



**Programme Structure and
Course Details of
Skill Enhancement Training Programme
In Oral Implantology
Batch 2026**

**Faculty of Dental Sciences
Department of Oral Implantology**

University's Vision, Mission and Objectives

The M. S. Ramaiah University of Applied Sciences (MSRUAS) will focus on student-centric professional education and motivates its staff and students to contribute significantly to the growth of technology, science, economy and society through their imaginative, creative and innovative pursuits. Hence, the University has articulated the following vision and objectives.

Vision

MSRUAS aspires to be the premier university of choice in Asia for student centric professional education and services with a strong focus on applied research whilst maintaining the highest academic and ethical standards in a creative and innovative environment

Mission

Our purpose is the creation and dissemination of knowledge. We are committed to creativity, innovation and excellence in our teaching and research. We value integrity, quality and teamwork in all our endeavors. We inspire critical thinking, personal development and a passion for lifelong learning. We serve the technical, scientific and economic needs of our Society.

Objectives

1. To disseminate knowledge and skills through instructions, teaching, training, seminars, workshops and symposia in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to equip students and scholars to meet the needs of industries, business and society
2. To generate knowledge through research in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to meet the challenges that arise in industry, business and society
3. To promote health, human well-being and provide holistic healthcare
4. To provide technical and scientific solutions to real life problems posed by industry, business and society in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences
5. To instill the spirit of entrepreneurship in our youth to help create more career opportunities in the society by incubating and nurturing technology product ideas and supporting technology backed business
6. To identify and nurture leadership skills in students and help in the development of our future leaders to enrich the society we live in
7. To develop partnership with universities, industries, businesses, research establishments, NGOs, international organizations, governmental organizations in India and abroad to enrich the experiences of faculties and students through research and developmental programmes

Programme Specifications: Skill Enhancement Training

Faculty	Dental Sciences
Department	Oral Implantology
Programme Name	Skill Enhancement Training Programme in Oral Implantology
Dean of the Faculty	Dr. Kavitha Prasad
Programme Director	Dr. Ranganath K

1. **Title of the Award:** Skill Enhancement Training Programme
2. **Mode of Study:** Part - Time
3. **Awarding Institution /Body:** M. S. Ramaiah University of Applied Sciences, Bengaluru
4. **Joint Award:** Not Applicable
5. **Teaching Institution:** Faculty of Dental Sciences, M. S. Ramaiah University of Applied Sciences, Bengaluru
6. **Date of Programme Specifications:** September 2025
7. **Date of Programme Approval by the Academic Council of MSRUAS:** 27th September 2025
8. **Next Review Date:** September 2026
9. **Programme Approving Regulating Body and Date of Approval:**
10. **Programme Accredited Body and Date of Accreditation:**
11. **Grade Awarded by the Accreditation Body:**
12. **Programme Accreditation Validity:**
13. **Programme Benchmark:**
14. **Rationale for the Programme**

Dental Implantology has rapidly evolved into a cornerstone of modern dental practice, offering predictable and long-term solutions for tooth replacement. With increasing patient awareness, higher expectations for aesthetics and function, and the global shift toward evidence-based, minimally invasive dentistry, proficiency in Implantology has become an essential competency for dental professionals

Despite the growing demand, many practitioners face challenges in acquiring systematic training in basic Implantology. This gap necessitates a structured skill enhancement Programme that integrates knowledge, clinical practice, and reflective learning. Ultimately, this Programme is envisioned to empower dental professionals with confidence, competence, and credibility in oral Implantology, thereby enhancing patient outcomes and contributing to the advancement of dental practice.

15. Programme Mission

The Oral Implantology skill enhancement training programme aims to empower dental professionals with advanced knowledge, precision techniques and evidence based practices in implant dentistry through structured training clinical exposure and mentorship. The Programme fosters competence in diagnosis, treatment planning, surgical execution and prosthetic rehabilitation using analogue and digital work flows

emphasizing patient centered care, innovation and lifelong learning. It seeks to bridge theory with practice, enhance clinical outcomes and raise the standards of oral health care delivery enabling practitioners to provide safe, predictable and esthetic implant solutions

16. Graduate Attributes (GAs)

GA-1. Oral health knowledge: Ability to apply knowledge of basic and applied medical and dental science to address oral health issues.

GA-2. Problem Analysis: Ability to analyse oral health problems, interpret data and arrive at meaningful conclusions involving appropriate investigations and diagnosis.

GA-3. Provide Solutions: Ability to understand the etiopathology, clinical features of oral disease and provide solutions considering public health and safety, and the cultural, societal, and environmental considerations

GA-4. Conduct Investigations of Complex Problems: Ability to understand and solve complex clinical situations by conducting experimental investigations

GA-5. Modern Tool Usage: Ability to apply appropriate tools and techniques and understand utilization of resources appropriately to oral health activities

GA-6. The Dental Expert and Society: Ability to understand the effect of oral health solutions on legal, cultural, social, and public health and safety aspects

GA-7. Environment and Sustainability: Ability to develop sustainable solutions and understand their effect on society and environment

GA-8. Ethics: Ability to apply ethical principles to dental practices and professional responsibilities

GA-9. Individual and Teamwork: Ability to work as a member of a team, to plan and to integrate knowledge of various dental and allied disciplines and to lead teams in multidisciplinary settings

GA-10. Communication: Ability to make effective oral presentations and communicate technical ideas to a broad audience using written and oral means

GA-11. Project Management and Finance: Ability to lead and manage multidisciplinary teams by applying financial principles for practice management.

GA-12. Life-long learning: Ability to adapt to the changes and advancements in technology and engage in independent and life-long learning

17. Programme Outcomes (POs)

Skill Enhancement Training Programme graduates will be able to:

- PO1.** Enhance understanding of etiology, clinical manifestations and differential diagnosis of common oral diseases affecting teeth and surrounding structures that could result in edentulism
- PO2.** Impart knowledge and ability to diagnose and plan treatment for patients with both partial and complete edentulism with implant supported prosthesis
- PO3.** Critically analyze various treatment options and deliver it efficiently based on evidence based dentistry through both analogue and digital work flows
- PO4.** Impart training on techniques for various procedures of oral rehabilitation involving hard and soft tissue reconstruction with the most appropriate prosthodontic treatment

18. Programme Goal

The programme goal is to produce graduates having critical, analytical and problem-solving skills, and ability to think independently, and to pursue a career in Oral Implantology

19. Program Educational Objectives (PEOs)

The objectives of the Skill Enhancement Training Programme in Oral Implantology are to:

- PEO-1.** Provide students with a strong foundation in basic and applied medical and dental sciences to address oral health issues to enable them to devise and deliver efficient solutions to challenging problems pertaining to edentulism and maxillofacial rehabilitation
- PEO-2.** Impart analytic and cognitive skills required to plan multidisciplinary treatment modalities specific to the needs of the patients as related to Oral Implantology
- PEO-3.** Train students in all levels of surgical, restorative and digital dentistry work flow incorporating advanced diagnostics and technology in patient management.
- PEO-4.** Inculcate strong human values and social, interpersonal and leadership skills required for professional success in evolving global professional environments

20. Programme Specific Outcomes (PSOs)

At the end of the Skill Enhancement Training Programme in Oral Implantology, the graduate will be able to:

- PSO-1.** Diagnose various causes for tooth loss leading to edentulism, plan appropriate treatment options, by selecting ideal materials /techniques for implant supported prosthetic treatment, so as to improve the quality of life
- PSO-2.** Incorporate newer digital diagnostic, treatment planning and treatment execution technologies to provide optimal esthetic functional and biologically long lasting restorations
- PSO-3.** Perform various clinical procedures involving interdisciplinary approach for holistic management of the patient
- PSO-4.** Take responsibility in managing difficult situations using multidisciplinary hospital set up for effective oral rehabilitation of the patient

21. Programme Structure:

Year 1

Sl. No.	Course Title	Theory Hrs	Practical Hrs	Max. Marks
1	Basics in Oral Implantology including Preclinical Work	15	5	50
2	Hands on Clinical Implant Dentistry	15	75	100
3	Observation of Advanced procedures in Implant Dentistry	-	10	50
Total		30	90	200
Total number of contact hours		120		

22. Module Delivery

The module is delivered for one session of 3 days between week 1-6, one session of 10 days between week 7 - 20 and one session of 3 days between week 21-24, from 8.30 AM to 1.00 PM and afternoon 2.00-4.30 PM.

23. Teaching and Learning Methods

- Team Teaching/ Integrated Teaching
- Face to Face Lectures using Audio-Visuals
- Case Based Discussions
- Group Discussions, Presentations
- Demonstrations on videos, computers and models
- Clinical based learning
- Laboratory work
- Interdepartmental meets

24. Assessment and Grading

24.1. Components of Grading

Continuous Evaluation at the end of each Module:

At the end of each module the student will be assessed based on the log book submission and case presentation and graded accordingly as per description below

Sl. No.	Grade Description	Grade
1	Excellent	A
2	Good	B
3	Satisfactory	C

Programme End Exam: It has two components, theory and Case Presentation

Theory Component is a written MCQ examination and has a weightage of 30%. Clinical Component has two parts, part A is a case presentation along with Viva-Voce and has a weightage of 35% and Component B is a log book assessment and has a weightage of 35%. A student is required to score a minimum of 50% in each component.

25. Student Support for Learning

- Course Notes
- Reference Books in the Library
- Magazines and Journals
- Internet Facility

5. Computing Facility
6. Laboratory Facility
7. Staff Support
8. Lounges for Discussions
9. Any other support that enhances their learning

26. Quality Control Measures

1. Review of Course Notes
2. Review of Question Papers
3. Student Feedback
4. Moderation of Assessed Work
5. Review by external examiners
6. Student exit feedback

27. Programme Map (Course-PO-PSO Map)

Module	Course Title	PO-1	PO-2	PO-3	PO-4	PSO-1	PSO-2	PSO-3	PSO-4
I	Basics in Oral Implantology including Preclinical Work	3	2	1	1	3	3	2	2
II	Hands on Clinical Implant Dentistry	2	3	3	2	2	3	3	3
III	Observation of Advanced procedures in Implant Dentistry	1	2	3	3	1	3	3	3
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution									

28. Co-curricular Activities

Students are encouraged to take part in co-curricular activities like seminars, conferences, symposia, project competitions and related activities for enhancing their knowledge and networking.

29. Cultural and Literary Activities

Annual cultural festivals are held to showcase the creative talents in students. They are involved in planning and organizing the activities.

30. Sports and Athletics

Students are encouraged to take part in sports and athletic events regularly. Annual sports meet will be held to demonstrate sportsmanship and competitive spirit.

Course Specifications: Skill Enhancement Training in Oral Implantology

Course Title	Oral Implantology
Course Type	Skill Enhancement Training Programme
Department	Oral Implantology
Faculty	Dental Sciences

I. Course Summary

1. Aim and Summary

The Skill Enhancement Course in Oral Implantology aims to develop skilled and clinically competent dental professionals, diagnose, manage edentulism and rehabilitate missing structure by use of implant supported removable and/or fixed prosthesis.

2. Course Size and Credits:

Number of Credits	5
Credit Structure (Lecture: Tutorial: Practical)	1:0:2
Total Hours of Interaction	120
Number of Weeks in a term	24
Delivery Method	Modular
Student Intake per Batch	5
Department Responsible	Oral Implantology
Total Course Marks	200
Pass Criterion	50% Pass in each module
Attendance Requirement	80% in each module

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- CO-1.** Describe etiology, clinical manifestations and differential diagnosis of common oral diseases affecting teeth and surrounding structures that could result in edentulism
- CO-2.** Plan optimal treatment for patients with both partial and complete edentulism with implant supported prosthesis
- CO-3.** Deliver efficient treatment after critical analysis of various treatment options based on evidence
- CO-4.** Provide treatment with empathy for the geriatric population into definitive long term solutions involving easy maintenance of prosthesis

4. Course Contents

Theory and Clinical:

Module 1	
Week Nos.	Activity
1-8	Basics in Oral Implantology including Preclinical Work
Module 2	
Week Nos.	Activity
9-27	Hands on Clinical Implant Dentistry
Module 3	
Week Nos.	Activity
28-32	Observation of Advanced procedures in Implant Dentistry

Course contents: Module 1: Basics in Oral Implantology including Preclinical Work

Theory:

1. Introduction to Oral Implantology - History and evolution of dental implants, Basic terminology and classification, Overview of osseointegration
2. Applied Anatomy- Maxillofacial anatomy: bone density, vital structures, Radiographic interpretation (CBCT, panoramic)
3. Diagnosis and Case Selection: Patient evaluation: medical history, oral hygiene, Risk factors and contraindications
4. Treatment Planning and Implant Design: Implant dimensions, surface characteristics, Prosthetic considerations in planning
5. Prosthetic Phase of Implantology: Types of implant-supported prostheses
6. Surgical Protocols and Sterilization: Surgical steps for implant placement, Asepsis and sterilization
7. Prosthetics: Abutment selection and impression techniques
8. Complications and Maintenance: Biological and mechanical complications, Maintenance protocols and patient education
9. Final Assessment: Ethical and legal considerations

Practical:

1. Identification of implant components, Demonstration of implant systems,
2. Tracing anatomical landmarks on radiographs
3. Case-based discussions
4. Use of digital planning software
5. Preclinical placement of implants on jaw models

Assessment:

- MCQ and log book

Course Content: Module 2: Hands on Clinical Implant Dentistry

Theory:

1. Patient Selection and Consent: Informed consent and medico-legal considerations
2. CBCT analysis and surgical guide if applicable
3. Presurgical preparation and surgical protocols

4. Suturing, Post-op Care, management of early complications

Practical:

1. Reviewing patient records
2. Digital planning with Bluesky software
3. Sterilization of instruments, Setting up surgical trays, surgical checklists
4. Drilling sequence, bone preservation, suturing techniques on patients.
5. One-stage vs two-stage protocols for implant placement, Torque values and primary stability
6. Immediate temporization and development of emergence profile
7. Suturing and Post-op Care
8. Prosthetic Phase: Healing abutment where applicable, Abutment selection and prosthesis design, inter-arch space reconfirmation, Impression techniques

Assessment: Theory written exam, Case presentation and log book

Course Content: Module 3: Observation of Advanced Procedures in Implant Dentistry

Practical:

Observation of recorded surgeries or live demonstrations

Assessment:

MCQs or short-answer test on indications and procedural steps

Program Details Theory	Practicals	Module	Tentative Schedule
• Introduction to Oral Implantology - History and evolution of dental implants, Basic terminology and classification, Overview of osseointegration • Applied Anatomy- Maxillofacial anatomy: bone density, vital structures, Radiographic interpretation (CBCT, panoramic) • Diagnosis and Case Selection: Patient evaluation: medical history, oral hygiene, Risk factors and contraindication, • Treatment Planning and Implant Design: Implant dimensions, surface characteristics, Prosthetic considerations in planning • Prosthetic Phase of Implantology: Types of	• Identification of implant components, Demonstration of implant systems, • Tracing anatomical landmarks on radiographs • Case-based discussions • Use of digital planning software • Preclinical placement of implants on jaw models	I	3 working days between week 1 and 6

implant-supported prostheses • Surgical Protocols and Sterilization: Surgical steps for implant placement, Asepsis and sterilization • Prosthetics: Abutment selection and impression techniques • Complications and Maintenance: Biological and mechanical complications, Maintenance protocols and patient education • Final Assessment: Ethical and legal considerations			
• Patient Selection and Consent: Informed consent and medico-legal considerations • CBCT analysis and surgical guide if applicable • Presurgical preparation and surgical protocols • Suturing, Post-op Care, management of early complications	○ Reviewing patient records ○ Digital planning with Bluesky software ○ Sterilization of instruments, Setting up surgical trays, surgical checklists ○ Drilling sequence, bone preservation, suturing techniques on patients. • One-stage vs two-stage protocols for implant placement, Torque values and primary stability • Immediate temporization and development of emergence profile • Suturing and Post-op Care • Prosthetic Phase: Healing abutment where applicable, Abutment selection and prosthesis design, inter-arch space reconfirmation, Impression techniques	II	10 days between week 7 -20
	• Observation of recorded surgeries or live demonstrations of	III	3 days between week 21-24

	• Direct and indirect sinus lifts, • Ridge augmentation, • Immediate implants, Indications, contraindications, and complexity levels. Risk management and intraoperative decision-making		
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Course Map (CO-PO-PSO Map)

	Programme Specific Outcomes (PSOs)							
	PO-1	PO-2	PO-3	PO-4	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	Basics in Oral Implantology including Preclinical Work	3	2	1	1	3	3	2
CO-2	Hands on Clinical Implant Dentistry	2	3	3	2	2	3	3
CO-3	Observation of Advanced procedures in Implant Dentistry	1	2	3	3	1	3	3
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution								

5. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		20
Demonstrations		10
1. Demonstration using Videos	02	
2. Demonstration using Physical Models /Patients	08	
Practical Work		85
Pre-Clinical laboratories	5	
Clinical Area	80	
Others		02
1. Case Study Presentation	02	
Term Tests, Laboratory Examination/Written Examination, Presentations		03
Total Duration in Hours		120

6. Course Assessment and Reassessment

- Log book submission
- Clinical records with Photographs printed
- Case Presentation

The details of the components and subcomponents of course assessment is presented in the Programme Specifications document pertaining to the Skill Enhancement Training Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document. The evaluation questions are set to measure the attainment of the COs. In either component (CE or Presentation) or subcomponent of CE, COs are assessed as illustrated in the following table.

Focus of COs on each Component or Subcomponent of Evaluation	
	Component 1: CE (100% Weightage)
Subcomponent ►	SC1: CE
Maximum Marks ►	200
CO-1	X
CO-2	X
CO-3	X
CO-4	X
The details are presented in the Programme Specifications Document.	

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the module.

7. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Lectures, Case Based Discussion, Small Group discussion, Information Centre
2.	Understanding	Lectures, Case Based Discussion, Small Group discussion, Information Centre
3.	Critical Skills	Case Based Discussion
4.	Analytical Skills	Class room lectures
5.	Problem Solving Skills	Case Based Discussion, Small Group discussion
6.	Practical Skills	Clinical posting
7.	Group Work	Case Based Discussion, Small Group discussion
8.	Self-Learning	Clinical posting, Information Centre
9.	Written Communication Skills	Log book

10.	Verbal Communication Skills	Clinical posting, Case presentation
11.	Presentation Skills	Case Presentation
12.	Behavioral Skills	Clinical posting
13.	Information Management	Information Centre
14.	Personal Management	Clinical posting
15.	Leadership Skills	Case Based Discussion, Small Group discussion

8. Course Resources

a. Essential Reading

- a. **Resnik, R.R. (2020)** *Contemporary Implant Dentistry*. 4th edn. St. Louis, MO: Elsevier.
- b. **Misch, C.E. (2014)** *Dental Implant Prosthetics*. 2nd edn. St. Louis, MO: Elsevier.
- c. **Beumer III, J., Faulkner, R.R., Shah, K.C. and Moy, P.K. (2015)** *Fundamentals of Implant Dentistry*. 2nd edn. Hanover Park, IL: Quintessence Publishing.
- d. **Resnik, R.R. (2018)** *Avoiding Complications in Oral Implantology*. 1st edn. St. Louis, MO: Elsevier.
- e. **Buser, D., Belser, U.C. and Wismeijer, D. (2019)** *Implant Therapy in the Esthetic Zone: A Step-by-Step Treatment Strategy*. 2nd edn. Berlin: Quintessence Publishing.
- f. **Zarb, G.A., Bolender, C.L. and Eckert, S.E. (2013)** *Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prostheses*. 13th edn. St. Louis, MO: Elsevier.
- g. **Jensen, O.T. (2019)** *The Sinus Bone Graft*. 3rd edn. Chicago, IL: Quintessence Publishing.
- h. **Sclar, A.G. (2003)** *Soft Tissue and Esthetic Considerations in Implant Therapy*. 1st edn. Chicago, IL: Quintessence Publishing.

