

**LEARNING OUTCOME BASED VOCATIONAL CURRICULUM**

**CLASS 11 & 12**

**SECTOR:  
HEALTH CARE**

**JOB ROLE**  
**DENTAL ASSISTANT**

(Qualification Pack Ref. ID:HSS/Q2401)



**State Council of Educational Research & Training (SCERT) Kerala**

(Department of General Education, Government of Kerala)

Vidhya Bhavan, Poojappura, Thiruvananthapuram





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[www.scert.kerala.gov.in](http://www.scert.kerala.gov.in)



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VOCATIONAL CURRICULUM**

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## **FOREWORD**

A collaborative initiative for developing learning outcome based vocational curriculum and courseware aimed at integrating both vocational and general qualifications has been implemented by the State Council of Educational Research and Training (SCERT) Kerala and the PSSCIVE Bhopal. This is intended to open up pathways of career progression for students and the SCERT Kerala is developing curricula under the project as an integral part of Vocationalisation of Education under Samagra Shiksha, approved by the Government of Kerala. Decisive improvement in the teaching-learning process and working competencies through learning outcomes that have been judiciously embedded in the vocational subject is expected to be the major impact that will be brought about by the learning outcome based vocational curriculum.

It is a matter of great pleasure to introduce this learning outcome based vocational curriculum as part of the vocational training package for the job role of Dental Assistant (HSS/Q2401). The curriculum has been developed for the higher secondary students of vocational education and is aligned to the National Occupation Standards (NOSs) of a job role identified and approved under the National Skill Qualification Framework (NSQF).

The key aim of the curriculum will be to provide children with employability and vocational skills that would in turn aid occupational mobility and lifelong learning. A major transformation in the teaching process is also aimed at, which will be brought about through interactive sessions in classrooms, practical activities in laboratories and workshops, projects, field visits, and professional experiences.

The curriculum has been meticulously developed and judiciously reviewed by a group of experts and their much-valued contributions are immensely acknowledged. The imminent utility of the curriculum will without doubt, be adjudged by the qualitative improvement that it brings about in teaching-learning. The feedback and suggestions on the content by the teachers and other stakeholders will be of immense value to us in bringing about further enhancement and augmentation to this document.

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*Director*  
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## **ACKNOWLEDGEMENT**

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We are extremely thankful to Dr. RVG Menon, Chairperson, High Power Committee for the implementation of NSQF in Kerala, Dr. Sukesh Kumar, Former Principal, Government Engineering College Palakkad and Sri. G S Unnikrishnan Nair, Former Director State Agricultural Management and Extension Training Institute (SAMETI), Thiruvananthapuram for their mentorship in the process of developing this document. The contributions made by Dr. Vinay Swarup Mehrotra, Professor and Head, Curriculum Development and Evaluation Centre (CDEC), PSSCIVE Bhopal in development of the curriculum are duly acknowledged.

We are grateful to the experts for their earnest efforts and contributions in the development of this learning outcome based vocational curriculum. Their names are acknowledged in the list of contributors.

We are grateful to the Vocational Higher Secondary wing of the Directorate of General Education (DGE) Kerala for extending the support to develop this curriculum document on time by providing the service of its teaching staff.



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## 1. COURSE OVERVIEW

### COURSE TITLE: DENTAL ASSISTANT

#### GENERAL OBJECTIVES

Dental Assistants play a key role in the delivery of quality dental treatment and services by enabling the dentist to provide efficient, high-quality care to patients. They should have strong interpersonal skills as well as technical knowledge to excel in their role. Proper training enables a student to excel in this job role as they will have thorough knowledge to assist the Dentist in treatment and reassure and educate the patients and prepare them for treatment.

On successful completion of this course the learners are expected to develop skills;

- to manage front office of a Dental office
- to assist Dentist during procedures
- to coordinate with dental laboratories and dental suppliers
- to practice infection control and sterilisation of instruments
- to implement Bio Medical Waste management protocols
- to provide oral health instructions and educate the patient on oral hygiene

#### COURSE OUTCOMES

1. apply effective oral and written communication skills to interact with people and customers.
2. identify the principal components of a computer system.
3. demonstrate the basic skills of using computer.
4. demonstrate self-management skills.
5. demonstrate the ability to provide a self-analysis in context of entrepreneurial skills and abilities.
6. demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection.
7. demonstrate how to communicate with the patient.
8. manage the schedule of patient appointments to provide hassle free work environment.
9. attend and manage phone calls at the dental office.
10. prepare the reception area of the dental office.
11. demonstrate how to create and maintain patient records.
12. prepare the dental office according to the sterilisation and disinfection protocols .
13. perform the process of biomedical waste management.
14. assist in taking dental radiographs and process dental films.
15. demonstrate oral hygiene methods to the patient.
16. explain the treatment procedures to the patient .
17. prepare clinical environment for a variety of dental procedures.

18. assist the dental surgeon in performing tasks like examination, treatment procedures.
19. explain the post operative instructions of the dental surgeon.
20. demonstrate the basic life support skills and manage emergencies in dental clinic.
21. demonstrate how to mix materials and medicaments to support treatment.

**COURSE REQUIREMENTS**

The learner should have the basic knowledge of science.

**COURSE DURATION:** 600 hrs Class

Class 11	300 hrs
Class 12	300 hrs
<b>Total</b>	<b>600 hrs</b>

**2. SCHEME OF UNITS**

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 11 and Class 12 opting for vocational subject along with general education subjects.

*The unit-wise distribution of hours and scores for Class 11 is as follows:*

<b>CLASS 11</b>			
	<b>Units</b>	<b>Number of Hours for theory and practical=300</b>	<b>Max. scores for theory and practical=100</b>
<b>PART A</b>	<b>Employability Skills</b>		
	Unit 1 Self-management skills	25	10
	Unit 2 Communication skills	25	
	Unit 3 Information and communication technology skills	20	
	Unit 4 Entrepreneurial development skills	25	
	Unit 5 Green skills	15	
	<b>Total</b>	<b>110</b>	<b>10</b>
<b>Part B</b>	<b>Vocational Skills</b>		
	Unit 1 Introduction to dentistry	10	40
	Unit 2 Basic human Physiology	10	
	Unit 3 General and Oral Anatomy	20	
	Unit 4 Basic Oral Surgery-1	25	
	Unit 5 Restorative and Endodontic Dentistry-1	20	
	Unit 6 Periodontics -1	15	
	Unit 7- Prosthodontics-1	25	
	Unit-8- Orthodontics-1	20	
	Unit-9Dental Office Management	20	
	<b>TOTAL</b>	<b>165</b>	<b>40</b>
<b>Part C</b>	<b>Practical work</b>		
	Practical Examination	06	15
	Written examination	01	10

	Viva Voce	03	10
	<b>Total</b>	<b>10</b>	<b>35</b>
<b>PART D</b>	<b>Project work/Field Visit/OJT</b>		
	Practical file/Student portfolio	10	
	Viva Voce	5	
	<b>Total</b>	<b>15</b>	<b>15</b>
	<b>Grand Total</b>	<b>300</b>	<b>100</b>

The unit-wise distribution of hours and scores for Class 12 is as follows:

<b>CLASS 12</b>			
<b>Units</b>		<b>No: of Hours for theory and practical=300</b>	<b>Max. scores for theory and practical=100</b>
<b>PART A</b>	<b>Employability Skills</b>		
	Unit 1 Communication Skills-IV	25	<b>10</b>
	Unit2 Self Management Skills- IV	25	
	Unit 3 Information and Communication Technology Skills-IV	20	
	Unit 4 Entrepreneurial Skills- IV	25	
	Unit5- Green Skills-IV	15	
	<b>Total</b>	<b>110</b>	<b>10</b>
<b>PART B</b>	<b>Vocational Skills</b>		
	Unit 1 Basic Oral Surgery-2	20	<b>40</b>
	Unit2 Restorative and Endodontic Dentistry-2	20	
	Unit3 Periodontics- 2	20	
	Unit4 Prosthodontics-2	25	
	Unit5 Orthodontics-2	20	
	Unit6 Dental Pharmacology	15	
	Unit7 Dental Radiology	15	
	Unit8 Health & Safety measures in Dental clinic	20	
	Unit 9 Advanced Dental Treatments	10	
	<b>Total</b>	<b>165</b>	<b>40</b>
<b>PART C</b>	<b>Practical work</b>		
	Practical Examination	06	15
	Written exam	01	10
	Viva Voce	03	10
	<b>Total</b>	<b>10</b>	<b>35</b>
<b>PART D</b>	<b>Project work/Field Visit/OJT</b>		
	Practical File/Student Portfolio	10	10
	Viva-voce	5	5
	<b>Total</b>	<b>15</b>	<b>15</b>
	<b>GRAND TOTAL</b>	<b>300</b>	<b>100</b>

### 3. LEARNING OUTCOME BASED ACTIVITIES

Classroom, Laboratory/workshop and field are the key spots where teaching and learning take place. Classroom and laboratory-based teaching and learning facilitate knowledge creation whereas

field visits open venues for free interaction with experts and also helps acquaint learners with various tools, materials, equipment procedures and operations in the workplace. While considering these intensified ways of knowledge acquisition, emphasis should also be laid on the occupational safety, health and hygiene of the participants.

### **Classroom activities**

Classroom activities are mainly interactive lecture sessions, followed by discussions and doubt clarifications. Classes are handled by trained vocational teachers and this is considered as an integral part of the course. The most attractive feature of the class is that the classes are in tune with the outcome-based curriculum. Teaching learning processes are well planned and implemented. Teaching learning materials such as audio-visual materials, colour slides, charts, diagrams, models, exhibits, handouts, on-line teaching materials etc., have been incorporated in accordance with the topic and this may help the teachers to impart the content in an effective manner.

### **Practical work in Laboratory / Workshop**

Practical work is usually performed to enhance the skills of the learners which are indeed essential for them to become specialized technician . Practical sessions may include hands on training, simulation training, role-play, case-based studies and exercises. Equipment and other appliances are available for use in abundance. Trained personnel teach and exercise specialized techniques. Practical classes involving laboratory/workshop are well planned with tools, equipment, materials and also other skill acquisition activities. Vocational teachers should submit the plan of laboratory/workshop work in advance to the head of the institution and get it sanctioned prior to use.

### **Field visits/ Educational Tour**

Field visit is one of the ways and means of learning outside the classroom. It promotes knowledge acquisition by giving opportunity to learners to interact with renowned experts and to make observations of the activities performed by them. An observation check list may help the students to ensure the collection of required information and its analysis for further use. This may be developed with the help of vocational teachers who are in charge of outdoor learning activities. All the field visits are well planned by taking into consideration of the learning requirements, distance to travel, time, health and hygiene. The Principal and teachers should plan to implement at least three field visits within a year by making all necessary arrangements.

### **Virtual Field Visits, Expert Interactions and Practical Activities**

With the rapid potentials offered by information technology in digital classrooms, the extent of virtual field visits, online expert interactions and online demonstrations cum practical activities can be worked out. It may be helpful amid the current Covid 19 pandemic scenario. A State level cluster

of teachers and experts in the concerned subject can be pooled together for the purpose. The guidelines for such activities can be issued by the concerned SCERTs.

### **Suggested Topics for Expert Interaction**

1. Functioning of a Dental clinic and the team involved in Dental practice
2. The treatment procedures done in Oral and Maxillofacial surgery department
3. The procedures done in restorative and endodontic dentistry department
4. The procedures done in Periodontics Department
5. The procedures done in Prosthodontic Department
6. The scope of orthodontic treatment and the common procedures.
7. Familiarisation with Dental patient management and data entry software
8. Advanced investigative methods used in dentistry
9. Introduction to implants, lasers and other advanced techniques of dental treatment
10. Role of a Dental Assistant in a Dental Hospital

## **4. ASSESSMENT AND CERTIFICATION**

The National Skill Qualification Framework (NSQF) is based on outcomes rather than inputs referred by the National Occupation Standards (NOSs). Learning outcomes, as per the NSQF level descriptors, include the Process, Professional Knowledge, Professional Skills, Core Skills and Responsibility. Knowledge in the job of a learner shall be the basis of assessment. It would also be considered if the learning program undertaken by the learner has delivered the required output. Certification is based on required standards so that the learner and the employer could come to know about the competency attained in the vocational subject/ course. In order to make the assessment reliable, valid, flexible, convenient, cost effective, fair and transparent standardised assessment tools are to be used. Technology assisted assessment process is in vogue now.

### **Knowledge Assessment (Theory)**

Knowledge Assessment usually includes two components – Internal Assessment and External Assessment. External assessment includes theory examination conducted by the concerned examination Boards. Tools for assessment contain components for testing the application of knowledge. Knowledge testing can be performed by making use of either objective or short answer type paper-based test. Source of the questions should be the content of the curriculum.

**Written Test**

A group, comprising of academicians, experts from existing vocational subject experts / teachers, subject experts from University/ College or from the industry prepare theory question paper for the vocational subjects. A panel of experts for question paper setting and conducting examination should be formed by the respective central / state boards. Written tests allow the learners to demonstrate that they have acquired the necessary knowledge and skill in the given topics.

*The blue print for the question paper may be as follows:*

**Duration: 3 hrs**

**Maximum Scores: 50**

		No. of Questions			Scores
	Typology of Question	Very Short Answer (1 score)	Short Answer (2 scores)	Long Answer (3 scores)	
1.	Remembering – (Knowledge based simple recall questions, to know specific facts, terms, concepts, principles, or theories; identify, define or recite, information)	3	3	3	18
2.	Understanding – (Comprehension – to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	2	4	3	19
3.	Application – (Use abstract information in concrete situation, to apply knowledge to new situations: Use given content to interpret a situation, provide an example, or solve a problem)	0	2	1	07
4.	High Order Thinking Skills – (Analysis and Synthesis – Classify, compare, contrast, or differentiate between different pieces of information; Organize and/ or integrate unique pieces of information from a variety of sources)	0	2	0	04
5.	Evaluation – (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	0	1	0	02
<b>Total</b>		<b>5x1=5</b>	<b>12x2=24</b>	<b>7x3=21</b>	<b>50 (24 questions)</b>



**Skill Assessment (Practical)**

Skill assessment should be done by considering the practical demonstration of skills by the candidate. It is assessed by making use of a competency checklist prepared by experts. The competency checklist should be developed as per the National Occupation Standards (NOSs). This should be in tune with the qualification pack for the Job Role to ensure necessary consistency in the quality of assessment across different sectors and institutions. As per the performance criteria defined in the National Occupation Standards, the students have to demonstrate their competencies in front of the examiners. Assessment will indicate whether they are competent or incompetent. The assessors assessing the skills of the students should possess enough industrial experience and should have undergone a rigorous training in assessment principles and practices. The Sector Skill Councils (SSCs) should ensure that the assessors are given the required training on the assessment of competencies.

The demonstration of knowledge and skill in performing a task of the learners, is the purpose of the practical examination. This include practical examination where hands on experience will be displayed and a viva voce. A team of two evaluators, one a subject teacher and the other an expert from the relevant industry certified by the relevant Board or SSCs concerned can conduct practical examination as well as viva voce.

**Project Work**

Project is an efficient strategy to assess the practical skills acquired along a certain timeline. Project is chosen and given to candidates only on the basis of their capabilities, because it needs specific skills. It is performed step by step and the first and foremost step is classroom discussion and selection of the topic for the project. After fixing the topic and objectives, the methodology of the project work should be decided during the classroom discussions. Monitoring and evaluation should be done at each stage. Proper feedback shall be provided to the learners for improvement and innovation. Field visits can be organized as part of the project work. The data collected may be used for presentations and report writing. Accuracy of the data is to be ensured. The entire project work is maintained as a practical work file or as student's portfolio.

**Student Portfolio**

It is a document that supports the candidate claim of competencies acquired as a part of the teaching learning process. The student portfolio is a compilation of project reports, articles, photos of products prepared by the student.

**Viva Voce**

Viva voce provides chance to each candidate to demonstrate communication skills and content knowledge. It is a way of obtaining feedback on the student's experience, learning, project work

and field visit. Audio visual recording of the whole procedure can be done for future reference and documentation. A Board, including external examiners, is constituted as per the norms which in turn should be suitably adapted to the specific requirement of the vocational subjects.

The central/state examination board for secondary education and the respective Sector Skill Councils can certify the competencies of the learner upon the successful completion of the course.

## 5. UNIT CONTENTS

### CLASS 11

#### Part A: Employability Skills

Sl.No.	Units	Duration (hrs)
1.	Communication Skills- III	25
2.	Self-management Skills – III	25
3.	Information and Communication Technology Skills - III	20
4.	Entrepreneurial Skills – III	25
5.	Green Skills – III	15
	<b>Total</b>	<b>110</b>

#### Unit 1: Communication Skill– III

Expected Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Demonstrate knowledge of various methods of communication	<ul style="list-style-type: none"> <li>➤ Methods of communication</li> <li>• Verbal</li> <li>• Non-verbal</li> <li>• Visual</li> </ul>	<ul style="list-style-type: none"> <li>• Writing pros and cons of written, verbal and non-verbal communication</li> <li>• Listing do's and don'ts for avoiding common body language mistakes</li> </ul>	05
2. Identify specific communication styles	<ul style="list-style-type: none"> <li>• Communication styles- assertive, aggressive, passive-aggressive, submissive, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Observing and sharing communication styles of friends, teachers and family members and adapting the best practices</li> <li>• Roleplays on communication styles.</li> </ul>	10
3. Demonstrate basic writing skills	<ul style="list-style-type: none"> <li>• Writing skills to the following:</li> <li>• Sentence</li> <li>• Phrase</li> <li>• Kinds of Sentences</li> <li>• Parts of Sentence</li> <li>• Parts of Speech</li> <li>• Articles</li> <li>• Construction of a Paragraph</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration and practice of writing sentences and paragraphs on topics related to the subject</li> </ul>	10
<b>Total</b>			<b>25</b>

Unit 2: Self-Management – III			
Expected Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Demonstrate impressive appearance and grooming	<ul style="list-style-type: none"> <li>Describe the importance of dressing appropriately, looking decent and positive body language</li> <li>Describe the term grooming</li> <li>Prepare a personal grooming checklist</li> <li>Describe the techniques of self- exploration</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration of impressive appearance and groomed personality</li> <li>Demonstration of the ability to self- explore</li> </ul>	10
2. Demonstrate team work skills	<ul style="list-style-type: none"> <li>Describe the important factors that influence in team building</li> <li>Describe factors influencing team work</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion on qualities of a good team</li> <li>Group discussion on strategies that are adopted for team building and team work</li> </ul>	10
3. Apply time management strategies and techniques	<ul style="list-style-type: none"> <li>Meaning and importance of time management – setting and prioritizing goals, creating a schedule, making lists of tasks, balancing work and leisure, using different optimization tools to break large tasks into smaller tasks.</li> </ul>	<ul style="list-style-type: none"> <li>Game on time management</li> <li>Checklist preparation</li> <li>To-do-list preparation</li> </ul>	05
<b>Total</b>			<b>25</b>

Unit 3: Information and Communication Technology - III			
Expected Learning Outcome	Theory (08 hrs)	Practical (12 hrs)	Duration (20 hrs)
1. Create a document on word processor	<ul style="list-style-type: none"> <li>Introduction to word processing.</li> <li>Software packages for word processing.</li> <li>Opening and exiting the word processor.</li> <li>Creating a document</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demonstration and practice of the following:               <ul style="list-style-type: none"> <li>Listing the features of word processing</li> <li>Listing the software packages for word processing</li> <li>Opening and exit the word processor</li> <li>Creating a document</li> </ul> </li> </ul>	10
2. Edit, save and print a document in word processor	<ul style="list-style-type: none"> <li>Editing text</li> <li>Wrapping and aligning the text</li> <li>Font size, type and</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demonstration and practising the following:               <ul style="list-style-type: none"> <li>Editing the text</li> </ul> </li> </ul>	10

	<ul style="list-style-type: none"> <li>face</li> <li>• Header and Footer</li> <li>• Auto correct</li> <li>• Numbering and bullet</li> <li>• Creating table</li> <li>• Find and replace</li> <li>• Page numbering</li> <li>• Printing document</li> <li>• Saving a document in various formats</li> </ul>	<ul style="list-style-type: none"> <li>• Word wrapping and alignment</li> <li>• Changing font type, size and face</li> <li>• Inserting header and footer</li> <li>• Removing header and footer</li> <li>• Using autocorrect option</li> <li>• Insert page numbers and bullet</li> <li>• Save and print a document</li> </ul>	
<b>Total</b>			<b>20</b>

Unit 4: Entrepreneurial Skills – III			
Expected Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Describe the significance of entrepreneurial values and attitude	<ul style="list-style-type: none"> <li>• Values in general and entrepreneurial values</li> <li>• Entrepreneurial value orientation with respect to innovativeness, independence, outstanding performance and respect for work</li> </ul>	<ul style="list-style-type: none"> <li>• Listing of entrepreneurial values by the students.</li> <li>• Group work on identification of entrepreneurial values and their roles after listing or reading 2-3 stories of successful entrepreneur</li> <li>• Exhibiting entrepreneurial values in Ice breaking, rapport building, group work and home assignments</li> </ul>	10
2. Demonstrate the knowledge of attitudinal changes required to become an entrepreneur	<ul style="list-style-type: none"> <li>• Attitudes in general and entrepreneurial attitudes</li> <li>• Using imagination/ intuition</li> <li>• Tendency to take moderate risk</li> <li>• Enjoying freedom of expression and action</li> <li>• Looking for economic opportunities</li> <li>• Believing that we can change the environment</li> </ul>	<ul style="list-style-type: none"> <li>• Preparing a list of factors that influence attitude in general and entrepreneurial attitude</li> <li>• Demonstrating and identifying own entrepreneurial attitudes during the following micro lab activities like thematic appreciation test</li> </ul>	15

	<ul style="list-style-type: none"> <li>Analyzing situation and planning action</li> <li>Involving in activity</li> </ul>	<ul style="list-style-type: none"> <li>Preparing a short write-up on “who am I”</li> <li>Take up a product and suggest how its features can be improved</li> <li>Group activity for suggesting brand names, names of enterprises, etc.</li> </ul>	
<b>Total</b>			<b>25</b>

Unit 5: Green Skills – III			
Expected Learning Outcome	Theory (07 hrs)	Practical (08 hrs)	Duration (15 hrs)
1. Describe importance of main sector of green economy	<ul style="list-style-type: none"> <li>Main sectors of green economy- E-waste management, green transportation, renewal energy, green construction, water management</li> <li>Policy initiatives for greening economy in India</li> </ul>	<ul style="list-style-type: none"> <li>Preparing a poster on any one of the sectors of green economy</li> <li>Writing a two-page essay on important initiatives taken in India for promoting green economy</li> </ul>	08
2. Describe the major green Sectors/Areas and the role of various stakeholder in green economy	<ul style="list-style-type: none"> <li>Stakeholders in green economy</li> <li>Role of government and private agencies in greening cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries</li> </ul>	<ul style="list-style-type: none"> <li>Preparing posters on green Sectors/Areas: cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries</li> </ul>	07
<b>Total</b>			<b>15</b>

**PART B- VOCATIONAL SKILLS**

Sl .No	Units	Duration (hrs)
1	Introduction to Dentistry	10
2	Basic Human Physiology	10
3	General & Oral Anatomy	20
4	Basic Oral Surgery-1	25
5	Restorative and Endodontic Dentistry-1	20
6	Periodontics-1	15
7	Prosthodontics-1	25
8	Orthodontics-1	20
9	Dental Office Management	20
	<b>Total</b>	<b>165</b>

Unit 1: Introduction to Dentistry				
Sl No:	Expected Learning Outcome	Theory (4 hrs)	Practical (6 hrs)	Duration (10 hrs)
1	Explain the various branches associated with dentistry	➤ Dentistry and branches of dentistry	• Prepare a chart showing different branches of dentistry	2
2	Explain the duties of DA in a dental office.	<ul style="list-style-type: none"> <li>➤ Introduction to roles of Dental assistant.</li> <li>➤ Act within limits of ones competency</li> <li>➤ Team in Dental Office</li> <li>• Dental Surgeon</li> <li>• Receptionist</li> <li>• Dental Assistant</li> <li>• Dental Hygienist</li> <li>• Dental Technician</li> <li>• Housekeeping staff</li> </ul>	• Role play on duties of dental assistant.	2
3	List out the common pathogens and infections of concern to the dental clinic	Basics of microbiology <ul style="list-style-type: none"> <li>➤ Common pathogens               <ul style="list-style-type: none"> <li>• Bacteria &amp; its spores</li> <li>• Virus</li> <li>• Fungus</li> </ul> </li> <li>➤ Types of Infections               <ul style="list-style-type: none"> <li>• Acute</li> <li>• Chronic</li> <li>• Nosocomial</li> </ul> </li> <li>➤ Modes of transmission of Infections               <ul style="list-style-type: none"> <li>• Direct,</li> <li>• Indirect</li> <li>• Airborne</li> <li>• Parenteral</li> <li>• Through Food &amp; Water</li> </ul> </li> <li>➤ Diseases of concern to the Dental Clinic               <ul style="list-style-type: none"> <li>• Tuberculosis</li> <li>• Staphylococcus infection</li> <li>• Hepatitis</li> <li>• HIV</li> <li>• Herpels</li> <li>• Oral candidiasis</li> </ul> </li> </ul>	• Prepare a Chart showing diseases of dental concern and their causative organisms.	3
4	Explain patient's rights in a dental clinic	<ul style="list-style-type: none"> <li>• Patients' rights and responsibilities</li> <li>• Professional ethics,</li> <li>• Basic responsibilities to patients</li> <li>• Dental jurisprudence</li> </ul>	• Present a seminar on patient's rights in a dental clinic	1

5	Demonstrate the working of Dental chair	<ul style="list-style-type: none"> <li>Dental chair and associated parts and equipment</li> </ul>	<ul style="list-style-type: none"> <li>Familiarization of dental chair during dental clinic visit</li> </ul>	2
<b>Total</b>				<b>10</b>

<b>Unit 2: Basic human physiology</b>				
<b>Sl.No</b>	<b>Expected Learning Outcome</b>	<b>Theory (4 hrs)</b>	<b>Practical (6 hrs)</b>	<b>Duration (10 hrs)</b>
1	Describe the different systems of the body	<ul style="list-style-type: none"> <li>➤ Basic Human Physiology</li> <li>Parts &amp; Function of                             <ul style="list-style-type: none"> <li>Skeletal</li> <li>Muscular</li> <li>Circulatory- (CVS&amp; Lymphatic)</li> <li>Nervous</li> <li>Digestive</li> <li>Respiratory</li> <li>Excretory</li> <li>Endocrine</li> <li>Reproductive</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Diagrammatic representation of different systems of the human body</li> </ul>	8
2	Describe the planes of the body	<ul style="list-style-type: none"> <li>➤ Body planes &amp; Directional terms of the body                             <ul style="list-style-type: none"> <li>Anterior</li> <li>Posterior</li> <li>Medial</li> <li>Lateral</li> <li>Proximal</li> <li>Distal</li> <li>Superior</li> <li>Inferior</li> <li>Sagittal Plane</li> <li>Transverse Plane</li> <li>Frontal Plane</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Prepare charts of the different body planes.</li> </ul>	2
<b>Total</b>				<b>10</b>

<b>Unit 3: General and Oral Anatomy</b>				
<b>Sl.No</b>	<b>Expected Learning Outcome</b>	<b>Theory (8 hrs)</b>	<b>Practical (12 hrs)</b>	<b>Duration (20 hrs)</b>
1	Identify the skull and facial bones	<ul style="list-style-type: none"> <li>• Anatomy of skull bones, facial bones, TMJ, Maxilla, Mandible</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of the skull and facial bones on a model or diagram</li> </ul>	3
2	Identify the structures in the oral cavity	<ul style="list-style-type: none"> <li>• Oral anatomy</li> <li>• Oral Cavity</li> </ul>	<ul style="list-style-type: none"> <li>• Marking of anatomical landmarks on</li> </ul>	3

		<ul style="list-style-type: none"> <li>• Tongue</li> <li>• Frenum</li> <li>• Hard and Soft palate</li> <li>• Oral mucosa- Different areas of oral mucosa</li> <li>• Vestibule,</li> <li>• Salivary glands</li> </ul> <p>Teeth</p> <ul style="list-style-type: none"> <li>• Number of teeth</li> <li>• Stages of Dentition</li> <li>• Types of teeth and their function</li> </ul>	<p>edentulous models of oral cavity</p> <ul style="list-style-type: none"> <li>• Identify different types of tooth and their function</li> </ul>	
3	Recognize various parts of tooth	<ul style="list-style-type: none"> <li>➤ Structure of tooth</li> <li>• Crown</li> <li>• Root</li> <li>• Cervical area</li> <li>➤ Tissues of Tooth</li> <li>• Enamel</li> <li>• Dentine</li> <li>• Pulp</li> <li>• Cementum</li> <li>• Periodontal ligament</li> </ul>	<ul style="list-style-type: none"> <li>• Labelling the parts on a diagram of tooth</li> <li>• Labelling the tissues on a diagram of Cross section of tooth</li> </ul>	1
4	Explain the terminologies used in dentistry	<p>Terminologies</p> <ul style="list-style-type: none"> <li>• Aspects of teeth</li> <li>• Mesial</li> <li>• Distal</li> <li>• Incisal/Occlusal</li> <li>• Palatal/Lingual</li> <li>• Labial/Buccal</li> <li>➤ Anatomic features</li> <li>• Cusp</li> <li>• Ridge</li> <li>• Cingulum</li> <li>• Fossa</li> <li>• Pit</li> <li>• Sulcus</li> <li>• Groove</li> </ul> <p>Midline Embrasure Diastema Contact Point Occlusion</p>	<ul style="list-style-type: none"> <li>• Prepare a chart depicting diagram of tooth with aspects of teeth and anatomical features</li> </ul>	2
5	Differentiate among various teeth in oral cavity	<p>Dental Anatomy</p> <ul style="list-style-type: none"> <li>➤ .Identifying features of Maxillary &amp;mandibular</li> <li>• Central Incisor</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters – Identification of different types of teeth</li> </ul>	9



		<ul style="list-style-type: none"> <li>• Lateral Incisor</li> <li>• Canine</li> <li>• Premolar</li> <li>• Molars</li> </ul>		
6	Recognize the different tooth numbering system	Tooth numbering system <ul style="list-style-type: none"> <li>• FDI</li> <li>• Palmar</li> </ul>	<ul style="list-style-type: none"> <li>• Chart preparation- Diagrammatic representation of teeth with FDI &amp; Palmar numbering systems</li> </ul>	2
<b>Total</b>				<b>20</b>

<b>Unit 4: Basic Oral Surgery -1</b>				
<b>Sl.No</b>	<b>Expected Learning Outcome</b>	<b>Theory (10 hrs)</b>	<b>Practical (15 hrs)</b>	<b>Duration (25 hrs)</b>
1	List out common oral surgical procedures	<ul style="list-style-type: none"> <li>➤ Introduction to common oral surgical procedures-</li> <li>• Extraction</li> <li>• Alveoloplasty</li> <li>• Impaction</li> <li>• Abscess drainage</li> <li>• Root fragment removal</li> <li>• Fracture treatment</li> </ul>		4
2	Explain the basic procedure of extraction	Extraction- <ul style="list-style-type: none"> <li>• Causes for extraction</li> <li>• Basic procedure of extraction</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a Seminar on basic procedure of extraction</li> </ul>	5
3	Assist in loading local anesthesia	Anaesthesia <ul style="list-style-type: none"> <li>➤ Names of different routes of administration of anesthesia</li> <li>• Topical</li> <li>• Regional Anesthesia- Names of different nerve blocks</li> <li>➤ Technique of loading syringes for different types of nerve blocks</li> </ul>	<ul style="list-style-type: none"> <li>• Hands on training for loading syringes</li> </ul>	6
4	Identify the instruments used in surgical procedures	<ul style="list-style-type: none"> <li>➤ Instruments used in surgical procedures</li> <li>• Forceps</li> <li>• Elevators</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters-</li> <li>• Identification of instruments used in surgical procedures</li> </ul>	10

	<ul style="list-style-type: none"> <li>• Bone curette</li> <li>• Bone Rongeur</li> <li>• Bone File</li> <li>• Scalpel</li> <li>• Needle holder</li> <li>• Suture</li> <li>• Suture needle</li> <li>• Surgical Scissors</li> <li>• Tissue Retractors</li> <li>• Surgical Chisel and Mallet</li> <li>• Syringes &amp; Needles</li> <li>• B.P Blades</li> <li>• Artery Forceps</li> </ul>		
<b>Total</b>			<b>25</b>

Unit 5: Restorative and Endodontic Dentistry-1				
Sl.No	Expected Learning outcomes	Theory (8 hrs)	Practical (12 hrs)	Duration (20 hrs)
1	Recognize the stages of progression of dental caries in oral cavity	<ul style="list-style-type: none"> <li>➤ Dental Caries and pulp damage</li> <li>• Causes</li> <li>• Progression</li> </ul>	<ul style="list-style-type: none"> <li>• Flow chart depicting progression of dental caries</li> </ul>	2
2	Differentiate among different types of cavities	<ul style="list-style-type: none"> <li>• Types of cavities- Blacks</li> <li>Classification of cavities</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a chart with diagrammatic representation of different types of cavities</li> </ul>	2
3	Identify instruments used in restorative procedure	<ul style="list-style-type: none"> <li>➤ Instruments used in restorative procedure- Identification of instruments</li> <li>• Examination instruments</li> <li>• Restorative instruments</li> <li>• Rotary instruments</li> <li>• Dental Burs</li> <li>• Matrices</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange instruments used in restorative procedure</li> </ul>	8
4	Assist in preventive treatment procedures	<ul style="list-style-type: none"> <li>• Preventive Treatment procedures</li> <li>• Pit &amp; Fissure sealants</li> <li>• Flouride application</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange instruments used for preventive procedures</li> <li>• Hands on training for manipulation of the materials used</li> </ul>	8
<b>Total</b>				<b>20</b>

Unit 6: Periodontics-1				
Sl.No	Expected Learning Outcomes	Theory (6 hrs)	Practical (9 hrs)	Duration (15 hrs)
1	Explain the supporting structure of teeth	<ul style="list-style-type: none"> <li>➤ Introduction to periodontium</li> <li>• Gingiva</li> <li>• Periodontal ligament</li> <li>• Alveolar process of bone</li> </ul>	<ul style="list-style-type: none"> <li>• Labelling of periodontium on a diagram of tooth and supporting structures</li> </ul>	3
2	List the factors affecting periodontal health	<ul style="list-style-type: none"> <li>➤ Factors affecting periodontal health</li> <li>• Lack of oral hygiene- Plaque, calculus</li> <li>• Smoking</li> <li>• Diabetes</li> <li>• Hormonal imbalances</li> <li>• Psychological stress</li> <li>• Xerostomia</li> <li>• Medications- antipsychotics, antihypertension, antihistamines, antiepiletics</li> <li>• Defective restorations</li> <li>• Immunocompromising diseases-HIV</li> </ul>	<ul style="list-style-type: none"> <li>• Chart depicting factors affecting periodontal health.</li> </ul>	4
3	Assist in periodontal procedures	<ul style="list-style-type: none"> <li>➤ Instruments and materials used in Periodontal procedures</li> <li>• Hand scaling instruments</li> <li>• Ultrasonic scaler</li> <li>• Curettes</li> <li>• Periodontal Knives</li> <li>• Periodontal probe</li> <li>• Pocket markers</li> <li>• Periodontal Dressings</li> </ul>	<ul style="list-style-type: none"> <li>• Handling of instruments and mixing of materials needed for periodontal procedures</li> </ul>	8
<b>Total</b>				<b>15</b>

Unit 7: Prosthodontics 1				
Sl.No	Expected Learning outcomes	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1	Demonstrate different types of Prosthodontic appliances	<ul style="list-style-type: none"> <li>➤ Introduction to Prosthodontic appliances</li> <li>• Removable Prosthodontic- Complete Denture(Parts), Partial Denture</li> <li>• Fixed Prosthodontics Inlay</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters- Identification of different types of Removable and Fixed Prosthodontic</li> </ul>	2

		Onlay Veneer Bridge Crown	Appliances	
2	Demonstrate the mixing of materials used in prosthodontic procedures	<ul style="list-style-type: none"> <li>• Materials and their manipulation</li> <li>• Impression Materials- Types, Uses and manipulation</li> <li>• alginate impression compound,</li> <li>• ZnO Eugenol Impression paste, Elastomers-</li> <li>• Materials for cast and die preparation- Gypsum Products – Types , uses and manipulation</li> <li>• Denture base materials- Types &amp; Uses</li> <li>• Waxes- Types &amp; Uses</li> <li>• Separating media- Types &amp; uses</li> <li>• Abrasives and polishing agents</li> </ul>	<ul style="list-style-type: none"> <li>• Hands on training on mixing of different materials used in prosthodontic procedures</li> </ul>	10
3	List out the different instruments used in prosthodontics	<ul style="list-style-type: none"> <li>• Instruments in Prosthodontics</li> <li>• Impression Trays</li> <li>• Bowl</li> <li>• Spatula</li> <li>• Mixing pad</li> <li>• Cement Spatula</li> <li>• Fox Guide plane</li> <li>• Spirit lamp</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange the instruments used in clinical prosthodontics</li> </ul>	3
4	Explain the clinical steps of complete denture preparation	<ul style="list-style-type: none"> <li>• Steps of Complete denture fabrication</li> </ul>	<ul style="list-style-type: none"> <li>• Flow chart preparation of Steps in complete denture fabrication</li> </ul>	10
<b>Total</b>				<b>25</b>

<b>Unit 8 : Orthodontics -1</b>				
<b>Sl.No</b>	<b>Expected Learning outcomes</b>	<b>Theory (8 hrs)</b>	<b>Practical (12 hrs)</b>	<b>Duration (20 hrs)</b>
1	Differentiate among different types of Malocclusion	<ul style="list-style-type: none"> <li>➤ Introduction to Orthodontics</li> <li>• Occlusion</li> <li>• Malocclusion</li> <li>• Classification</li> <li>• Factors causing</li> </ul>	<ul style="list-style-type: none"> <li>• Group discussion of factors causing malocclusion</li> <li>• Prepare chart depicting different types of malocclusion</li> </ul>	7

		<ul style="list-style-type: none"> <li>• Sequelae</li> </ul>		
2	Identify different type of orthodontic appliances	<ul style="list-style-type: none"> <li>• Classification of Orthodontic Appliances</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of different types of orthodontic appliances</li> </ul>	3
3	Identify the appliances used in different oral habits	<ul style="list-style-type: none"> <li>• Oral habits and indicated appliances</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters-</li> <li>• Identify different habit breaking appliances</li> </ul>	4
4	List out the various myo functional appliances	<ul style="list-style-type: none"> <li>• Myo functional Appliances- Types and indicated conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters-</li> <li>• Identify different myofunctional appliances</li> </ul>	3
5	List out the need and types of space maintainers	<ul style="list-style-type: none"> <li>• Space Maintainers- Need for space maintainers, Types</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters-</li> <li>• Identify different space maintainer appliances</li> </ul>	3
<b>TOTAL</b>				<b>20</b>

Unit 9: Dental Office Management				
Sl.No	Expected Learning Outcomes	Theory (8hrs)	Practical ( 12 hrs)	Duration (20 hrs)
1	List out the skills needed for front office management	<ul style="list-style-type: none"> <li>• Front office management-</li> <li>• Positive Attitude</li> <li>• Reflective listening</li> <li>• Active Listening</li> <li>• Conflict resolution</li> <li>• Non-verbal communication</li> <li>• Accounting &amp; Billing</li> <li>• Telephone etiquette</li> </ul>	<ul style="list-style-type: none"> <li>• Role play</li> </ul>	2
2	Perform the process of data entry	<ul style="list-style-type: none"> <li>• Data entry and appointments scheduling using dental soft ware</li> </ul>	<ul style="list-style-type: none"> <li>• Data entry using computer</li> </ul>	3
3	Demonstrate the procedure of communicating with the dental lab	<ul style="list-style-type: none"> <li>• Communication with dental lab</li> </ul>	<ul style="list-style-type: none"> <li>• Role play</li> </ul>	2
4	List out guidelines to be followed for geriatric and patients with special needs.	<ul style="list-style-type: none"> <li>• Managing Geriatric and patients with special needs-</li> <li>• Guidelines to be followed</li> </ul>	<ul style="list-style-type: none"> <li>• Role play</li> </ul>	2
5	Assist in handling medical emergencies in dental clinic	<ul style="list-style-type: none"> <li>➤ Emergency management</li> <li>• Syncope</li> </ul>	<ul style="list-style-type: none"> <li>• Role play</li> </ul>	5

		<ul style="list-style-type: none"> <li>• Epilepsy</li> <li>• Chest pain</li> <li>• Heart attack</li> <li>• Allergic Reactions</li> <li>• Anaphylaxis</li> <li>• Choking</li> <li>➤ Basic Life Support</li> </ul> Documentation of an emergency		
6	Assist in management of paediatric patients	<ul style="list-style-type: none"> <li>➤ Behavioural management techniques of paediatric patients</li> <li>• TSD</li> <li>• Hand over Mouth</li> </ul>	• Role play	2
7	List out the general steps to follow in patient management	<ul style="list-style-type: none"> <li>• General steps to follow in patient management in Dental clinic</li> </ul> General Steps to follow in Instrument set up and care	• Role play	4
<b>Total</b>				<b>20</b>

**CLASS 12**

**Part A: Employability Skills**

Sl.No.	Units	Duration (hrs)
1.	Communication Skills- IV	25
2.	Self-management Skills – IV	25
3.	Information and Communication Technology Skills - IV	20
4.	Entrepreneurial Skills – IV	25
5.	Green Skills – IV	15
	<b>Total</b>	<b>110</b>

**Unit 1: Communication Skills – IV**

Expected Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Describe the steps to active listening skills	<ul style="list-style-type: none"> <li>• Importance of active listening at workplace</li> <li>• Steps to active listening</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration of the key aspects of becoming active listener</li> <li>• Preparing posters of steps for active listening</li> </ul>	10
2. Demonstrate basic writing skills	<ul style="list-style-type: none"> <li>➤ Writing skills to the following:                             <ul style="list-style-type: none"> <li>• Sentence</li> <li>• Phrase</li> <li>• Kinds of Sentences</li> <li>• Parts of Sentence</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration and practice of writing sentences and paragraphs on topics related to the subject</li> </ul>	15

	<ul style="list-style-type: none"> <li>• Parts of Speech</li> <li>• Articles</li> <li>• Construction of a Paragraph</li> </ul>		
<b>Total</b>			<b>25</b>

Unit 2: Self-Management Skills – IV			
Expected Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Describe the various factors influencing self-motivation	<ul style="list-style-type: none"> <li>• Finding and listing motives (needs and desires);</li> <li>• Finding sources of motivation and inspiration (music, books, activities);expansive thoughts; living fully in the present moment; dreaming big</li> </ul>	<ul style="list-style-type: none"> <li>• Group discussion on identifying needs and desire</li> <li>• Discussion on sources of motivation and inspiration</li> </ul>	<b>10</b>
2. Describe the basic personality traits, types and disorders	<ul style="list-style-type: none"> <li>• Describe the meaning of personality</li> <li>• Describe how personality influence others</li> <li>• Describe basic personality traits</li> <li>• Describe common personality disorders- paranoid, antisocial, schizoid, borderline, narcissistic, avoidant, dependent and obsessive</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the knowledge of different personality types</li> </ul>	<b>15</b>
<b>Total</b>			<b>25</b>

Unit 3: Information and Communication Technology Skills - IV			
Expected Learning Outcome	Theory (06 hrs)	Practical (14 hrs)	Duration (20 hrs)
1. Perform tabulation using spreadsheet application	<ul style="list-style-type: none"> <li>• Introduction to spreadsheet application</li> <li>• Spreadsheet applications</li> <li>• Creating a new worksheet</li> <li>• Opening workbook and entering text</li> <li>• Resizing fonts and styles</li> <li>• Copying and moving</li> <li>• Filter and sorting</li> <li>• Formulas and functions</li> <li>• Password protection.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demonstration and practice on the following: <ul style="list-style-type: none"> <li>• Introduction to the spreadsheet application</li> <li>• Listing the spreadsheet applications</li> <li>• Creating a new worksheet</li> <li>• Opening the workbook and enter text</li> <li>• Resizing fonts and styles</li> <li>• Copying and move the cell data</li> </ul> </li> </ul>	<b>10</b>

	<ul style="list-style-type: none"> <li>• Printing a spreadsheet.</li> <li>• Saving a spreadsheet in various formats.</li> </ul>	<ul style="list-style-type: none"> <li>• Sorting and Filter the data</li> <li>• Applying elementary formulas and functions</li> <li>• Protecting the spreadsheet with password</li> <li>• Printing a spreadsheet</li> <li>• Saving the spreadsheet in various formats.</li> </ul>	
2. Prepare presentation using presentation application	<ul style="list-style-type: none"> <li>• Introduction to presentation</li> <li>• Software packages for presentation</li> <li>• Creating a new presentation</li> <li>• Adding a slide</li> <li>• Deleting a slide</li> <li>• Entering and editing text</li> <li>• Formatting text</li> <li>• Inserting clipart and images</li> <li>• Slide layout</li> <li>• Saving a presentation</li> <li>• Printing a presentation document.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demonstration and practice on the following: <ul style="list-style-type: none"> <li>• Listing the software packages for presentation</li> <li>• Explaining the features of presentation</li> <li>• Creating a new presentation</li> <li>• Adding a slide to presentation.</li> <li>• Deleting a slide</li> <li>• Entering and edit text</li> <li>• Formatting text</li> <li>• Inserting clipart and images</li> <li>• Sliding layout</li> <li>• Saving a presentation</li> <li>• Printing a presentation document</li> </ul> </li> </ul>	10
<b>Total</b>			<b>20</b>

Unit 4: Entrepreneurial Skills - IV			
Expected Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Identify the general and entrepreneurial behavioural competencies	<ul style="list-style-type: none"> <li>• Barriers to becoming entrepreneur</li> <li>• Behavioural and entrepreneurial competencies – adaptability/decisiveness,initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Administering self-rating questionnaire and score responses on each of the competencies</li> <li>• Collect small story/ anecdote of prominent successful entrepreneurs</li> <li>• Identify entrepreneurial competencies reflected in each story and connect it to the definition of behavioural competencies</li> <li>• Preparation of</li> </ul>	10



		competencies profile of students	
2. Demonstrate the knowledge of self-assessment of behavioural competencies	<ul style="list-style-type: none"> <li>• Entrepreneurial competencies in particular: self -confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building</li> </ul>	<ul style="list-style-type: none"> <li>• Games and exercises on changing entrepreneurial behaviour and development of competencies for enhancing self-confidence, problem solving, goal setting, information seeking, team building and creativity</li> </ul>	15
<b>Total</b>			<b>25</b>

<b>Unit 5: Green Skills – IV</b>			
<b>Expected Learning Outcome</b>	<b>Theory (05 hrs)</b>	<b>Practical (10 hrs)</b>	<b>Duration (15 Hrs)</b>
1. Identify the role and importance of green jobs in different sectors	<ul style="list-style-type: none"> <li>• Role of green jobs in toxin-free homes,</li> <li>• Green organic gardening, public transport and energy conservation,</li> <li>• Green jobs in water conservation</li> <li>• Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes,</li> <li>• Green jobs in green tourism</li> <li>• Green jobs in building and construction</li> <li>• Green jobs in appropriate technology</li> <li>• Role of green jobs in Improving energy and raw materials use</li> <li>• Role of green jobs in limiting greenhouse gas emissions</li> <li>• Role of green jobs minimizing waste and pollution</li> <li>• Role of green jobs in protecting and restoring ecosystems</li> <li>• Role of green jobs in support adaptation to the effects of climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Listing of green jobs and preparation of posters on green job profiles</li> <li>• Prepare posters on green jobs.</li> </ul>	15
<b>Total</b>			<b>15</b>

**PART B-VOCATIONAL SKILLS**

Sl.No	Units	Duration (hrs)
1	Unit 1-Basic Oral Surgery-2	20
2	Unit 2-Restorative and Endodontic Dentistry-2	20
3	Unit 3-Periodontitis-2	20
4	Unit 4-Prosthodontics-2	25
5	Unit 5-Orthodontics -2	20
6	Unit 6-Dental Pharmacology	15
7	Unit 7-Dental Radiology	15
8	Unit 8- Health & Safety measures in Dental clinic	20
9	Unit 9-Advanced dental treatments	10
<b>TOTAL</b>		<b>165</b>

<b>Unit 1: Basic Oral Surgery-2</b>			
<b>Expected Learning outcomes</b>	<b>Theory (8 hrs)</b>	<b>Practical (12 hrs)</b>	<b>Duration (20 hrs)</b>
1. Explain common oral surgical procedures	<ul style="list-style-type: none"> <li>➤ Common oral surgical procedures-Basic procedure of                             <ul style="list-style-type: none"> <li>• alveoloplasty, impaction,</li> <li>• abscess drainage</li> <li>• cyst enucleation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Report on common oral surgical procedures observed during field visit to dental clinic</li> </ul>	8
2. List out the methods of management of complications associated with oral surgical procedures	<ul style="list-style-type: none"> <li>➤ Complications and management associated with oral surgical procedures-                             <ul style="list-style-type: none"> <li>• Dry socket</li> <li>• Infections</li> <li>• Nerve damage.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Seminar on complications associated with oral surgical procedures and their management</li> </ul>	7
3. Lists out precautions to be taken before and after surgical procedures	<ul style="list-style-type: none"> <li>• Instructions to be given to patient-preoperative and post operative</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare sample pamphlets regarding pre and post operative instructions</li> </ul>	5
<b>Total</b>			<b>20</b>

<b>Unit 2: Restorative and Endodontic Dentistry-2</b>			
<b>Expected Learning outcomes</b>	<b>Theory (8 hrs)</b>	<b>Practical (12 hrs)</b>	<b>Duration (20 hrs)</b>
1. Assist in restorative procedures	<ul style="list-style-type: none"> <li>➤ Procedures in Restorative Dentistry &amp; materials used                             <ul style="list-style-type: none"> <li>• Permanent Restoration- Basic Procedure and materials- Amalgam, Glass Ionomer Cement, Miracle mix, Composite</li> <li>• Temporary Restoration- Reason &amp; Procedure &amp; material –</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Hands on training on manipulation of materials (Mention the consistency for liners, bases and luting)</li> </ul>	10

	<p>Zinc Oxide Eugenol Cement</p> <ul style="list-style-type: none"> <li>• Cavity liners</li> <li>• Cavity Bases</li> <li>• Luting Cement-</li> </ul>		
2. Assist in endodontic procedures	<ul style="list-style-type: none"> <li>➤ Basic Procedures in Endodontics                             <ul style="list-style-type: none"> <li>• Pulp capping</li> <li>• Pulpotomy</li> <li>• Pulpectomy/RCT</li> <li>• Apexification</li> <li>• Post &amp; Core</li> </ul> </li> <li>➤ Indications for each procedure</li> </ul> <p>Identification of instruments &amp; manipulation of materials</p> <ul style="list-style-type: none"> <li>• Apex locator</li> <li>• Files &amp; Reamers- Colour coding</li> <li>• Spreaders &amp; Pluggers</li> <li>• Endodontic explorer</li> <li>• Endodontic spoon excavators</li> <li>• Rotary Files &amp; Burs</li> <li>• Sodium hypochlorite</li> <li>• Hydrogen peroxide</li> <li>• Guttapercha</li> <li>• Formocresol</li> </ul>	<ul style="list-style-type: none"> <li>• Identification &amp; manipulation of materials used</li> </ul>	5
3. Assist in isolation of tooth	<ul style="list-style-type: none"> <li>➤ Isolation of tooth- Importance of isolation &amp; methods used                             <ul style="list-style-type: none"> <li>• Rubber dam</li> <li>• Cotton roll</li> <li>• Suction</li> <li>• Saliva ejector</li> <li>• Absorbent pads</li> <li>• Air drying</li> <li>• Wiping</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Report on procedures of isolation of tooth as observed in a dental clinic during field visit</li> </ul>	5
<b>Total</b>			<b>20</b>

**Unit 3: Periodontics-2**

<b>Expected Learning outcomes</b>	<b>Theory (8 hrs )</b>	<b>Practical (12 hrs)</b>	<b>Duration (20 hrs)</b>
1. List out progression of periodontal diseases	<ul style="list-style-type: none"> <li>➤ Periodontal diseases- Signs and Symptoms &amp; Progression                             <ul style="list-style-type: none"> <li>• Gingivitis</li> <li>• Periodontitis- Chronic, Aggressive, Juvenile, Necrotizing</li> <li>• Ulcers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Chart preparation on progression of periodontal diseases</li> </ul>	5

2. List out the indications of different periodontal procedures	<ul style="list-style-type: none"> <li>• Periodontal procedures- Indications</li> <li>• Prophylaxis</li> <li>• Curettage</li> <li>• Surgical procedures- Gingivectomy, Gingivoplasty</li> <li>• Flap surgery</li> <li>• Gingival grafting, Osteoplasty Osteotomy</li> <li>• Root planning</li> </ul>	<ul style="list-style-type: none"> <li>• Seminar on indications of periodontal procedures</li> </ul>	5
3. Demonstrate oral hygiene methods	<ul style="list-style-type: none"> <li>• Oral hygiene methods- brushing technique, interdental cleaning, irrigation</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation of posters, pamphlets on brushing techniques</li> <li>• Demonstration of brushing technique on models</li> <li>• Conduct awareness campaign on oral hygiene methods in the community</li> </ul>	5
4. List out causes of oral cancer	<ul style="list-style-type: none"> <li>• Oral cancer-causes detection</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare poster on causes of oral cancer</li> </ul>	5
<b>Total</b>			<b>20</b>

Unit 4 : Prosthodontics -2			
Expected Learning outcomes	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Identify types of removable partial dentures	<ul style="list-style-type: none"> <li>• Removable partial Dentures</li> <li>• Types-Cast partial Denture&amp; Acrylic)</li> <li>• Care and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Spotters- Identification of different types of removable partial dentures</li> <li>• Prepare poster on instruction for caring of Removable partial Denture</li> </ul>	15
2. List out the instructions for care of Fixed partial denture	<ul style="list-style-type: none"> <li>• Fixed partial dentures- parts, Clinical steps of fabrication, care and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare pamphlets on instructions for care of Fixed partial denture</li> </ul>	5
3. Differentiate between immediate and over denture	<ul style="list-style-type: none"> <li>• Immediate dentures, over dentures-definition and indications</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare chart on indications of immediate denture and over denture</li> </ul>	3
4. Assist in relining and rebasing	<ul style="list-style-type: none"> <li>• Relining and rebasing-clinical procedure</li> <li>• Materials used and their manipulation</li> </ul>	<ul style="list-style-type: none"> <li>• Hands on mixing of materials used for relining and rebasing</li> </ul>	2
<b>Total</b>			<b>25</b>

<b>Unit 5: Orthodontics-2</b>			
<b>Expected Learning outcomes</b>	<b>Theory ( 8 hrs)</b>	<b>Practical ( 12 hrs)</b>	<b>Duration</b>
1. List out instruments used in fixed orthodontic treatment	<ul style="list-style-type: none"> <li>Fixed orthodontics-components and instruments used</li> </ul>	<ul style="list-style-type: none"> <li>Report on components and instruments used in Fixed Orthodontics as observed during dental clinic visit</li> <li>Identification of instruments used</li> </ul>	6
2. Identify different types of removable Orthodontic appliances	<ul style="list-style-type: none"> <li>Removable orthodontics</li> <li>Hawleys appliance-indications</li> <li>Expansion Appliance-indications</li> </ul>	<ul style="list-style-type: none"> <li>Identification off different types of Removable orthodontic appliances</li> </ul>	8
3. Identify different types of retainers	<ul style="list-style-type: none"> <li>Retainers – Indications, Types(Fixed, removable)</li> </ul>	<ul style="list-style-type: none"> <li>Identification of types of retainers</li> </ul>	3
4. Lists out instructions to be given to the patient	<ul style="list-style-type: none"> <li>Oral hygiene and dietary instructions</li> </ul>	<ul style="list-style-type: none"> <li>Role play</li> <li>Prepare pamphlets on oral hygiene and dietary instructions</li> </ul>	3
<b>Total</b>			<b>20</b>

<b>Unit 6: Dental pharmacology</b>			
<b>Expected Learning outcomes</b>	<b>Theory ( 6 hrs )</b>	<b>Practical ( 9 hrs )</b>	<b>Duration (15 hrs)</b>
1. Develop skill in advising patient on dosage and usage of medicines	<ul style="list-style-type: none"> <li>Introduction to pharmacology-prescription format</li> </ul>	<ul style="list-style-type: none"> <li>Role play</li> </ul>	2
2. List out the different antibiotics used in dentistry	<ul style="list-style-type: none"> <li>Antibiotics commonly used in Dentistry-Names, uses and Precautions</li> </ul>	<ul style="list-style-type: none"> <li>Chart preparation on different antibiotics, their use and precautions</li> <li>Role play</li> </ul>	3
3. List out the different analgesics used in dentistry	<ul style="list-style-type: none"> <li>Analgesics commonly used in dentistry-names ,uses and precautions</li> </ul>	<ul style="list-style-type: none"> <li>Chart preparation on different analgesics, their use and precautions</li> <li>Role play</li> </ul>	3
4. Explain the composition of local anaesthesia	<ul style="list-style-type: none"> <li>Local anaesthesia-composition</li> </ul>		3
5. Develop skill in storing and dispensing of drugs	<ul style="list-style-type: none"> <li>Storage and dispensing of drugs</li> </ul>	<ul style="list-style-type: none"> <li>Seminar on storage and dispensing of drugs</li> </ul>	2
6. Lists out the	<ul style="list-style-type: none"> <li>Other drugs used</li> </ul>	<ul style="list-style-type: none"> <li>Chart preparation on</li> </ul>	2

different drugs and their uses	antifungals, antihistamines, antacids,,antiemetics,anti inflammatory, anti pyretic, anticoagulants, hemostatics	different drugs and their uses	
<b>Total</b>			<b>15</b>

Unit 7: Dental Radiology			
Expected Learning Outcomes	Theory ( 6 hrs )	Practical ( 9 hrs )	Duration (15 hrs)
1. Explain the importance of radiography	<ul style="list-style-type: none"> <li>• Introduction to radiography</li> </ul>		2
2. Identify the different types of radiographs	<ul style="list-style-type: none"> <li>• Types of dental radiographs</li> <li>• IOPA, occusal , Bite wing, OPG,</li> </ul>	<ul style="list-style-type: none"> <li>• Identify different types of radiographic films</li> </ul>	3
3. Identify the parts of X ray machine	<ul style="list-style-type: none"> <li>• Parts of Xray machine</li> </ul>	<ul style="list-style-type: none"> <li>• Identify parts of X-ray machine during field visit to dental clinic</li> </ul>	2
4. Explain the process of developing and fixing of IOPA radiographs	<ul style="list-style-type: none"> <li>• Developing and fixing solutions, Procedure of Developing and fixing of IOPA radiographs</li> </ul>	<ul style="list-style-type: none"> <li>• Report on procedure of developing and fixing of IOPA radiograph as observed during field visit to Dental Clinic/Hospitals/radiology labs.</li> </ul>	4
5. List out the radiation hazards and protection methods	<ul style="list-style-type: none"> <li>• Radiation hazards and protection</li> </ul>	<ul style="list-style-type: none"> <li>• Report on precautions taken during radiological procedures as observed during field visit to Dental Clinic/Hospitals/radiology labs.</li> </ul>	2
6. Explain the newer techniques of radiography	<ul style="list-style-type: none"> <li>• Digital radiography</li> </ul>	<ul style="list-style-type: none"> <li>• Seminar on newer techniques of radiography</li> </ul>	2
<b>Total</b>			<b>15</b>

Unit 8: Health and Safety Measures in Dental Clinic			
Expected Learning Outcomes	Theory ( 8 hrs )	Practical ( 12 hrs )	Duration (20 hrs)
1. Explain the importance of disinfection, sterilisation and asepsis	<ul style="list-style-type: none"> <li>• Introduction to disinfection sterilisation&amp; asepsis</li> <li>• Hand Hygiene</li> <li>• PPE- Doffing and Doning</li> <li>• Personal Hygiene</li> <li>• Surface disinfection</li> <li>• Injury prevention</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration of hand hygiene, Doffing and doning of PPE</li> </ul>	3

2. Assist in infection control	<ul style="list-style-type: none"> <li>Disinfection – Materials used and procedure</li> </ul>	<ul style="list-style-type: none"> <li>Hands on training on disinfection methods</li> </ul>	6
3. Explain sterilisation procedure	<ul style="list-style-type: none"> <li>Sterilisation- Types, materials and equipment used</li> </ul>	<ul style="list-style-type: none"> <li>Report on sterilisation procedures as observed in a dental clinic during field visit</li> </ul>	7
4. Describe the procedure of packaging and storing of sterilised instruments	<ul style="list-style-type: none"> <li>Packaging and storing of sterilised instruments</li> </ul>	<ul style="list-style-type: none"> <li>Report on package and storing of instruments as observed in a dental clinic during field visit</li> </ul>	4
<b>Total</b>			<b>20</b>

Unit 9: Advanced dental treatments			
Expected Learning outcomes	Theory (4 hrs)	Practical (6 hrs)	Duration (20 hrs)
1. Identify different advanced prosthodontic appliances	<ul style="list-style-type: none"> <li>Prosthodontics-implants , flexible dentures, BPS</li> </ul>	<ul style="list-style-type: none"> <li>Spotters- Identification of advanced prosthodontic appliances</li> </ul>	4
2. Identify the indications of laser treatment in dentistry	<ul style="list-style-type: none"> <li>Laser treatment-- what is laser treatment and indications</li> </ul>	<ul style="list-style-type: none"> <li>Seminar presentation on laser treatment in dentistry</li> </ul>	3
3. Identify invisalign	<ul style="list-style-type: none"> <li>Orthodontics - invisalign</li> </ul>	<ul style="list-style-type: none"> <li>Spotter – Identification of invisalign</li> </ul>	3
<b>Total</b>			<b>10</b>

## 6. ORGANISATION OF FIELD VISITS/ON-THE-JOB TRAINING

In a year, at least 3 field visits/educational tours should be organised for the students to expose them to the activities in the workplace. Visit a Dental Hospital/Clinic and observe various activities of the Dental Assistant on daily schedule basis. Also observe and assist the following activities at Hospital/Clinic:

1. Front office activities
2. Reception and registration activities
3. Disinfecting clinic/hospital and treatment area.
4. Sterilisation of equipment and instruments
5. Chairside management of patient
6. Radiography procedures
7. Various activities related to patient care

8. Post operative Care
9. First Aid and Basic Life Support Procedures
10. Various safety measures adopted
11. Manipulation of materials
12. Bio medical waste Management
13. Data entry and record keeping

On the job training of at least 80hours is to be organized by the institution to provide hands-on training to the students.

## **7. LIST OF EQUIPMENT AND MATERIALS**

The list given below is suggestive and an exhaustive list should be prepared by the vocational teacher. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

Glass slab

Cement spatula

Mixing pad

Plastic spatula

Filling instrument

Amalgam carrier

Amalgam Condenser

Amalgam carver

Amalgam burnisher

Mortar and pestle

Mouth mirror

Explorer/Probe

Tweezer

Hand scaling instruments

Forceps

Elevators

Artery Forceps

Needle holder

Scissors

Suture needle

Suture thread

Curette



Cheek retractor  
Bite blocks  
Orthodontic pliers  
Artificial teeth  
Impression trays  
Fox guide plane  
Rubber bowl  
Spatula  
Articulators  
Syringes & needles  
Endodontic files and reamers  
Steriliser  
Kidney tray  
Rubber Dam and clamps  
Autoclave  
Light cure unit  
Ultrasonic Scaler  
Airotor  
Micromotor  
Dental Chair Unit with air compressor and suction  
IOPA Radiograph

## 8. LIST OF CONTRIBUTORS

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