

Krishna Vishwa Vidyapeeth (Deemed to be University)

Krishna Institute of Nursing Sciences, Karad



Syllabus

**Postgraduate Diploma in
Operation Theatre Technique.**

Choice Based Credit System (C.B.C.S.)

Program code: 4501

Course code: 4501-11

Krishna Vishwa Vidyapeeth (Deemed to be University)

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Preface

The health needs are fast changing owing to the rapid change in the life style. It has significant impact on the development of diseases, its processes and treatment modalities. The advanced surgical procedures and technology has played a pivotal role in treatment modalities. This calls for specialized trained nurses in Operation theatre places the tremendous demand on the operation room nurses. Specially trained Operating Room nurses play a key role in the effective functioning of Operating Room surgical team.

The National Health Policy (NHP) 2002 emphasizes on the preventive, promotive, curative and rehabilitative aspects of the care. Since 1983 the NHP has guided the health care system in meeting the needs of the people to a great extent. The policy recognizes the need for establishing the training courses for the specialty nurses required for tertiary care institutions.

Operation Room Nursing is designed to prepare specially trained Operation Room Nurses. The outcome of the programme will be to have more nurses prepared as operation room nurses to work effectively as a member of the operation room surgical team.

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Philosophy

Krishna Vishwa Vidyapeeth (Deemed to be University) Krishna Institute of Nursing Sciences, Karad recognizes the need to prepare the specialized cadre of Operating Room nurses with advanced knowledge, skills and attitude in providing comprehensive care to patients undergoing surgery.

Advances in surgical technology necessitate additional training to prepare them for effective participation as a health team member in operation room.

Aim

Prepare Post Graduate Nurses with advanced knowledge, clinical skills and attitude necessary to function effectively as a member of OR surgical team(OR/peri operative nursing includes immediate pre intra and immediate post operative nursing)

Objectives

General Objective-

The purposes of the course are to train to:

At the end of the course the will be nurses able to provide quality care to patients in OR & manage & supervise care of patients in OR. Also teach nurses, allied health professionals and family members in areas related to OR nursing.

COURSE OUTCOME:

At the end of the course the student will be able to,

1. Imbibe the qualities of theatre nurse.
2. Explain the principles and concepts of Operation Theatre nursing.
3. Practice aseptic technique in the preparation of theatre and the care of the patient.
4. Explain the principles and methods of sterilization and disinfection.
5. Assist the Surgeon and Anesthetists effectively.
6. Appreciate the team work and co-ordinate the activities in the theatre.
7. Operate various types of modern equipment used in the Operation Theatre i.e. Microscope, Heart-Lung Machine, Defibrillator machine etc.
8. Assess the needs of patients immediately after operation plan, implement or evaluate nursing care.

Eligibility

Selection: The candidate seeking admission to this course should be

- Have passed B.Sc. Nursing course / Post Basic BSc.N. course recognized by Indian Nursing Council.
- Be registered with Maharashtra Nursing council.
- Nurses from other countries must obtain an equivalence certificate from INC before admission.
- Be physically fit.
- 100% of attendance for integrated practice experience
- 80 % of the theoretical instruction hours during the year.

Entrance / Selection test:

Selection of the candidates should be based on the merit of the entrance examination held by University.

Duration of Programme : 1 year

.Intake Capacity: 10

Vacation: Three weeks vacation.

Course Duration:

Total available weeks 52 weeks

Total Weeks per Semester: 26wks/semester

Number of Weeks per Semester for instruction: 20 weeks (40hrs/week x 20 weeks=540hours)

Number of Working Days: Minimum of 100 working days (5 days/weekx20 weeks)

Vacation, Holidays, Examination and Preparatory Holidays-6 Weeks

Vacation: 3 weeks

Holidays-1 week

Examination & preparatory holidays-2 weeks

1st Semester:

Theory =105 hrs

Practical =10

Clinical = 425 hrs

2nd Semester:

Theory =105 hrs

Practical =10

Clinical = 425 hrs

CHOICE BASED CREDIT SYSTEM (C.B.C.S.)

	Total hrs	540 hrs	Credit points 26
Core	Theory hrs core subjects	75	5
	Practical core hrs	10	5
	Clinical core hrs	365	12
Elective	Subject specific		
	Theory (s)	15	1
	Clinical	60	2
	Generic		
	Theory	15	1
	Clinical	-	-
Total		540	26

SYLLABUS

POSTGRADUATE DIPLOMA IN IN OPERATION THEATRE TECHNIQUE

COURSE DESCRIPTION:

This course is designed to help the nurses to review their knowledge of structure & functions of human body, pharmacodynamic of drugs acting on various systems of body & their relation with promotion of health, anesthesia and responsibilities of the OR nurse. Further it would be enable to prepare OR nurses with specialized knowledge and skills in assisting for various surgical procedures and practicing infection control measures.

COURSES OF INSTRUCTION

SEMESTER		Type	Unit	COURSE/ SUBJECT	Theory (hrs.)	Lab (hrs.)	Clinical (hrs.)	Total (hrs.)	Credit hrs 26
First		Core	1	Review of surgical anatomy	15	2	91	108	5
			2	Anaesthesia	15	2	91	108	5
			3	Pharmacodynamics.	30	2	92	124	7

			4	O.R. Table And Organization	15	2	91	108	5
			5	Clinical OT posting		-	365		
	E l e c t i v e	Subject Specific	6	Communication Skill	15	-	60	75	3
			7	Legal Responsibilities	15	-	60	75	3
		Generic	8	Human values	15	-	-		3
			9	Health Economics	15	-	-	-	3
				Total	80	10	485	540	26

SEMESTER		Type	Units	COURSE/ SUBJECT	Theory (hrs.)	Lab (hrs.)	Clinical OT posting	Total (hrs.)	Credit points
Second		Core	1.	Infection control	15	2	90	107	5
			2.	Preparation and assisting for various surgical procedures; as circulating and scrub nurse	15	2	90	107	5
			3.	Suture Material & Needles	15	2	90	107	5
			4.	Recovery Room /Surgical Intensive Care Unit	30	4	95	129	7
			5.	Clinical OT posting	-	-	365	-	-
	E l e c t i v e	Subject specific	6.	Operating microscopes	15	-	60	75	3
			7.	Endoscopies	15	-	60	75	3
		Generic	8.	Stress management	15	-	-		1
				Soft Skills	15	-	-	-	1
				Total	80	10	485	540	26

1ST SEMISTER

Theory =105 hrs

Practical =10

Clinical = 425 hrs

Total Hrs:540 HRS

Unit	Hours	Learning Objectives	Content	Teaching Learning Activities	Assessment Methods
Unit I	T-15hrs P-2hrs Clinical-91hrs -	-Explain the Anatomy & physiology of various systems.	<p>REVIEW OF SURGICAL ANATOMY</p> <ul style="list-style-type: none"> GENERAL SURGERY Abdominal Surgery-Anatomy of abdominal wall incisions, Hernia alimentary Canal, Gall bladder, bile duct, liver, spleen Pancreas, Surgery of Head & Neck, Mouth and Breast, Thyroid gland. ORTHOPAEDICS Bones and Joints UROLOGY Kidney, ureters, Bladder, Prostate, Testes EAR, NOSE & THROAT Surgery of pharynx, Larynx, Nose & Ear. GYNAEC & OBST. Pelvic viscera and other supports, Uterus, fallopian tubes, ovaries, cervix, vagina CARDIO THORACIC SURGERY Chest wall, heart, blood vessels, trachea, bronchi, lungs, NEURO SURGERY brain, spinal cord, peripheral & sympathetic nerves, PAEDIATRIC SURGERY Body systems OPHTHAMOLOGY Eyes 	<ul style="list-style-type: none"> Lecture Discussion Activity 	<ul style="list-style-type: none"> Short answers Objective type Assessment of skills with checklist

Unit II	T-15hrs p-2hrs Clinical OT Posting- 91hrs	-Acquire knowledge regarding Anesthesia. -Identify role & responsibilities of Ot Nurse about drugs in anesthesia.	ANAESTHESIA <ul style="list-style-type: none"> • Introduction, Principles, Types, Stages, Method of Administration • Anaesthetic Machines And Equipments • Nurses Role & Responsibilities. DRUGS USED IN ANESTHESIA <ul style="list-style-type: none"> • anesthetic Agents used : Types • Methods of administration, Action and effects side effect, Antidotes Nurses responsibilities 	<ul style="list-style-type: none"> • Practice session • Clinical practice • Demonstration 	<ul style="list-style-type: none"> • Short answers • Assessment of skills with checklist
Unit III	T-30hrs p-2hrs Clinical OT Posting- 92	-Acquire & present knowledge regarding anaesthesia drugs.	<ul style="list-style-type: none"> • Pharmacodynamics. Drugs Antiseptics and disinfectants, Hypnotics, Barbiturates, Tranquillizers and sedatives o Neuroleptic drugs, Phenothiazines, Butobarbitone. Anticonvulsants, Analgesics, Intraoperative Analgesia, Nonsteroidal anti-inflammatory drugs, Narcotic antagonists, Intravenous induction agents. Isopropylatrine, Bronchodilators, Respiratory stimulants ,Antidysrhythmias, Vasopressor, Vasodilator, antihypertensive agents ,Ganglion blockers, Plasma expanders, Muscle relaxant, Beta blockers ,Uterine stimulators, Uterine inhibitors, Insulin, Histamine and H ₁ & H ₂ receptor antagonists, Anticoagulants, Antiemetics, Anticholinergics, Drugs acting on eye , ENT and etc <ul style="list-style-type: none"> • Nurses role and responsibilities 	<ul style="list-style-type: none"> • Lecture • Discussion 	<ul style="list-style-type: none"> • Objective type • Short answers
Unit IV	T-15hrs p-2 hrs Clinical OT Posting91 hrs	-Demonstrate skill of organization of OR Table & instrument	O.R. TABLE AND ORGANIZATION <ul style="list-style-type: none"> • Equipments and amenities • Different types of tables and accessories Organization of table and equipments nurses' role and responsibilities.	<ul style="list-style-type: none"> • Practice session • Clinical teaching care plan • Care study 	<ul style="list-style-type: none"> • Short answers • Long answers

Unit-V	T-15 P-60	-Demonstrate skill of communication skill & IPR	<ul style="list-style-type: none"> • Communication Skills & IPR • Process & methods • Establishing & maintaining good IPR & communication with family, staff and colleagues • Breaking of bad news- Multidisciplinary team & role of nurses • Guidance & Counseling 	<ul style="list-style-type: none"> • Lecture • Clinical teaching • Demonstration 	<ul style="list-style-type: none"> • Short answers • Objective type • Assessment of skills with checklist
Unit VI	T-15 hrs P-60hrs	-Explain and demonstrate legal responsibilities of OT nurse	LEGAL RESPONSIBILITIES <ul style="list-style-type: none"> • Identification of patients • Identification of right part to be operated • valid consent <ul style="list-style-type: none"> ✓ for operation ✓ use of body tissue and organ transplant (donor and recipient) • care of dentures • counting of sponges, instruments etc • prevention of unusual incidences (fall of patient, burn, fire hazards) • Records in operation theatre : Its medico - legal importance 	<ul style="list-style-type: none"> • Demonstration • Clinical practice 	<ul style="list-style-type: none"> • Short Answers
Unit-VII	T-15hrs P-60hrs	Demonstrate Human Values	Human values	Lecture Activity	Short Answers
Unit-VIII	T-15hrs	Demonstrate Planning of health economics	Health Economics	Lecture Activity	Short Answers

2nd SEMISTER

2nd Semester:

Theory =105 hrs

Practical =10

Clinical = 425 hrs

Total Hrs:540 HRS

Unit –I	T-15 p-2 Clinical OT Posting- 91	-Update knowledge regarding infection control. -Identify infection control measures	Infection control <ul style="list-style-type: none"> • Environment : - Cleaning, disinfecting O.R. Area, equipments, Air conditioning system, • Aspetic techniques - Handwashing, use of mask, gowning, gloving, head cover Sterilization: - Preparing and packing of instruments, dressing materials, linen, suturematerials , drainage tubes and catheters, care of electro-medical equipments Handling and storing of sterilized material, equipments, instruments. <ul style="list-style-type: none"> • Collection of various specimens for laboratory tests • Bio-Medical Waste Management: - Universal standards and it's application in O.R.Nursing. Nurses Role and Responsibility	<ul style="list-style-type: none"> • Lecture • Discuss ion • Practice session 	<ul style="list-style-type: none"> • Short answers • Long answers
Unit II	T-15 p-2 Clinical OT Posting- 92	-Perform skill of assisting for various surgical procedures.	Preparation and assisting for various surgical procedures; as circulating and scrub nurse <ul style="list-style-type: none"> • Setting up of operation room and table • setting up of trays and trolleys for various surgical procedures • Part preparation for surgical procedures • positioning and draping according to the surgical procedures • incisions for various surgical procedures • Minor surgeries-surgical instruments and suturing materials • Major surgeries - surgical instruments and suturing materials : General, Gynaec, Obstetrics, Orthopaedics, Plastic and Reconstructive surgery, Ophthalmic, Head and Neck, ENT, Cardio-Thoracic, Neuro, Paediatric Dental. Laser and robotic surgery <ul style="list-style-type: none"> • Records and reports 	<ul style="list-style-type: none"> • Demons tration • Practice session • Clinical practice • Lecture discussi on 	<ul style="list-style-type: none"> • Short answers • Long answers

			Nurses role and responsibilities		
Unit-III	T-15 Clinical OT Posting- 91	<ul style="list-style-type: none"> Identify Types,uses,disinfection,storage of suture material & needles. 	Suture Material & Needles Types,uses,disinfection,storage of suture material and needles.	<ul style="list-style-type: none"> Lecture Discussion Practice session 	Long answers
Unit- IV	T-15 p-2 Clinical OT Posting- 91	-Present organization of recovery room.	Recovery Room /Surgical Intensive Care Unit Set up and organization,management of patient,reporting and recording,transportation of patient, Nurses role and responsibilities	<ul style="list-style-type: none"> Lecture 	Long answers
Unit- V	T-15 P-60	Discuss structure , use & maintenance of Operating microscope.	Operating microscopes Types,accessories,attachments,uses,disinfection,maintenance and storage Nurses role and responsibilities	<ul style="list-style-type: none"> Lecture Discussion Practice session 	<ul style="list-style-type: none"> Short answers
Unit – VI	T-15 P-60	-Identify Types,uses,disinfection,storage of endoscope. -Discuss Role of OT Nurse in Preparation of patients	Endoscopies <ul style="list-style-type: none"> Definition,Types,Uses,Maintenance and storage. Preparation of patients Nurses role and responsibilities	<ul style="list-style-type: none"> Discussion Practice session 	<ul style="list-style-type: none"> Short answers
Unit VII	T-15 P-60	Demonstrate Stress management skill.	Stress management	Lecture Activity	Short Answers

Unit VIII	T-15	Demonstrate various Soft Skills	Soft Skills	Lecture Activity	Short Answers
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SCHEME OF EXAMINATION

Internal assessment examination will be converted to of 25 marks theory and 25 marks practical and will be added in End semester examination.

End semester examination:

Question Paper Pattern:

Theory: 75 Marks

Answer all the questions.

- I. Multiple Choice Question (MCQ) = $15 \times 1 = 15$
- II. Essay question : $20 \times 1 = 20$
- III. Long Answers (Answer 2 out of 3) = $2 \times 10 = 20$
- IV. Short Answers (Answers 4 out of 6) = $4 \times 5 = 20$

Total = 75 Marks

Practical:

Oral Examination: 25 Marks

Practical Examination 50 Marks

Total Marks : 75.

Total exam marks for end semester are 100 marks theory and 100 marks practical.

1. Promotion and award of grades

A student shall be declared PASS and eligible for getting he/she secures at least 50% marks in that particular course including internal assessment..

2. Carry forward of marks

In case a student fails to secure the minimum 50% in any Theory or Practical course as specified ,then he/she shall reappear for the end semester examination of that course. However his/her marks of the Internal Assessment shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.

3. Improvement of internal assessment

A student shall have the opportunity to improve his/her performance only once in the Sessional exam component of the internal assessment. The re-conduct of the Sessional exam shall be completed before the commencement of next end semester theory examinations.

Grading of performances:

Letter grades and grade points allocations:

Based on the performances, each student shall be awarded a final letter grade at the end of the semester for each course. The letter grades and their corresponding grade points are given in table I

Table –I Letter grades and grade points equivalent to Percentage of marks and performances

Percentage of Marks Obtained	Letter Grade	Grade Point	Performance
90.00 – 100	O	10	Outstanding
80.00 – 89.99	A	9	Excellent
70.00 – 79.99	B	8	Good
60.00 – 69.99	C	7	Fair
50.00 – 59.99	D	6	Average
Less than 50	F	0	Fail
Absent	AB	0	Fail

A learner who remains absent for any end semester examination shall be assigned a letter grade of A Band a corresponding grade point of zero. He/she should reappear for the said evaluation/examination in due course.

18. The Semester grade point average(SGPA)

The performance of a student in a semester is indicated by a number called ‘Semester Grade Point Average’ (SGPA). The SGPA is the weighted average of the grade points obtained in all the courses by the student during the semester. For example, if a student takes five courses(Theory/Practical) in a semester with credits C1, C2, C3, C4 and C5 and the student’s grade points in these courses are G1, G2, G3, G4 and G5, respectively, and then students’ SGPA is equal to:

$$SGPA = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5 + C_6G_6 + C_7G_7}{C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7}$$

$$C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7$$

The SGPA is calculated to two decimal points. It should be noted that, the SGPA for any semester shall take into consideration the F and ABS grade awarded in that semester. For

example if a learner has a F or ABS grade in course 4, the SGPA shall then be computed as:

$$SGPA = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4 \cdot \text{ZERO} + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

$$C_1 + C_2 + C_3 + C_4 + C_5$$

Cumulative Grade Point Average(CGPA)

The CGPA is calculated with the SGPA of all the II semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all II semesters and their courses. The CGPA shall reflect the failed status in case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA shall only reflect the new grade and not the fail grades earned earlier. The CGPA is calculated as:

$$CGPA = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6}{C_1 + C_2 + C_3 + C_4 + C_5 + C_6}$$

where C_1, C_2, \dots is the total number of credits for semester I, II, ..., and S_1, S_2, \dots is the SGPA of semester I, II, ..., .

Declaration of class

The class shall be awarded on the basis of CGPA as follows:

First Class with Distinction= CGPA of 7.50 and above

First Class= CGPA of 6.00 to 7.49

Second Class= CGPA of 5.00 to 5.99

Award of Ranks

Ranks and Medals shall be awarded on the basis of final CGPA.

Award of degree

Candidates who fulfill the requirements mentioned above shall be eligible for award of PG Diploma during the ensuing convocation.

Final Mark list Of University Examination

Sr. No.	Semester	Internal Assessment		End Semester Examination		Total	
		Theory 25 marks	Practical 25 marks	Theory 75 marks	Practical 75 marks	Theory 100 marks	Practical 100 marks

1	Semester I						
2	Semester II						

Prescribed Books For Course:

1. Blackwell, Caroline C. and D. M. Wein. Principles of Infection Immunity in Patient care, New York. Churchill Livingstone, 1981.
2. Br igitden, Raymond J. Operation Theatre Technique, London, Churchill Livingstone, 1980.
3. Devidson Ws et al, Cross infection Hazards and Prevention, Australlia; WA Department of Health, 1965.
4. Dixon Eillen, Theatre Technique, London : Bailliege Tindall and Cassell, 1983.
5. Gray, E. T. Principles of Surgery, New York : Churchill Livingstone, 1981.
6. Houghton Mayorie, *Nurses Aid Series* Tray and Trolley setting 6th edition, London, Bailliege Tindall and Cassell, 1965.
7. Honghton Marjorie and Jean Hudd, *Aid to Theatre Technique*. London: Bailliege Tindall and Cassell, 1961.
8. Nash, D. F. Ellison, *The Principles and Practice of Surgery for Nurses and Allied Profession*, 7th Ed. Edward Arnold, 1980.
9. Palmer Monica, *Infection Control, A Policy and Procedure Mannual* Philadelphia W. S. Saunders Company, 1984.
10. Perkins John J. *Principles and Methods of Sterilization and Health Sciences*, 2nd Ed. Illinois, Charles C. Thomas, 1983.
11. Perkins E. W. *Aseptic Techniques for Operating room Personnel*, London: B. Saunders and Co., 1959.
12. Thresyamma, C. Po. *Notes on: Operating room Technique for General Nursing Course*. Williams Rooetal; *Hospital Infection Causes and Prevention*, London, Llyod Luke Ltd., 1966

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