فقيه.

كلية فقيه للعلوم الطبية
Fakeeh College for Medical Sciences

COURSE HANDBOOK

Program: Post-Graduate Online Courses
Course Name: Infection Control
Course Code & Number: SNBC 101

Sep-Nov 2021

Welcome Message from Your Teaching Staff

WELCOME to Infection Control On-line course (SNBC 101)

We hope you embark with us on an enriching and enjoyable learning experience. We are committed to providing you with high quality education in an active learning environment.

This handbook provides you with an overview of this course. It includes all the information relevant to the educational process, including but not limited to teaching, learning, assessment, staff members and learning resources.

Your journey in this course will take 12 weeks. We look forward to a productive course with you.

During your journey in this course, you have to remember the followings:

In addition to the teaching hours provided by the teaching staff, there is additional learning hours that you (as a participants) are expected to study independently (e.g. in assignments or other work associated with the course). For this course, these expected hours are (14 hrs. /week) over the course duration.

To get the best achievements in this course, it is highly recommended to demonstrate your commitment, hard work, regular class attendance and participation in all assigned activities and readings. In addition it is important to utilize all the learning resources provided by the college such as library, language and IT labs, and electronic facilities….etc.

Course Identification:

College:	Fakeeh College for Medical Sciences	
Program:	Post-Graduate On-Line Courses	
Course Title:	Infection Control	
Course Code:	SNBC 101	
Credit Hours	2 CHs (Two contact hours/week)	
Target Audience	Health Care Workers	
Date & Time of Delivery	Sundays: 1-3 PM	
Course Instructors	**Course Coordinator** **Dr. Rania Alkadi** **Email:** *raalkadi@fcms.edu.sa* **Contact No.** 0569849897 Ext. 500 **Affiliation& academic rank:** Associate Professor of Medical Microbiology and Immunology, FCMS, Jeddah, KSA 	**Co-Coordinator** **Dr. Minerva Raguini** **Email:** *mpraguini@fcms.edu.sa* **Contact No.** 0126588650 Ext. 114 **Academic Rank:** Assistant Professor at FCMS Specialty: Women and Child Health Nursing 

Course Description and Main Objective

1. Course Description

This course is designed to provide nurses and allied health professionals with comprehensive knowledge of infection control's basic concept (Chain of infections, Mode of transmission and hospital-acquired infections). Focus is placed on the Isolation precautions (Hand hygiene, antisepsis, and Personal protective equipment (PPE). The course also highlights the importance of improving patient outcomes through the practice round in the hospital.

2. Course Main Objective

This course aims to equip and update nurses and allied healthcare professionals on infection control principles and practices to enable them to function effectively as healthcare professionals in their respective clinical areas.

Course Learning Outcomes, Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding:**		
1.1	Define the basic concepts of infection control.	Interactive Lecture Small Group discussion •	MCQ Short Answer questions
1.2	Describe the process of transmission-based precautions (Contact, droplet and air-borne)	Interactive Lecture Small Group discussion •	MCQ Short Answer questions
2.0	**Skills**		
2.1	Evaluate the prevention of procedure /device-related infections.	Interactive lectures Presentations. Flipped Classes Individual and Group Assignments	Evaluation of the presentations by rubric. Assignment evaluation by (Rubric)
2.2	Judge standard precautions techniques in a safe manner.	Interactive Lectures. Flipped Classes Assignments • Students oral presentations	Assignment evaluation by (Rubric) Oral presentation evaluation by (Rubric) Examination (MCQ and Essay).
2.3	Compare the steps of controlling multi-drug resistant organisms.	Interactive lectures Flipped classes Group discussions	Examinations (MCQs, Short & Long Essay

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
		Individual and Group Assignments	Questions) Rubric for individual & group assignments
3.0	**Values**		
3.1	Demonstrate responsibility for own behavior and growth as an adult learner and a professional.	Small Group discussions • Assignments	• Rubric for assignments
3.2	Demonstrate effective communication skills when dealing with patients, health care team, colleagues and faculty.	Individual and Group Assignments • Students oral presentations	Assignment evaluation by (Rubric) Oral presentation evaluation by
3.3	Show leadership skills in the application of patient care.	Small Group discussions • Assignments	Rubric for assignments

Mode of Instruction (Teaching Strategies):

The teaching strategies of this course in the below table are planned and identified according to course learning outcome and chosen based on the type of skills to be developed that fit the course learning domains (Knowledge, Skills & Values). For example: (1) Interactive lecture and discussion are designed to impart knowledge and cognitive skills; (2) Student prepared presentation and case-based learning are designed to develop communication and information technology; (3) Topic presentation and case study are designed to develop interpersonal skills and responsibility.

These innovative teaching methods aim to increase participants engagement and active class participation and enhance teamwork and leadership skills. They also contribute to increase in retention of course content, increased motivation, and improved interpersonal skills. Furthermore, active teaching strategies foster students' learning and their autonomy.

No	Activity	Learning Hours
Contact Hours		
1	**Interactive Lecture**	**12 Hours**
2	**Interactive teaching strategies** (Flipped classroom, Case-based learning, small group discussions, and Student prepared presentations, and case study)	**12 Hours**
	Total	**24 Hours**

Course Evaluation System:

Assessment methods (direct and indirect) that show in the below tables are designed to measure the different levels of course learning domains (Knowledge, Skills & Values). The direct method includes written examinations (MCQs & Essay Questions) and other course activities (Reflections, Oral Presentations & Written Assignments)

- **Direct Assessment:**

#	Assessment task*	Due Date	Percentage of Assessment Score
1	Assignments	Week-3-11	20%
2	Presentations	Week-6-10	10%
3	Reflection	Continuous	10%
4	Quiz	5 and 10	20%
5	Final written examination	Week-12	40%
Total			**100 %**

- **Indirect Assessment:**
  Indirect assessment method includes evaluation of the course through surveys as present in the following table.

Evaluation Areas/Issues	Evaluators	Evaluation Methods
- Learning facilities and resources	Students	- Facilities and learning resources survey
- Course Learning Outcome achievement	Student	- Course Learning Outcomes survey
- Course content	Student	- Course Evaluation Survey - Focus group discussion with students at the end of the course.

Grading System:

The grades earned by participants in the course are calculated as follows:

Percent	Rating	Rating Symbol	Rating Weight out of 5
100-95	Exceptional	A+	5.0
90 to less than 95	Excellent	A	4.75
85 to less than 90	Superior	B+	4.5
80 to less than 85	Very good	B	4.0
75 to less than 80	Above Average	C+	3.5
70 to less than 75	Good	C	3.5
less than 70	Failed	F	2.5

Learning Resources:

Required Textbooks	- Wilson J (2019): Infection Control in Clinical Practice. Elsevier. 3rd edition. - Wladyslaw Kowalski (2017). Hospital Airborne Infection Control. By CRC Press. 1st edition.
Essential Reference Materials	- Sanjay Singhal (2013). Handbook of Hospital Infection Control, Delivery to pincode 400001 - Mumbai. - Santosh Saini and Rajiv Saini, (2012). Hospital Infection Control. Paras Medical Publisher - Gould D., & Brooker C., (2008) Infection Prevention and Control , Applied Microbiology for Healthcare, 2nd edition Palgrave Macmillan
Electronic Materials	- Medicare web site - EBSCO web site - Saudi Digital Library
Other Learning Materials	- Academic Search Elite (EBSCO) - CINAHL - http://www.ninr.nih.gov/ - http://www.watsoncaringscience.org/ - Elsevier - https://www.cdc.gov/infectioncontrol/index.html - https://www.who.int/teams/integrated-health-services/infection-prevention-control

Course Content:

No	List of Topics	Contact Hours
1.	Basic Concept of Infection Control 1.1 Introduction 1.2 Infection Control 1.3 Chain of infections 1.4 Mode of transmission. 1.5 Hospital-acquired infection (HAI)	4
2.	2. Standard precautions 2.1 Hand hygiene and antisepsis 2.2 Personal protective equipment (PPE) 2.3 Environmental control 2.4 Needles and other sharps 2.5 Patient resuscitation 2.6 New Standard precautions 2.6.1 Respiratory Hygiene/Cough Technique 2.6.2 Safe Injection Practices 2.7 Practices for Special Lumbar Puncture Procedures	4
3.	Isolation precautions 3.1 Transmission based Precautions 3.1.1 Contact Precautions 3.1.2 Droplet Precautions 3.1.3 Airborne Infection Isolation Precautions 3.2 Protective environment	2
4.	Prevention of procedure/device-related infections 4.1 Surgical site-related infections 4.2 Urinary catheter-related infections 4.3 Intravascular device-related infections 4.4 Ventilator-associated pneumonia	4
5.	Antimicrobial stewardship 5.1 Rational use of antimicrobials 5.2 Clinical use of antibiotics for therapy and prophylaxis 5.3 Antibiotic resistance: reservoirs and how to prevent 5.4 Antibiotic policy	2
6.	Infection Control policy for the control of multi-drug resistant organisms 6.1 Methicillin-resistant Staphylococcus aureus 6.2 Glycopeptide-resistant enterococci 6.3 Multidrug-resistant Gram-negative bacilli	4
7.	Occupational Bloodborne Pathogen transmission 7.1 Prevention and control 7.2 Recommendations for post-exposure prophylaxis guidelines	4
	Final Exam	
Total		24

Course Study Plan:

Date	Topic	Student Learning Outcomes (SLO) *By the end of the session, you should be able to:*	Speaker	Reference
Week-1	Orientation to Infection Control Course	• List the Course Contents • Explain Course requirement • Describe Grading and Evaluation system	• Dr. Rania Alkadi • Dr. Minerva Raguini	• Course Specification
Week-2	Basic Concepts of Infection Control	• Define the basic concepts of infection control. • Describe the process of transmission-based precautions (Contact, droplet and air-borne).	• Dr. Rania Alkadi	Andersen BA (2019): Prevention and Control of Infection in Hospitals Practice and Theory. Springer. Chapter 3. Damani NN (2003): Manual of Infection Control Procedures. 2nd edition. Cambridge. Chapter 1.
Week-3	Hospital Acquired Infections	• Differentiate hospital acquired infections (HAIs) from community-acquired infections. • Summarize different types of HAIs.	• Dr. Rania Alkadi	Andersen BA (2019): Prevention and Control of Infection in Hospitals Practice and Theory. Springer. Chapter 2. Motacki K, O'Mara NB, Kapoian T (2011): An Illustrated Guide to Infection Control. Springer. Chapter 1.
Week-4	Standard precautions of infection prevention and control 1. Hand hygiene and antisepsis 2. Personal protective equipment (PPE) 3. Environmental control 4. Needles and other sharps	• Define standard precautions of infection prevention and control. • Illustrate different methods of hand hygiene. • Enlist types and indications of PPE. • Identify methods of environmental infection control. • Review how to manage needles and other sharps.	• Dr. Rania Alkadi • Dr. Minerva Raguini	Motacki K, O'Mara NB, Kapoian T (2011): An Illustrated Guide to Infection Control. Springer. Chapter 1.

Date	Topic	Student Learning Outcomes (SLO) *By the end of the session, you should be able to:*	Speaker	Reference
Week-5	1. Patient resuscitation 2. New Standard precautions 3. Respiratory Hygiene/Cough Technique 4. Safe Injection Practices 5. Practices for Special Lumbar Puncture Procedures	• Identify basic concepts of patient resuscitation. • Explain new Standard precautions. • Describe respiratory Hygiene/Cough Technique. • Illustrate safe injection practices. • Summarize practices for Special Lumbar Puncture Procedures	• Dr. Rania Alkadi • Dr. Minerva Raguini	Weston D (2013): Fundamentals of infection prevention and control: theory and practice. 2nd edition. Wiley Blackwell. Chapter 12-14. Andersen BA (2019): Prevention and Control of Infection in Hospitals Practice and Theory. Springer. Chapter 27. Andersen BA (2019): Prevention and Control of Infection in Hospitals Practice and Theory. Springer. Chapter 20.
Week-6	1. Transmission based Precautions 2. Contact Precautions 3. Droplet Precautions 4. Airborne Infection Isolation Precautions 5. Protective environment	• Identify different transmission-based precautions. • Describe airborne-infection isolation precautions. • Discuss protective environment.	• Dr. Minerva Raguini	• https://www.cdc.gov/infectioncontrol/index.html • https://www.who.int/teams/integrated-health-services/infection-prevention-control
Week-7	1. Surgical site related infections 2. Urinary catheter-related infections	• Identify prevalence, risk factors, pathogenesis, prevention and control of SSIs. • Describe prevalence, risk factors, pathogenesis, prevention and control of urinary catheter-related infections.	• Dr. Rania Alkadi	Damani NN (2003): Manual of Infection Control Procedures. 2nd edition. Cambridge. Chapter 13. Damani NN (2003): Manual of Infection Control Procedures. 2nd edition. Cambridge. Chapter 15.

Date	Topic	Student Learning Outcomes (SLO) *By the end of the session, you should be able to:*	Speaker	Reference
Week-8	1. Intravascular device-related infections 2. Ventilator-associated pneumonia (VAP).	• Summarize major components of intravascular device-related infections. • Explain VAP.	• Dr. Rania Alkadi	Damani NN (2003): Manual of Infection Control Procedures. 2nd edition. Cambridge. Chapter 14. Damani NN (2003): Manual of Infection Control Procedures. 2nd edition. Cambridge. Chapter 16.
Week-9	1. Rational use of antimicrobials 2. Clinical use of antibiotics for therapy and prophylaxis	• Identify basic concepts of rational use of antimicrobials. • Illustrate clinical use of antibiotics for therapy and prophylaxis.	• Dr. Minerva Raguini	• https://www.cdc.gov/infectioncontrol/index.html • https://www.who.int/teams/integrated-health-services/infection-prevention-control • Gould D., & Brooker C., (2008) Infection Prevention and Control , Applied Microbiology for Healthcare, 2nd edition Palgrave Macmillan page 73-95
Week-10	1. Antibiotic resistance: reservoirs and how to prevent 2. Antibiotic policy	• Explain mechanisms of antibiotic resistance: reservoirs and how to prevent. • Illustrate how to construct an antibiotic policy.	• Dr. Rania Alkadi	Damani NN (2003): Manual of Infection Control Procedures. 2nd edition. Cambridge. Chapter 8.
Week-11	1. Methicillin-resistant *Staphylococcus aureus* (MRSA). 2. Glycopeptide-resistant enterococci 3. Multidrug-resistant Gram-negative bacilli	• Identify the magnitude of the problem of MRSA in the hospitals. • Describe infection control measures against MRSA. • Identify the magnitude of the problem of glycopeptide-resistant enterococci in the hospitals. • Demonstrate infection control measures against glycopeptide-resistant enterococci • Identify the magnitude of the problem of multidrug-resistant Gram-negative bacilli in the hospitals.	• Dr. Rania Alkadi	Andersen BA (2019): Prevention and Control of Infection in Hospitals Practice and Theory. Springer. Chapters 49, 50, 51.

Date	Topic	Student Learning Outcomes (SLO) *By the end of the session, you should be able to:*	Speaker	Reference
		• Describe infection control measures against multidrug-resistant Gram-negative bacilli.		
Week-12	1. Prevention and control 2. Recommendations for post-exposure prophylaxis guidelines.	• Identify basic concepts of prevention and control of occupational bloodborne pathogens. • Discuss recommendations and guidelines for post-exposure prophylaxis against occupational bloodborne pathogens	• Dr. Minerva Raguini	• https://www.cdc.gov/infectioncontrol/index.html • https://www.who.int/teams/integrated-health-services/infection-prevention-control • Gould D., & Brooker C., (2008) Infection Prevention and Control , Applied Microbiology for Healthcare, 2nd edition Palgrave Macmillan 131-148

Communication and Attitude:

- Communicate and behave in a professional and respectful manner with Patients / Family, FCMS Faculty Staff, Clinical Instructor, Preceptor, Colleagues, and Other Multidisciplinary Team Members.
- Follow defined chain of commands during communication.
- Use proper and respectable words and voice tone in verbal communication.
- Illustrate proper and respectful body language and facial expressions in non-verbal communication.
  - ✓ Share the course learning objectives with the FCMS Faculty Staff.
  - ✓ Participate in all session's discussions.
- Accept constructive feedback and comments of FCMS Faculty Staff and Peers.

Punctuality Guidelines:

- Arrive on time (not to be late more than (10) minutes).
- Attend all sessions unless an official excuse is provided by the participant.
- Respect the approved break times.
- Do not leave the session's site/ area before you take permission from FCMS Faculty Staff.

Commitment:

- Communicate and behave in a professional and respectful manner with FCMS Faculty Staff, Colleagues, and Other Multidisciplinary Team Members.
- Comply with the FCMS and DSFH policy and procedures.
- Sustain a professional appearance (uniform, hair, nails, shoes, communication, chewing gum and use of mobile phone).
- Accept and complete projects, tasks and assignments given by the FCMS Faculty within a given time.

FCMS Examination Policy:

- **Re-sit Exam:** This exam conducted for those who get less than 70% of the total course score or those with unaccepted or no excuse to attend the final examination.

- **Academic warning:** is given to those who have absenteeism more than 25%, with unaccepted or no excuses for examinations and all with any academic misconduct according to MOE bylaws.

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