



National Skill Qualification Framework Level 4

HSS/Q/2601: Operating Theatre Technician

Competency Based Curriculum

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Introduction



The term “**curriculum**” (plural: *curricula* or *curriculum*s) is derived from the Latin word for “*race course*”, referring to the course of deeds and experiences through which children grow to become mature adults. A competency based curriculum describes what learners must “know” and “be able to do” by the end of a program or study. It identifies the competencies and sub-competencies each learner is expected to master. It states clearly the criteria and conditions by which performance will be assessed. It also defines the learning activities that will lead to the learner to mastery of the targeted learning outcome.

The **competency based curriculum** is broken down into coherent parts known as **Units**. Each unit is further broken down into knowledge and skills on the basis of which evidence is to be provided by the learner and the evaluation is to be done by the teacher or trainer.

About the Sector



Healthcare sector in India has been growing rapidly over the years and is estimated to reach US\$ 280 billion by 2020. Consequently, the sector is also experiencing an incremental demand for human resources across verticals; from doctors, nurses to allied health professionals and technicians.

India is far behind global standards in terms of availability of doctors per 1000 people (India 0.6; US 2.56 or UK 2.3) , nurses (India 0.8; US 9.37 or UK 12.12), Midwives (India 0.47; UK 0.63) and lab technicians (India 0.02; US 2.15)

To meet the growing human resource challenges, the National Skill Development Corporation & the Confederation of Indian Industry have constituted the Healthcare Sector Skill Council (HSSC). The Council is expected to promote a vibrant vocational education system in healthcare in the country by setting up occupational standards, affiliating training institutes, assessing competency of trainees and issuing certificates. The council aims to facilitate skilling of 4.8 million people over the next 10 years in allied health & paramedics space.

Objective of the Course



- The objective of the program is to develop a pool of trained workforce which can be employed by medical service providers to assist Surgeons. This course is geared to prepare 10+2 children with science background and who desire to be employed as a OT technician in a health care facility on completion of NSQF L-4 course. This program focuses on the acquisition of skills necessary for OTT to perform duties such as transport patients, preparing operating room for surgery, set up, check, connect and adjust surgical equipment, technical assistance to surgeons, clean & restock the operating room, arranging instrument, supplies and equipment according to instruction and position patients for surgery. The training methodology includes simulation in the classroom and technology in the clinical setting. Upon completion of the course, trainees will be able to:
- develop skills in the area of sterile services.
- assist in the preparation of the patient for surgery taking into account the problems identified during the preoperative assessment, nature of procedure and expected postoperative course.
- develop appropriate professional relationships in multi-disciplinary set up to provide total care.
- achieve skills in surgical instruments handling and it's reprocessing techniques.
- Know and apply the principles of sterilization, disinfection, infection control and aseptic techniques
- Perform invasive and non-invasive diagnostic examinations and therapeutic interventions under supervision
- Ensure availability of medical and diagnostic supplies
- Identify and know the instruments and equipment used in different procedures
- Acquire sound knowledge of special procedures and able to assist in all.
- Able to work effectively with others and have good communication abilities

Duration of the Course



Terms	No of Notional Learning Hours		
	Theory	Practical	Total (in Hours)
Term 1	100	100	200
Term 2	100	100	200
Term 3	100	100	200
Term 4	100	100	200
Total (Term 4)	400	400	800
Laboratory Training/Clinical Training			400
Grand Total (all terms + clinical training)			1200

National Occupational Standards



- HSS/ N 2601: Prepare and maintain operation theater
- HSS/ N 2602: Maintain equipment support in an acute care environment
- HSS/ N 2603: Identify and move to maintain a sterile field
- HSS/ N 2604: Follow infection control policies and procedures
- HSS/ N 2605: Manage and maintain theater equipment
- HSS/ N 2606: Prepare patient for operative procedures
- HSS/ N 2607: Provide intra-operative equipment and technical support
- HSS/ N 2608: Assist anaesthetist in handling emergencies outside of OT Room
- HSS/ N 2609: Manage hazardous waste
- HSS/ N 9602: Ensure availability of medical and diagnostic supplies
- HSS/ N 9603: Act within the limits of one's competence and authority
- HSS/ N 9604: Work effectively with others
- HSS/ N 9605: Manage work to meet requirements
- HSS/ N 9606: Maintain a safe, healthy, and secure working environment
- HSS/ N 9608: Follow radiation safety guidelines
- HSS/ N 9609: Follow biomedical waste disposal protocols
- HSS/ N 9611: Monitor and assure quality

Course Structure: Term I (NSQF Level 4): Operating Theatre Technician (OTT)



This course consists of the following 33 modules called as units along with the unit code (NOS) and notional hours.

Term I			
Sl No	Unit Code	Unit Title	No of Notional Learning Hours
1	Introduction	Introduction to Healthcare Delivery system and Operation theatre technology	15 (10 Theory + 5 Practical)
2	HSS/N 2606, 2601	Anatomy and Physiology of Human Body : Basic Obstetrics And Gynecology	15 (10 Theory + 5 Illustrative)
3	HSS/N 2606, 2601	Elementary Pathology , Microbiology & Pharmacology	10 (5 Theory + 5 Illustrative)
4	HSS/N 9606	Personnel Hygiene	10 (5 Theory + 5 Illustrative)
5	HSS/N 9606, 9608	Sanitation , Safety/PPE & First Aid	20 (15 Theory + 5 Illustrative)
6	HSS/N 9609, 2609	Bio Medical Waste Management/Hazardous Waste management	20 (5 Theory + 5 Practical)
7	Introduction	Soft Skills And Communications	10 (5Theory+ 5 Illustrative)

Course Structure: Term II (NSQF Level 4: OTT)



Term II			
Sl No	Unit Code	Unit Title	No of Notional Learning Hours
8	HSS/N 2601, 2605, 2607	Theatre protocols	15 (10 Theory + 5 Practical)
9	HSS/N 2601, 2602, 2605, 2606	Basic of Surgery	15 (10 Theory + 5 Practical)
10	HSS/N 2602, 2605, 2607, 9602	Surgical Equipment and Machinery	15 (10 Theory + 5 Practical)
11	HSS/N 2602, 2605, 2607, 9602	Maintenance and management of theatre equipment's, machines and inventory	10 (5 Theory + 5 Practical)
12	HSS/N 2602, 2605, 2607, 9602	Basics of Anesthesia Equipment and Drugs	15 (10 Theory + 5 Practical)
13	HSS/N2604	Infection Control Measure- Policies and Procedures	10 (5 Theory + 5 Practical)
14	HSS/N 2608	Basic Life Support	10 (5 Theory + 5 Practical)
15	Introductory	Soft Skills and Communication- II	10 (5 Theory + 5 Practical)

Course Structure : Term III (NSQF Level 4: OTT)



Term III			
SI No	Unit Code	Unit Title	No of Notional Learning Hours
16	HSS/N 2605	Washing of Surgical Instruments	20 (5 Theory + 15 Practical)
17	HSS/N 2604	Transfer of Patient/Sample/Drugs and Patient Care	15 (10 Theory + 5 Practical)
18	HSS/N9603, 9604	OT Ethics and Discipline	10 (5 Theory + 5 Practical)
19	HSS/N2604	Infection Control	10 (5 Theory + 5 Practical)
20	HSS/N2601, 2602	Preparing OT units (Anesthesia and surgical) and patients for procedures	15 (10 Theory + 5 Practical)
21	HSS/N9608, 9611	Quality Assurance in OT	10 Hours (5 Theory + 5 Practical)
22	HSS/N2601, 2606	Pre Operative, Operative and Post operative management of procedures and protocols for patients	15 (10 Theory + 5 Practical)
23	HSS/N9603	Patient Maneuver's to reduce complications, pain etc	5 (5 Theory + 5 Practical)

Course Structure : Term IV (NSQF Level 4: OTT)



Term IV			
Sl No	Unit Code	Unit Title	No of Notional Learning Hours
24	HSS/N2603	Aseptic Techniques & Guidelines	10 Hours (5 Theory + 5 Illustrative)
25	HSS/N 2608	Emergency Handling	15 (10 Theory + 5 Illustrative)
26	HSS/ N 9603 HSS/N0107	Act within the limits of Competence and Authority	5 (2 Theory + 3 Illustrative)
27	Introduction	Basic Life Support	10 (5 Theory + 5 Illustrative)
28	HSS/ N 9604	Work effectively with others	5 (3 Theory + 2 Illustrative)
29	HSS/ N 9605	Manage work to meet requirements	5 (3 Theory + 2 Practical)
30	HSS/ N 9611	Monitor and Assure Quality	20 (15 Theory + 5 Illustrative)
31	HSS/ N 9606, 9605, 9602	Consent, Documentation & Records	15 (10 Theory + 5 Illustrative)
32	Introductory	Basic Computer Knowledge	15 (10 Theory + 5 Illustrative)

MINIMUM QUALIFICATION OF FACULTY



- MBBS doctor with one year experience in Operating theatre or B.Sc Nurse with three years experience in operating department or GNM Nurse with five years of experience working in OT department Operating theatre technician with five years experience in OT department.