Syllabus and Curriculum of Diploma in Operation Theatre Technician course

(To be implemented From 2016 - 17 session)

Uttar Pradesh State Medical Faculty, Lucknow.

Index

- Objectives of the course…….……....…. 3-3
- Outline of curriculum of ‘Diploma in Operation Theatre Technician’ course……..... 4-7
- Eligibility criteria & duration of the course…….……....…..... 8-8
- Scheme of examination…….…….....… 9-10
- Schedule of the course……...… 11-13
- Details of first year course curriculum…….…….…… 14-20
- Details of Second year course curriculum…….…… 21-26

OBJECTIVES OF THE COURSE

To prepare a **OT technician** who –

- Can prepare OT before surgery including process of sterilization.
- Can assist common surgeries to respective surgeons as first assistant.
- Can use C-Arm and other imagings effectively.
- Can take care of patient in post operative room.
- Can maintain all records.
- Can do CPR.
- Can perform basic nursing procedures like IV/IM/SC injections, Nebulization, catheterization ,Oxygen therapy.
- Can provide Psychological support to the patient & counsel him & his/her relatives.

Outline of Curriculum of Diploma in Operation Theatre Technician course

FIRST YEAR

THEORY (Classes: 9 AM to 12 Noon)

First paper : **Syllabus covers** -
1. General Anatomy & Physiology (Cytology, Histology, Osteology and only basics of all organ systems of body). 2. Only basics of relevant Pathology, Pharmacology (including anaesthetic agents) & Microbiology.

Second paper : **Syllabus covers** -
1. Detailed Surgical Anatomy. 2. Basics of OT techniques, CSSD techniques and Anaesthesia techniques. 3. Hand hygiene & prevention of cross infection. 4. Basics life support (BLS) & Cardio-pulmonary resuscitation (CPR).

FIRST YEAR

PRACTICAL (Classes: 1 PM to 4 PM)

Practical classes will be after lunch; from 1 PM to 4 PM.

Students must present in the hospital/ OT for practicals.

During first year, they should be there only as "Observers" in practical classes.

(Observership for Pre-operative preparation, Intra-operative assistance, Post operative care & CSSD techniques).

Following subjects must be taught; though there will not be any exam from these-
1. Basic Computer skills. 2. Basic English. 2. **Soft skills like** - Interpersonal relationship skills & moral education. .

Outline of Curriculum of Diploma in Operation Theatre Technician course

SECOND YEAR

THEORY (claases:9 AM to 12 Noon)

First paper : **Syllabus cover**s -
1. Only relevant surgical & medical conditions (relevant to OT technician). 2. Nursing Procedures like vital recording, IM/IV/SC injection, Oxygen therapy, Nebulization,, catheterisation, IV infusion.

Second paper : **Syllabus cover**s -
1. Details of common surgeries & applied OT techniques. 2. Basics of CSSD & sterilization practices, biomedical waste management. 3. Basic biomedical engineering physics of OT equipments & instrument.

SECOND YEAR

PRACTICAL (claases:9 AM to 12 Noon)

Practical exams syllabus should cover-

- Hands on training of Hand wash/scrubbing & sterilization practices.
- Hands on training of pre operative preparation.
- Assisting surgeries.
- Hands on training of Post operative care.
- Hands on training of biomedical waste management.
- Hands on training of BLS.
- Hands on training of basic anaesthesia techniques.
- Hands on training of use of drugs used in OT.

ELIGIBILITY CRITERIA FOR ADMISSION & DURATION OF THE COURSE

COURSE DURATION:-

- It is 2 years, **full time** Diploma Course.

ELIGIBITY:-

- Candidate must have passed 12th with

  Physics, Chemistry, Biology

  Or

  Physics, Chemistry, Maths

  with 35% marks in Intermediate exams.

  (From UP board or any other recognised board).

- Candidate must have completed age of 17 years of age as on 31st December of admission year. There is no maximum age limit for the admission.

SCHEDULE OF EXAMINATION

FIRST YEAR

Paper	Subjects	Mark	Internal Assessment Marks	Total Marks	Pass Marks	Duration of Exam.
First Paper Theory	1.General Anatomy & Physiology (Cytology, Histology, Osteology and only basics of all organ systems of body). 2.Only basics of relevant Pathology, Pharmacology (including anaesthetic agents) & Microbiology.	75	25	100	50	3 Hours
Second Paper Theory	1.Detailed Surgical Anatomy. 2.Basics of OT techniques, CSSD techniques and Anaesthesia techniques. 3.Hand hygiene & prevention of cross infection. 4.Basics life support (BLS) & Cardio-pulmonary resuscitation (CPR).	75	25	100	50	3 Hours
Practical	Oral & Practical	75	25	100	50	3 Hours

SCHEDULE OF EXAMINATION

SECOND YEAR

Paper	Subjects	Mark	Internal Assessment Marks	Total Marks	Pass Marks	Duration of Exam.
First Paper Theory	1.Only relevant surgical & medical conditions (relevant to OT technician). 2.Nursing Procedures like vital recording, IM/IV/SC injection, Oxygen therapy, Nebulization, IV infusion.	75	25	100	50	3 Hours
Second Paper Theory	1.Details of common surgeries & applied OT techniques. 2.Basics of CSSD & sterilization practices, biomedical waste management. 3.Basic biomedical engineering physics of OT equipments & instrument.	75	25	100	50	3 Hours
Practical	Oral & Practical	75	25	100	50	3 Hours

SCHEDULE OF COURSE

(List of holidays, Total hours, Subject wise allottement of hours)

- **List of Holidays:-**

Sundays	- 52 days
Summer vacation	- 10 days
Winter vacation	- 10 days
Gazetted holidays	- 23 days
Preparatory holidays	- 10 days
Total Holidays	- 105 days

- **Total Hours :-**

Theory classes per day	- 3 Hours
Practical classes per day	- 3 Hours
Total hours per day	- 6 Hours
Total days & hours in One year (after deduction of holidays)	- 260 days or - 1560 Hours

SCHEDULE OF COURSE

Subject wise allottement of hours

FIRST YEAR

Theory (780 Hours) Practical (780 Hours)

First Paper Theory	1.General Anatomy & Physiology (Cytology, Histology, Osteology and only basics of all organ systems of body).	300 Hrs
	2.Only basics of relevant Pathology, Pharmacology (including anaesthetic agents) & Microbiology.	120 Hrs
Second Paper Theory	1.Detailed Surgical Anatomy.	50 Hrs
	2.Basics of OT techniques, CSSD techniques and Anaesthesia techniques.	140 Hrs
	3.Hand hygiene & prevention of cross infection.	30 Hrs
	4.Basics life support (BLS) & Cardio-pulmonary resuscitation (CPR).	40 Hrs
Third Paper Practical	As described in curriculum	780 Hrs
Theory: Other Subjects (These subjects must be taught; though there will not be any exam from these)	**1**.Basic Computer skills.	30 Hrs
	2.Basic English.	30 Hrs
	3.Soft skills like - Interpersonal relationship skills & moral education	10 Hrs

SCHEDULE OF COURSE

Subject wise allottement of hours

SECOND YEAR

Theory (780 Hours) Practical (780 Hours)

First Paper Theory	1.Only relevant surgical & medical conditions (relevant to OT technician).	450 Hrs
	2.Nursing Procedures like vital recording, IM/IV/SC injection, Oxygen therapy, Nebulization, IV infusion	20 Hrs
Second Paper Theory	1.Details of common surgeries & applied OT techniques.	190 Hrs
	2.Basics of CSSD & sterilization practices, biomedical waste management.	60 Hrs
	3.Basic biomedical engineering physics of OT equipments & instrument.	60 Hrs
Third Paper Practical	As described in curriculum	780 Hrs

Details of Curriculum for First Year
Diploma in Operation Theatre Technician

PAPER 1st Theory	Topics	Hours.
1.General Anatomy & Physiology (Cytology, Histology, Osteology and only basics of all organ systems of body).	**1.** General Orientation about parts of human body. Various terms used in Anatomy. Total numbers of bones, their names & location. Basic idea about organzation of body ,from cell to organ systems.	06 Hrs
	2. Structure of Animal cell, Cell organelles & their functions	06 Hrs
	3. Human tissue, types, structure & functions.	10 Hrs
	4. Osteology: Names, location, identification and basic details of all bones. (Details of skull bones is not required).	20 Hrs
	5. Joints: types, basic structure & examples.	06 Hrs
	6. Skin & appendages.	02 Hrs
	7. GIT: : Location, Gross structure, various parts & their functions. Details of process of food ingestion, digestion, absorption & defaecation. (Microscopic structure is not required.)	30 Hrs
	8. Respiratory tract: Location, Gross structure, various parts & their functions. Details of breathing mechanism, different respiratory volumes. (Microscopic structure is not required.)	30 Hrs
	9. Urinary tract: Gross structure, various parts & their functions. (Microscopic structure is not required.) Process of urine formation & voiding.	20 Hrs
	10. Male reproductive system: Only gross structure & functions of different parts. (Microscopic structure is not required.)	10 Hrs
	11. Female reproductive system: Only gross structure & functions of different parts. (Microscopic structure is not required.) Menstrual cycle.	10 Hrs

PAPER 1st Theory	Topics	Hours.
1.General Anatomy & Physiology (Cytology, Histology, Osteology and only basics of all organ systems of body).	**12.** Endocrine system: Hormones secreted by Pituitary, Thyroid, Parathyroid, Pancreas, Adrenal cortex, Adrenal medulla, Gonads & functions of different hormones. (Details of structure of these glands not required).	20 Hrs
	13. Gross structure of brain & spinal cord. Functions of different parts of brain & spinal cord.(Details not required.)	30 Hrs
	14. Blood: Composition & Functions. Details about Plasma, RBCs, WBCs, Platelets, Clotting system.	30 Hrs
	15. Gross structure & functions of sensory Organs - Eye, Ear, Nose, Tongue.(Details not required).	20 Hrs
	16. Basic gross structure of heart, vessels opening into heart & Leaving the heart. Arterial & Venous tree of body.	20 Hrs
	17. Lymphatic system: Structure & Functions.	10 Hrs
	18. Inumune system: Components & various mechanisms of defense.	20 Hrs

PAPER 1st Theory	Topics	Hours.
2.Only basics of relevant Pathology, Pharmacology (including anaesthetic agents) & Microbiology.	1. Basic steps of Acute & chronic inflammation and Healing of wound.	05 Hrs
	2. Basics of Necrosis & apoptosis.	02 Hrs
	3. Basics of Shock.	02 Hrs
	4. Basics of Disorders of blood coagulation system.	08 Hrs
	5. Basics of Disorders of Immune system of body.	05 Hrs
	6. Modes of disease transmission & prevention of infection.	05 Hrs
	7. Sterilization & methods of sterilization used in hospitals.	10 Hrs
	8. Basic idea about types of Bacteria, Virus, Fumgi.	20 Hrs
	9. Routes of drug administration.	02 Hrs
	10. Adverse effects & side effects of drugs.	02 Hrs
	11. Basic idea of Analgesics : Opioid & NSAIDs.	02 Hrs
	12. Basic idea of Drugs use in Cough & expectoration.	01 Hrs
	13. Basic idea of Drugs used in B.asthma & COPD.	02 Hrs
	14. Basic idea of Drugs used in GIT.	03 Hrs
	15. Basic idea of Anti Microbials.	20 Hrs
	16. Basic idea of Anti H-1 Histaminics & Corticosteroids.	01 Hrs
	17. Drugs used in anaemia.	02 Hrs
	18. Anaesthetic agents(LA&GA).	25 Hrs
	19. Muscle relaxants.	05 Hrs

PAPER 2nd Theory	Topics	Hours.
1.Detailed Surgical Anatomy.	1. Detailed Structure of Anterior abdominal wall including clinical anatomy of Hernia.	10 Hrs
	2. Detailed Structure of Posterior abdominal wall.	03 Hrs
	3. Detailed Structure of thoracic wall.	03 Hrs
	4. Concept of meninges & SCALP.	03 Hrs
	5. Surface anatomy & lmportant bony land marks.	13 Hrs
	6. Concept of Mediastinum.	03 Hrs.
	7. Skin as sensory organ.	03 Hrs
	8. Applied Ocular anatomy.	02 Hrs
	9. Location of major muscles of body.	10 Hrs

Details of Curriculum for First Year
Diploma in Operation Theatre Technician

PAPER 2nd Theory	Topics	Hours.
2.Basics of OT techniques, CSSD techniques and Anaesthesia techniques.	1. Hand wash & surgical scrubbing.	03Hrs.
	2. Pre-operative preparation of patient including surgery site.	07 Hrs
	3. Post operative care including dressing.	05 Hrs
	4. Basic idea of various methods of sterilization & basic functioning of CSSD.	15 Hrs
	5. Various positions used in different surgeries.	15 Hrs
	6. Types of anaesthesia, Boyle's machine & anaesthesia work station.	10 Hrs
	7. Gases used in anaesthesia.	08 Hrs
	8. Triage of patients.	02 Hrs
	9. Diagram & details of hand instruments used in common surgeries.	40 Hrs
	10. Pre anaesthetic check up	03 Hrs
	11. Infection control in OT	05 Hrs
	12. Basic idea of different IV fluids	05 Hrs
	13. Needles , sutures and knots.	15 Hrs
	14. Cautery.	05 Hrs

PAPER 2nd Theory	Topics	Hours.
3.Hand hygiene & prevention of cross infection.	1. Hand hygiene & method of Hand washing.	15 Hrs
	2. Prevention of cross infection.	15 Hrs

PAPER 2nd Theory	Topics	Hours.
4.Basic life support (BLS) & Cardio-pulmonary resuscitation (CPR).	1. Code blue.	05 Hrs
	2. Details of basic life support (BLS) & Cardio-pulmonary resuscitation (CPR).	35 Hrs

Curriculum
for
Practical :- First Year
Diploma in Operation Theatre Technician

	Topics
Practical	1. Hand wash & scrubbing.
	2. Basics of various methods of sterilization.
	3. Care & identification of all equipments, instruments & hand instruments related to OT.
	4. Pre-operative care & preparation.
	5. Post-operative care of patient.
	6. BLS.
	7. Using medical gases.
	8. Working as second assistant.
	9. Details about suthres, needles, knots.
	10. IV fluids use.
	11. Recording vitals.
	12. IV, IM injection, Urinary catheterization.
	13. Glove,Gown, Personal protection equipments.

Details of Curriculum for Second Year
Diploma in Operation Theatre Technician

PAPER 1st	Topics	Hours.