

Syllabus and Curriculum
of
Diploma in
Burn and plastic surgery technician

Uttar Pradesh State Medical Faculty, Lucknow.

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OBJECTIVES OF THE COURSE

To prepare a Burn and plastic surgery technician who –

- Can handle patients of burn, do the first aid arrangement, dressing etc and can work efficiently in burn ward..
- Is well aware of common equipments & instruments used in plastic surgery.
- Can assist plastic surgeon during different procedures & surgeries related to the discipline.
- Can perform CPR in Case of need.
- Can perform basic nursing procedures.
- Is well aware about biomedical waste management.

Outline of Curriculum
of
Diploma course
in
Burn and plastic surgery technician

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 .

THEORY (Classes: 9 AM to 12 Noon)

First paper : Syllabus covers -

1. Detailed gross and microscopic structures of skin, fascia, tendon, ligament, Cartilage, bone, muscles, artery, vein and nerves.
2. Diseases related to plastic surgery and burn.
3. Basic nursing procedures like IM/IV Injection, IV cannulation, Dressing, Ryles tubing, nebulization etc.

Second paper : Syllabus covers -

1. Special equipments and instruments used in plastic surgery.
2. Role of technician in various plastic surgery procedures and surgeries.
3. Hand hygiene & prevention of cross infection and CPR.

SECOND YEAR

PRACTICAL (Classes: 1 PM to 4 PM)

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

Students must present in the hospital for practicals.

ELIGIBILITY CRITERIA FOR ADMISSION & DURATION OF THE COURSE

COURSE DURATION:-

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

ELIGIBILITY:-

- 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.

Scheme OF EXAMINATION

FIRST YEAR

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

SECOND YEAR

<u>Paper</u>	<u>Subjects</u>	<u>Mark</u>	<u>Internal Assessment Marks</u>	<u>Total Marks</u>	<u>Pass Marks</u>	<u>Duration of Exam.</u>
<u>First Paper Theory</u>	<ol style="list-style-type: none">1. Detailed gross and microscopic structures of skin, fascia, tendon, ligament, Cartilage, bone, muscles, artery, vein and nerves.2. Diseases related to plastic surgery and burn.3. Basic nursing procedures like IM/IV Injection, IV cannulation, Dressing, Ryles tubing, nebulization etc.	75	25	100	50	3 Hours
<u>Second Paper Theory</u>	<ol style="list-style-type: none">1.Special equipments and instruments used in plastic surgery.2.Role of technician in various plastic surgery procedures and surgeries.3. Hand hygiene & prevention of cross infection and CPR.	75	25	100	50	3 Hours
<u>Practical</u>	Oral & Practical	75	25	100	50	3 Hours

SCHEDULE OF COURSE

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

- **List of Holidays:-**

Sundays	- 52 days
Summer vacation	- 10 days
Winter vacation	- 10 days
Gazetted holidays	- 23 days
Preparatory holidays	- 10 days
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Total Holidays	- 105 days
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- **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 allotment of hours

FIRST YEAR

Theory (780 Hours) Practical (780 Hours)

<u>First Paper Theory</u>	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
<u>Second Paper Theory</u>	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
<u>Third Paper Practical</u>	As described in curriculum	780 Hrs
<u>Theory: Other Subjects</u> <small>These subjects must be taught; though there will not be any exam from these)</small>	Basic Computer skills .	30 Hrs
	Basic English .	30 Hrs
	Soft skills like - Interpersonal relationship skills & moral education	10 Hrs

SECOND YEAR

Theory (780 Hours) Practical (780 Hours)

<u>First Paper Theory</u>	1.Detailed gross and microscopic structures of skin, fascia, tendon, ligament, Cartilage, bone, muscles, artery, vein and nerve.	150Hrs
	2.Diseases related to plastic surgery and burn.	200 Hrs
	3.Basic nursing procedures like IM/IV Injection, IV cannulation, Dressing, Ryles tubing, nebulization etc.	50 Hrs
<u>Second Paper Theory</u>	1.Special equipments and instruments used in plastic surgery.	100 Hrs
	2.Role of technician in various plastic surgery procedures and surgeries.	200 Hrs
	3. Hand hygiene & prevention of cross infection and CPR.	10 Hrs
<u>Third Paper Practical</u>	As described in curriculum	780 Hrs
<u>Theory: Other Subjects</u> (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

Details of Curriculum for First Year Diploma course in Burn and plastic surgery 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 organization 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.
	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

2 . Only basics of relevant Pathology, Pharmacology (including anaesthetic agents) & Microbiology .	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, Fungi.	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 & Important 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

PAPER 2nd Theory	Topics	Hours.
	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

2 . Basics of OT techniques, CSSD techniques and Anaesthesia techniques.		
	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

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

Practical	Topics
	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 sutures, 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 course in Burn and plastic surgery technician**

PAPER 1st Theory	Topics	Hours.
1.Detailed gross and microscopic structures of skin, fascia, tendon, ligament, Cartilage, bone, muscles, artery, vein and nerve.	1. Detailed gross and microscopic structures of Skin and its blood supply.	20 Hrs
	2. Detailed gross and microscopic structures of superficial and deep fascia.	05 Hrs
	3. Detailed gross and microscopic structures of muscles, tendons and ligaments.	10 Hrs
	4. Detailed gross and microscopic structures of cartilage.	10 Hrs
	5. Detailed gross and microscopic structures of bone.	10 Hrs
	6. Detailed gross and microscopic structures of artery.	10 Hrs
	7. Detailed gross and microscopic structures of vein.	10 Hrs
	8. Detailed gross and microscopic structures of lymphatics.	10 Hrs
	9. Detailed gross and microscopic structures of nerve and plexi.	10 Hrs
	10. Detailed gross and microscopic structures of arterial and venous system.	10 Hrs
	11. Detailed gross and microscopic structures of lymphatic system.	10 Hrs
	12. Structure of upper limb.	10 Hrs
	13. Structure of lower limb.	10 Hrs
	14. Structure of nose.	05 Hrs
	15. Structure of lip and palate.	10 Hrs

Details of Curriculum for Second Year Diploma course in Burn and plastic surgery technician

PAPER 1st Theory	Topics	Hours.
2.Diseases related to plastic surgery and burn.	1. Details of wound healing, regeneration ,fibrosis and scarring.	15 Hrs
	2. Skin wounds: superficial and deep.	05 Hrs
	3. Burn : def, types, pathology, extent, degree, effects, immediate treatment, general treatment, definitive treatment.	20 Hrs
	4. Bed sore.	05 Hrs
	5. Limb injury: crush and penetrating.	10 Hrs
	6. Nerve injury.	10 Hrs
	7. Vessel injury.	10 Hrs
	8. Tendon and ligament injury.	15 Hrs
	9. Cleft lip.	10 Hrs
	10. Cleft palate.	10 Hrs
	11. Corn, callus and warts.	10 Hrs
	12. Lipoma, fibroma, neurofibroma.	10 Hrs
	13. Haemangioma.	15 Hrs
	14. Basal and squamous cell carcinoma of skin.	15 Hrs
	15. Melanosis and melanoma.	10 Hrs
	16. Hyper and hypo pigmentation of skin.	10 Hrs
	17. Scar and keloid.	05 Hrs
	18. Hyper and hypopigmentation of skin.	05 Hrs
	19. Amputation.	05 Hrs
	20. Alopecia.	05 Hrs

Details of Curriculum for Second Year Diploma course in Burn and plastic surgery technician

PAPER 1st Theory	Topics	Hours.
3. Basic nursing procedures like IM/IV Injection, IV cannulation, Dressing, Ryles tubing, nebulization etc.	1. IM/IV injections.	05 Hrs
	2. IV cannulation.	05 Hrs
	3. IV fluids management.	15 Hrs
	4. Urinary catheterization.	05 Hrs
	5. Naso gastric intubation.	05 Hrs
	6. All types of dressings.	15 Hrs
	7. Wound and bed sore care.	05 Hrs

Details of Curriculum for Second Year Diploma course in Burn and plastic surgery technician

PAPER 2nd Theory	Topics	Hours.
1.Special equipments and instruments used in plastic surgery.	1. Special equipments and instruments used in Skin grafting and flap.	10 Hrs
	2. Special equipments and instruments used in Microvascular surgeries.	15 Hrs
	3. Special equipments and instruments used in Cleft lip and palate.	15 Hrs
	4. Special equipments and instruments used in Rhinoplasty.	10 Hrs
	5. Special equipments and instruments used in Limb reconstruction.	15 Hrs
	6. Special equipments and instruments used in Hair transplantation.	15 Hrs
	7. Special equipments and instruments used in Other plastic surgery procedures.	20 Hrs.

Details of Curriculum for Second Year Certificate course in Burn and plastic surgery technician

PAPER 2nd Theory	Topics	Hours.
2.Role of technician in various plastic surgery procedures and surgeries.	1. Role of technician in Burn: immediate care, intermediate care, dressing and definitive care.	30 Hrs
	2.Role of technician in microvascular surgeries.	30 Hrs
	3. Role of technician in Cleft lip and palate surgeries.	10 Hrs
	4.Role of technician in limb trauma and reconstructive surgeries.	20 Hrs
	5.Role of technician in Skin grafting and flap surgeries.	20 Hrs
	6.Role of technician in Rhinoplasty.	10 Hrs
	7.Role of technician in Ear pinna reconstruction.	10 Hrs
	8.Role of technician in Liposuction.	10 Hrs
	9.Role of technician in Hair transplantation.	20 Hrs
	10.Role of technician in cosmetic surgeries.	30 Hrs
	11. LASER and other advances in plastic surgery.	20 Hrs

PAPER 2nd Theory	Topics	Hours.
3. Hand hygiene & prevention of cross infection and CPR	1. Hand hygiene & prevention of cross infection	08 Hrs
	2.CPR	02 Hrs

Practical Curriculum

(Hours : 780 Hrs.)

Practical training in hospital/wards of the following :-

1. Role of technician in Burn: immediate care, intermediate care, dressing and definitive
2. Role of technician in microvascular surgeries.
3. Role of technician in Cleft lip and palate surgeries.
4. Role of technician in limb trauma and reconstructive surgeries.
5. Role of technician in Skin grafting and flap surgeries.
6. Role of technician in Rhinoplasty.
7. Role of technician in Ear pinna reconstruction.
8. Role of technician in Liposuction.
9. Role of technician in Hair transplantation.
10. Role of technician in cosmetic surgeries.
11. LASER and other advances in plastic surgery.