillance of Healthcare Associated Infections.</p> <p>-Monitoring & Evaluation of Surveillance Data.</p> <p>-Outbreaks, Investigation, Prevention and Control in Healthcare Settings.</p> <p>C - Policies, strategies and procedures relating to the prevention and control of infections include:</p> <p>-Catheter Associated Urinary tract Infection.</p> <p>-Intravascular Device Associated Infections.</p> <p>-Ventilator Associated Pneumonia.</p> <p>-Pressure Ulcer.</p> <p>-Dialysis Infection.</p> <p>-Solid Organ Transplantation and transplant unite.</p>			
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<p>-Perinatal Neonatal & Pediatric care</p> <p>- Infection control in ICU.</p> <p>- Endoscopy unit .</p> <p>-Dental Services.</p> <p>-Emergencies units, postoperative care units, critical care and ICU units</p> <p>D-Infection Prevention & Control</p> <p>During Construction and Renovation Infection.</p> <p>E-Role of infection control in:</p> <p>-Ambulatory Care and postmortem care.</p> <p>-Pharmacy Services.</p> <p>-Water system.</p> <p>-Infection control in the kitchen and laundry.</p> <p>F-Air system and material used in hospitals.</p>			
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7. Methods of teaching/learning:

1. lectures, tutorial
2. Hand on training
3. Data show presentations.
4. Explanatory videos.
5. Interactive way of explaining by asking questions and looking for answers.

6. Group discussion in homework to learn how to work in a team, ex. make summary for the explained lecture so as to learn how to focus on the important information.
7. Practical work : (Hand on training ,skill lab, clinical rounding in hospital)
8. Self-directed learning Internet searches.

8. Assessment methods:

i. Assessment tools in the course:

- Attendance 5% of total assessment
- Quizzes and Assignments including portfolio monitoring and formative assessment =15% of total assessment
- Project. 20% of total assessment
- Midterm written exam 10% of total assessment
- Final exam 50 % ;
- 20% written exam of total assessment+ 30% practical exam of total assessment.

ii. Time schedule: final exam at the end of the training and fulfilling portfolio requirements .

9. List of references

i. Lectures notes

Staff members print out of lectures and/or CD copies

ii. Essential books please write edition number

- a. Egyptian National Guidelines,2019
- b. Laboratory Safety Manual,2017.
- c. Prescott Microbiology 11th edition,2019

iii. Recommended books

APIC Text of Infection Control & Epidemiology,2010

iv. Periodicals, Web sites

<https://apic.org/APICStore/Products/Product?id=SLSTXT14>

v. Others

The Association for Professionals in Infection Control and Epidemiology (APIC)2009. www.apic.org

- U.S. Centers for Disease Control and Prevention (CDC),2011. www.cdc.gov
<https://www.cdc.gov/infectioncontrol/guidelines/index.html>
- Institute for Health Care Improvement (IHI),2012. www.ihc.org
- K. National Patient Safety Agency (NPSA),2005. www.npsa.nhs.uk
- The Society for Health Care Epidemiology of America (SHEA),2016. www.shea-online.org
- World Health Organization (WHO),2013. www.who.int
- Statistic <http://easycalculation.com/statistics/standard-deviation.php>.

10. Signatures

Program Coordinator:	Director of infection control unit:
Date:	Date:

11-Program evaluation

Course evaluation sheet after each module (evaluate instructor, methods of teaching, module experience & materials evaluation)

12- teaching resources

-Teaching class

-Online zoom meeting-

(End of the degree specifications)