2.6.1

Methods of the assessment of learning outcomes and graduate attributes

DEPARTMENT OF ORAL MEDICINE AND RADIOLOGY:

The following are the questions that reveal the objectives of the course outcome of the subject of oral medicine and radiology. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE
		ATTRIBUTES
CO1	Able to interpret diagnostic information from case	Based on chair side
	histories, extra and intra oral examination.	discussion and viva voce
CO2	Identify the oral manifestation of systemic	Based on theory exams
	diseases.	and assignments.
CO3	Formulate treatment strategies of common	Based on clinical
	disorders of oral and paraoral structures.	assessment of case history
		taking and OSCE
CO4	Restate the observed information and findings to	
	explain the disease process to patient effectively.	Based on Role play
CO5	Ability to suggest dental management for	Based on chair side
	medically compromised patients	discussion
CO6	Have a knowledge of the basics of forensic	Based on terminal exams,
	odontology	group discussion
CO7	To understand the basics of radiation physics,	Based on MCQ's and viva
	effects of radiation on living tissues and proper	voice
	radiation safety measures	

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CO8	Perform various intraoral radiographic techniques	Based on DOPS, Role
	to produce quality intra oral radiographs	play
CO9	Identify the normal anatomic radiographic	Based on X-ray test,
	landmarks and interpret pathologies on an	Group discussion
	intraoral radiographs	
CO10	Identify and understand the indications of various	Based on MCQ's and viva
	extra oral radiographs in different maxillofacial	voice
	pathologies	
	Have knowledge of various digital and advances	Based on terminal exams
CO11	in maxillofacial imaging	MCQ's
	Reproduce the morphology of the permanent	Based on university
CO12	maxillary and mandibular teeth in wax blocks and	practical examination
	illustrate the microscopic features of orofacial	
	tissues.	

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DEPARTMENT OF PERIODONTICS

The following are the questions that reveal the objectives of the course outcome of the subject of Conservative Dentistry & Endodontics. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. [Cognitive, psychomotor and affective domain]. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE ATTRIBUTES
CO1	Students have sufficient knowledge to	Continuous assessment with
	differentiate between normal and abnormal	theory classes on normal and
	periodontal conditions	diseased gingival and periodontal
		structures, MCQs and Terminal
		exams, Assignment / Google
		Classroom, Clinical assessment of
		the gingival changes and
		structures in patients.
CO2	Students have sufficient knowledge	Continuous assessment with
	aetiopathogenesis of periodontal and peri-	MCQs & Quiz Theory Exams,
	implant diseases. Able to identify the	Assignment / Google Classroom,
	relationship between the periodontal diseases	Group Discussions.
	and various medical conditions.	
CO3	Students have sufficient knowledge Diagnose	Continuous assessment with
	and can provide appropriate treatment for the	OSPE, Theory exams,
	condition.	Assignment / Google Classroom,
		Model assessment, Clinical
		Assessment and grading.
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CO4	Sufficient knowledge on ability to apply the	To continue in clinical
	appropriate diagnostic technique to diagnose	case assessment, assisting,
	periodontal diseases.	case recording.
CO5	Sufficient knowledge on how to Identify, plan	To continue Clinical assessment
	and execute non-surgical and surgical	of case sheet recording, Clinical
	periodontal treatment procedures.	cases Grading
CO6	Sufficient knowledge to communicate and	Continuous assessment by OCDE
C00	demonstrate appropriate measures in the	Continuous assessment by OSPE,
		Role Play, Group discussion
	prevention of periodontal diseases.	
CO7	Sufficient knowledge on inter-disciplinary	To continue in assisting in clinical
	approaches in periodontal/peri-implant	cases and case discussions and
	therapy and referral to the specialist.	involve more in Interdisciplinary
		treatments and co-ordinating with
		other departments.
CO8	Sufficient knowledge on how to assess and	To continue in assisting in cases.
	evaluate the performed treatment outcomes.	
CO9	Sufficient knowledge on how to deliver oral	Continue to involve students in
	health care to patients from different	attending camps and improve
	backgrounds, stages of life and in various	patient education and motivation
	settings.	skills.
CO10	Sufficient knowledge on how to implement an	To continue in educating
	effective infection control and environmental	sterilisation protocol and
	safe.	discussions.

ORAL AND MAXILLOFACIAL SURGERY

The course outcome in Oral and Maxillofacial Surgery will be evaluated through the following questionnaire. The questionnaire will be applicable to every student to know their understanding, knowledge, ability to perform individually and ability to participate in a team through various teaching methods and the following assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE ATTRIBUTES
CO1	To apply the knowledge gained from basic science and	Theory classes Periodic
	clinical subjects to perform clinical examination, arrive	assessments,
	at a final diagnosis; plan the treatment and management	 Terminal exams marks
	of oral and maxillofacial problems.	• Viva-voce
		Small group discussions,
		Department Outpatient
		management.
CO2	Competently diagnose and treat medically	• Theory classes,
	compromised patients with minor oral surgical	• Skills lab
	problems and manage medical emergencies if any	Basic life support
	during the procedures.	Small group discussions
CO3	Perform competently extraction of tooth/teeth under	Terminal exams marks
	local/general anesthesia with prescription of	• Viva-voce
	medications, post extraction instructions and proper	Small group discussions
	follow-up care.	• Flash – cards.
CO4	Management of intra/post-operative complications with	Skills lab
	referral to an Oral and Maxillofacial Surgeon as	Small group discussion
	required.	• Direct Observation of
		Procedure
CO5	To develop communication skills and compassion	• Role play
	towards the patient for establishing better patient-doctor	session.(student-staff)
	relationship.	C. Um

CO6	Ability to carry out simple minor oral surgical	Outpatient training
	procedures such as alveoloplasty, frenectomy, incision	Pre-clinical activity
	and drainage, dental wiring and biopsy.	Skills lab attendance.
CO7	To keep abreast with the recent advances in the specialty	• Flash – cards
	of Oral and Maxillofacial Surgery such as dental	 Innovative teaching
	implants, laser and cryotherapy.	• Department CDE
		Programme
CO8	To Understand the management of major oral surgical	Major OT assistance
	problems and principles involved in the management of	• casualty posting
	hospitalized patients.	attendance
CO9	Ability to understand and effectively communicate with	Role Play
	peers and professionals.	Peer Assisted Learning
		• Journal Club
		Presentation
		Seminar Presentation
CO10	Ability to gain knowledge and show interest in research	Student research activity
	activities.	• Model preparation
		/student projects

DEPARTMENT OF PUBLIC HEALTH DENTISTRY

The following are the questions that reveal the objectives of the course outcome of the subject of Public Health Dentistry. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. [Cognitive, psychomotor and affective domain]. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE ATTRIBUTES
CO1	Knowledge on community health problem	Based on terminal paper / test
CO2	Promotion of patient's oral health	Based on Oral health education
CO3	Ability to conduct clinical examination including	Based on Case history taking
	all diagnostic procedure to arrive diagnosis and	
	treatment planning	
CO4	Interest to update on advancement in preventive	Based on No. of. Workshop /
CO4	dentistry	CDE program attended
	dentistry	CDL program attended
CO5	Additional to a second to the	Embadan bandan Na af
CO5	Attitude to widen horizon on research	Evaluation based on No. of. Publication / research
	methodology	involvement data collection
		mvorvement data concerion
GO		
CO6	Application of biostatistics	Evaluation based on Test paper
		and viva

CO7	To quantify oral health burden	Based on taking indices
CO8	Application of oral health promotions towards patient care	Based on Health educated aids
CO9	Interest towards competition	Participation in various national and international conference and participation in CSM
CO10	Applications of epidemiology	Based on undertaking research study

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DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS

The following are the questions that reveal the objectives of the course outcome of the subject of Conservative Dentistry & Endodontics. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. [Cognitive, psychomotor and affective domain]. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE
		ATTRIBUTES
CO1	Students to have sufficient knowledge regarding	Continuous
	diagnosis, prevention and treatment of anomalies	assessment with
	and diseases of the teeth.	Theory classes,
		Terminal exams,
		Seminars to be
		done.
CO2	To improve students' skill in diagnostic	To concentrate more on
	procedures.	conducting MCQs & Quiz,
		Clinical assessment of and
		recording, Small Group
		Discussions.
CO3	To improve knowledge in cephalometric and extra	To conduct more Small
	oral radiographs.	Group Discussions &
		Grading, Clinical
		Assessment
CO4	To improve knowledge on growth and	To concentrate
	development of an individual.	more in Theory
		classes, Terminal
		exams, Quiz
		of mul

CO5	Students have adequate communication skills with	Continuous assessment by
	the patient and were able to motivate them while	Clinical assessment of
	undergoing treatment.	case sheet recording, Role
		Play
COC		
CO6	To adequate knowledge on preventive and	Continuous assessment by
	interceptive procedures.	OSPE, Role Play, Group
		discussion
CO7	To improve knowledge on Interdisciplinary	Involve students more in
	treatment planning.	assisting in clinical cases
		and case discussions and
		involve more in
		Interdisciplinary treatments
		and co-ordinating with
		other departments.
		-
CO8	Adequate knowledge on fabrication and activation	To continue in assisting
	of removable appliance.	cases and fabrication and
		activation of removable
		appliance
CO9	To improve knowledge about fixed appliance and	To involve students more in
	assist in fixed appliance cases.	fixed appliance cases
		assisting the case and
		understanding the basic
		bio-mechanics.
CO10	To update knowledge on recent advances	Conduct more seminars and
		discussions to make them
		gain knowledge about the
		recent advances.

DEPARTMENT OF PEDIATRIC AND PREVENTIVE DENTISTRY

The following are the objectives of the course outcome of Pediatric and Preventive Dentistry. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude [cognitive psychomotor and affective domain]. This will be evaluated by the questions given below using specific assessment tools.

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s and MCQ.
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		- Viva Voce
COD6	Understand basics of growth and development ,psychology	-Micro Teaching
	and behavior of children and display the strategies for the	-OSPE
	management in the dental clinic	-OSCE
COD7	Identify morphology of primary and permanent root canal,	-OSPE
	pulpal and periapical diseases and perform pulp therapy	-OSCE
	techniques	- Problem Based Learning
COD8	Master exodontias and LA techniques for the children	-Clinical Demonstration
		-Case Based Learning
COD9	Describe salient features of gingival and periodontium in	-Clinical Demonstration
	primary dentition and summarize management of common	-Case Based Learning
	gingival and periodontal diseases in the children	-Viva Voce
COD10	Demonstrate the management of the disabled children	-Problem Based Learning
	effectively and efficiently, tailored to the need of	-Case Based Learning
	individual requirement and conditions.	
COD11	Understand the etiology, prevention and management of	-Mind Mapping
	common dental injuries in children	-Problem Based Learning
		-Case Based Learning
		- Viva Voce
COD12	Develop and deliver oral health education and participate	-Screening & Treatment
	in school dental health program	school camps.

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DEPARTMENT OF ORAL PATHOLOGY:

The following are the questions that reveal the objectives of the course outcome of the subject of oral pathology. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE	
		ATTRIBUTES	
COD1	Describe the pathological processes, clinical manifestations,		
	radiographic features, histopathological features, biochemical		
	features, differential diagnosis, and treatment of diseases,		
	affecting the hard and soft tissues of the oral cavity.	Based on terminal	
		exam	
COD2	Describe the classification, etiology, etiopathogenesis,	Based on terminal	
	clinical features, histological features, lab investigation, special	exam	
	investigation of benign and malignant tumours involving oral and		
	para oral structures		
COD3	Apply the basic concepts and methods of forensic odontology in	Based on terminal	
	comparative human identification.	exam	
COD4	Illustrate the microscopic features of common lesions affecting the		
	oral tissues by evaluating the gross features and microscopic	Based on university	
	/projection slides of surgical specimens.	practical examination	

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DEPARTMENT OF DENTAL ANATOMY EMBRYOLOGY AND ORAL HISTOLOGY:

The following are the questions that reveal the objectives of the course outcome of the subject of dental anatomy embryology and oral histology. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. Each area of requirements will be evaluated using specific assessment tools.

LEARNING OUTCOMES	GRADUATE
	ATTRIBUTES
Relate the morphological features' of primary and	
permanent teeth its chronology, sequence of eruption,	Based on terminal exam
occlusion and variations in morphology.	
Illustrate the development, physical and chemical properties,	
clinical appearance, histopathological features', and clinical	Based on terminal exam
correlation of orofacial tissues.	
Describe the laboratory techniques involved in routine soft	Based on terminal exam
tissues and hard tissue processing.	
Reproduce the morphology of the permanent maxillary and	Based on university
mandibular teeth in wax blocks and illustrate the microscopic	practical examination
features of orofacial tissues.	
	Relate the morphological features' of primary and permanent teeth its chronology, sequence of eruption, occlusion and variations in morphology. Illustrate the development, physical and chemical properties, clinical appearance, histopathological features', and clinical correlation of orofacial tissues. Describe the laboratory techniques involved in routine soft tissues and hard tissue processing. Reproduce the morphology of the permanent maxillary and mandibular teeth in wax blocks and illustrate the microscopic

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DEPARTMENT OF PRE-CLINICAL CONSERATIVE

The objectives of the course outcome for preclinical conservative was assessed in 5 different aspects.

The calculated values will show the

- 1. The general performance of the department in achieving the expected outcome of the course
- 2. Area in which the expected outcome has not been achieved to satisfaction and needs improvement. Methods can be planned to improve the area and periodically assessed.

CODE	LEARNING OUTCOMES	GRADUATE
		ATTRIBUTES
COD1	The student is able to carry out basic preclinical exercises pertaining to cavity preparation in maniquins and typhodonts applying principles of cavity preparation.	Based on terminal exam
COD2	The student is able to carry out procedures related to restorative dentistry like bas application, matricing and wedging followed by appropriate restoration.	Based on terminal exam
COD3	The student has a basic knowledge of the various types of restorative materials indicated for various pathologies of hard tissues and location of the tooth in the dental arches.	Based on terminal exam
COD4	The student is able to judiciously dispense and manipulate the materials.	Based on terminal exam
COD5	The student is able to apply the knowledge of ergonomics and chair positions including positioning of the patient.	Based on university practical examination

DEPARTMENT OF PRECLINICAL PROSTHODONTICS

The following are the questions that reveal the objectives of the course outcome of the subject of preclinical prosthodontics. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE
		ATTRIBUTES
COD1	The student is able to carry out basic preclinical exercises	
	pertaining to removable prosthesis using simulated	Based on Evaluation of
	dentulous and edentulous models with concepts of	preclinical basic exercise
	biomechanics, principles of aesthetics and clinical	completion out of total of 5
	application	exercises
COD2	The student is able to carry out preclinical laboratory	
	procedures pertaining to stepwise complete denture	Based on Evaluation of teeth
	fabrication using simulated completely edentulous	setting exercises completion
	models.	out of total of 8
COD3	The student has a basic knowledge about all preclinical	Based on University exam
	exercises and is able to clinically correlate them.	marks
COD4	The student is able to select and use dental material	Based on Evaluation of
	carefully, without wastage.	material wastage

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DEPARTMENT OF DENTAL MATERIALS

The following are the questions that reveal the objectives of the course outcome of the subject of Dental materials. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE
		ATTRIBUTES
COD1	The general performance of the department in achieving the	
	expected outcome of the course	Based on University
		exam marks
COD2	Area in which the expected outcome has not been achieved to	
	satisfaction and needs improvement. Methods can be planned to	Based on University
	improve the area and periodically assessed.	exam marks
COD3	The student has acquired knowledge of the composition,	Based on University
	properties, application ,manipulative variables, and	exam marks
	recent advances of dental	
COD4	The students has developed the ability to use dental materials	Based on University
	which will include the manipulation through laboratory exercises	exam marks
COD5	The student is now able to use dental material carefully, without	Based on University
	wastage	exam marks

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DEPARTMENT OF CONSERVATIVE DENTISTRY AND ENDODONTICS:

The following are the questions that reveal the objectives of the course outcome of the subject of Conservative Dentistry & Endodontics. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. [Cognitive, psychomotor and affective domain]. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE ATTRIBUTES	
COD1	Possess sufficient knowledge regarding	Continuous assessment with Written	
	diagnosis, prevention and treatment of	examinations and viva voce, theory classes	
	anomalies and diseases of the teeth related to	pertaining to subject, utilization of assisted	
	conservative dentistry and endodontics.	learning methods like small group discussions,	
		jigsaw puzzles, mind and concept mapping.	
COD2	Acquire necessary skill to perform diagnostic	Practical examinations in mannequin and	
	procedures, preventive and restorative treatment	patient.	
	of anomalies and diseases of the teeth related to		
	conservative dentistry and endodontics.		
COD3	Develop knowledge, artistry and attitude to carry	DOPS, Case quota completion as per the	
	out contemporary diagnostic procedures,	guidelines framed by the DCI and the	
	preventive care and basic aesthetic treatment of	Tamilnadu Dr MGR Medical University and	
	anomalies and diseases of the teeth related to	Simulation based learning, periodic guest	
	conservative dentistry and endodontics without	lectures on relevant topics.	
	bias.		
COD4	Apply basic knowledge of anatomy, physiology	Viva Voce, pre-clinical training in II BDS	
	and biomechanical properties of teeth,	followed by Clinical postings in third year and	
	biomaterials and associated tissues for	final year BDS.	
	restorative treatment and endodontics.	al Unit	

COD5	Acquire sufficient proficiency in diagnosis of	
	developing lesion using advanced diagnostic	Flash cards, quizlet, peer assisted learning to
	aids like pulp tester and digital devices and	train undergraduates to perform basic
	institute preventive measures	diagnostic tests like thermal and electric pulp
		testing, training to take digital radiographs.
COD6	Acquire basic knowledge of etiology,	Theory classes integrated with participatory
	prevention, interception and management of	learning, problem based learning and
	caries and non-carious lesion of teeth.	experiential learning. Assessment of the
		learning process using OSCE and OSPE.
COD7	Communicate effectively and sensitively to the	Training to perform outpatient diagnosis and
	patients and public regarding retaining their	disposal and students made to participate in
	teeth for their lifetime.	camps as a part of their routine curriculum
		(Extension activities). Students trained to
		educate patients using models and videos.
COD8	Possess basic knowledge of pulpal and	Problem based learning and spotters
	periapical diseases and their treatment	
	modalities.	
COD9	Acquire sufficient skill to perform basic	Pre-clinical training to perform all basic
	endodontic procedures.	endodontic procedures
COD10	Identify difficulty levels of endodontic treatment	Training to record proper medical case history
	requiring specialist care.	and assess difficulty level of handling cases.
	requiring specialist care.	Interns are posted under PGs to assist them.
		interns are posted under 1 Os to assist utent.

DEPARTMENT OF PROSTHODONTICS AND CROWN & BRIDGE

The following are the questions that reveal the objectives of the course outcome of the subject of Prosthodontics and Crown & Bridge. It is essential that every student should possess, acquire and develop the knowledge, skill and attitude in the areas that will be reflected by the questions given hereunder. [Cognitive, psychomotor and affective domain]. Each area of requirements will be evaluated using specific assessment tools.

CODE	LEARNING OUTCOMES	GRADUATE
		ATTRIBUTES
COD1	Apply basic medical and dental sciences to the practice of	Based on University
	clinical prosthodontics	exam monthly test
COD2	Examine the patients requiring Prosthodontics therapy,	Based on evaluation of
	investigate the patient systemically, analyse the investigation	clinical case
	results, radiography, diagnose the ailment, plan a treatment,	presentation
	communicate it with the patient and execute it. Identify cases,	
	which are outside the area of his specialty/ competence and refer	
	them to appropriate specialists.	
COD3	Perform clinical and laboratory procedure with an	
	understanding of biomaterials and oral conditions related to the	Based on evaluation
	prosthesis and have competent dexterity and skill for performing	based on clinical and
	clinical and laboratory procedures in fixed and removable	lab work
	prosthodontics.	
COD4	Restore lost functions of Stomatognathic system namely	Based on chair side
	mastication, speech, appearance and psychological comforts, by	evaluation.
	understanding prosthodontic principles and provide a quality	
	health care to the patient.	d. Uml
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COD5	Acquire essential knowledge of personal hygiene, infection	Evaluation based on
	control, prevention of cross infection and safe disposal of waste,	chair side observation
	keeping in view the risks of transmission of Hepatitis, HIV and	and sterilization record
	COVID.	
COD6	Knowledge on ethics, respect patient's rights and privileges	Evaluation based on
	including patients right to information, decision making and	viva and patient
	right to seek the second opinion.	interaction
COD7	Communicate in simple understandable language with the	
	patient and educate the patient on consequences of tooth loss,	Based on Patient
	importance of replacement of teeth and proper maintenance care	interaction.
	instructions He should be able to guide and counsel the patient	
	with regard to various treatment modalities available. Develop	
	the ability to communicate with professional colleagues and	
	render the best possible treatment.	