



M.Sc. in Pain & Palliative Care 2 Years (4 Semesters)

Overview: The M.Sc. in Pain & Palliative Care is a specialized postgraduate program designed to equip students with advanced knowledge and skills to manage and treat individuals suffering from chronic pain and life-limiting illnesses. This interdisciplinary program integrates various fields such as medicine, nursing, psychology, and social work, and focuses on providing holistic care that addresses the physical, emotional, psychological, and spiritual needs of patients.

Palliative care aims to enhance the quality of life for patients, particularly those with terminal conditions such as cancer, heart failure, or neurodegenerative diseases, through pain management, symptom control, and psychosocial support. The program covers the latest techniques and practices for pain assessment, palliative care management, end-of-life care, and bereavement support, preparing students for a career in a rapidly evolving and highly rewarding field.

Affiliated Institution: School of Medical Sciences and Technology, Malla Reddy Vishwavidyapeeth (Deemed to be University)** The minimum eligibility for M.Sc. in Pain & Palliative Care is a pass in B.Sc. with at least 50% marks in qualifying exam.

Key Highlights:

- **Holistic Approach to Patient Care:** The program emphasizes a comprehensive, patient-centered approach that addresses the physical, emotional, psychological, and spiritual aspects of pain and palliative care.
- **Multidisciplinary Training:** Students are trained in collaboration with healthcare professionals from various disciplines, including medicine, nursing, psychology, social work, and physiotherapy.
- **Pain Management Techniques:** The curriculum covers modern approaches to pain management, including pharmacological and non-pharmacological methods, as well as advanced interventions such as nerve blocks and palliative sedation.
- **End-of-Life Care:** Students gain a deep understanding of the challenges and ethical considerations in providing end-of-life care and the importance of effective communication with patients and families.
- **Clinical Practice and Internships:** The program integrates clinical placements in hospices, hospitals, and palliative care centers to provide practical experience in pain management and palliative care.
- **Research and Evidence-Based Practices:** Students learn to conduct research and apply evidence-based practices to improve pain and palliative care.

Course Curriculum:

The M.Sc. in Pain & Palliative Care typically spans two years, consisting of theoretical coursework, practical training, and research projects. Below is a typical curriculum for the program:

Year 1:



➤ Core Modules:

- ✓ **Introduction to Palliative Care:** Overview of palliative care principles, history, and its role in modern healthcare.
 - ✓ **Pain Mechanisms and Assessment:** Understanding the biological and psychological mechanisms of pain, along with methods for pain assessment.
 - ✓ **Pharmacology in Pain Management:** Study of pain medications, including opioids, analgesics, and adjuvants, and their appropriate use in clinical settings.
 - ✓ **Ethics in Palliative Care:** Exploration of ethical issues in pain management and palliative care, including autonomy, informed consent, and decision-making.
 - ✓ **Psychosocial Aspects of Pain and Palliative Care:** Understanding the psychological and social dimensions of pain and illness, and how to address the emotional needs of patients.
 - ✓ **Communication in Palliative Care:** Techniques for effective communication with patients, families, and interdisciplinary teams, especially in difficult conversations about end-of-life issues.
- **Clinical Placements:** Clinical practice in pain clinics, hospices, or hospitals, allowing students to apply theoretical knowledge in real-world settings.

Year 2:

➤ Advanced Modules:

- ✓ **Advanced Pain Management:** In-depth study of chronic pain syndromes, advanced pharmacological treatments, interventional procedures, and complementary therapies.
 - ✓ **Palliative Care in Special Populations:** Addressing the unique needs of special populations, including pediatric, geriatric, and terminally ill patients.
 - ✓ **Symptom Control in Palliative Care:** Focusing on non-pain symptoms such as nausea, breathlessness, fatigue, and delirium, and their management.
 - ✓ **Spiritual Care and End-of-Life Issues:** Exploring spiritual and existential issues in palliative care, including cultural competence and care at the end of life.
 - ✓ **Research Methodology in Pain & Palliative Care:** Training students to design and conduct research in pain and palliative care, emphasizing evidence-based practice.
 - ✓ **Advanced Communication Skills:** Developing advanced skills in communicating with patients and families, especially in the context of terminal illness and grief.
- **Dissertation/Research Project:** Students conduct an independent research project on a relevant topic within the field of pain management or palliative care, applying advanced research methods.
- **Clinical Practice:** Additional clinical rotations focusing on specialized areas of palliative care such as oncology, geriatrics, and neurology.

Career and Academic Opportunities:

➤ Career Opportunities:



School of Medical Sciences & Technology

Graduates of M.Sc. in Pain & Palliative Care have diverse career opportunities in healthcare settings that focus on pain management, end-of-life care, and supportive care for individuals with chronic illnesses. Some career options include:

- **Palliative Care Physician:** Specializing in the medical management of patients with life-limiting diseases, including pain and symptom management, and providing end-of-life care.
- **Pain Management Specialist:** A physician or healthcare professional who focuses on the diagnosis and treatment of chronic pain conditions, using a range of medical, pharmacological, and therapeutic methods.
- **Palliative Care Nurse:** A nurse specializing in providing compassionate care for terminally ill patients, focusing on pain relief and quality of life.
- **Hospice Care Specialist:** Providing care and emotional support to patients in hospice settings, focusing on comfort care in the final stages of life.
- **Clinical Psychologist (Palliative Care):** Providing psychological support to patients and families dealing with terminal illnesses, grief, and loss.
- **Palliative Care Social Worker:** Offering counseling and support services to patients and families, including navigating healthcare systems, legal issues, and bereavement.
- **Researcher in Pain & Palliative Care:** Conducting research to develop new treatments and interventions in pain management and palliative care practices.
- **Consultant in Palliative Care:** Advising healthcare organizations on implementing effective palliative care programs, policies, and systems.
- **Palliative Care Educator:** Teaching and training healthcare professionals in the field of palliative care, pain management, and end-of-life care.

Academic Opportunities:

After completing the M.Sc. in Pain & Palliative Care, students may pursue further academic qualifications to specialize in a particular aspect of the field, or to engage in teaching and research. Some options include:

- **Ph.D. in Pain and Palliative Care:** A research-focused program for those interested in advancing the field through scientific research and clinical studies.
- **Postgraduate Diplomas or Certifications** in specialized areas such as pediatric palliative care, pain management techniques, or advanced oncology care.
- **Master of Public Health (MPH):** Focusing on public health issues in pain and palliative care, including healthcare policy and system development.

Professional Opportunities:

- **Certified Palliative Care Nurse:** Certification for nurses working in palliative care, recognizing expertise in the holistic care of patients with life-limiting illnesses.
- **Certified Pain Management Specialist:** Certification for healthcare professionals specializing in pain management, indicating proficiency in the diagnosis and treatment of chronic pain.
- **Certified Hospice and Palliative Care Physician:** Certification for physicians with expertise in providing care for terminally ill patients in hospice and palliative care settings.



- **Research Certifications in Pain & Palliative Care:** Researchers can obtain certifications in clinical research and evidence-based practices to enhance their professional credibility in the field.

Higher Education and Research Prospects:

- **Research Opportunities:** Graduates can engage in cutting-edge research on pain management techniques, the development of new drugs for symptom control, and improving end-of-life care protocols.
- **Postgraduate Education:** Further education in specialized fields such as **Palliative Care for Pediatric Patients, Advanced Pain Management, or Psychosocial Support in Palliative Care** can be pursued.
- **Ph.D. and Advanced Research:** Graduates may pursue a **Ph.D. in Pain and Palliative Care**, contributing to new methods for symptom management, improving care quality for terminally ill patients, or advancing the understanding of pain pathways.

Conclusion:

The **M.Sc. in Pain & Palliative Care** is an essential program for individuals seeking to make a profound impact on the lives of patients experiencing chronic pain or life-limiting illnesses. By combining medical, psychological, social, and spiritual aspects of care, this program prepares professionals to manage complex pain conditions and provide compassionate end-of-life care.

Graduates are well-equipped for a variety of roles in healthcare, including clinical positions in palliative care, pain management, hospice care, and research. The growing demand for palliative care professionals and the emphasis on quality of life for patients with chronic or terminal illnesses ensures that the field offers a wide range of career and academic opportunities. Through this program, students can contribute to a compassionate and holistic approach to healthcare that promotes dignity, comfort, and relief for patients and families facing the challenges of serious illness.

Labs

1. Pain Assessment & Neurophysiology Lab

- **Purpose:** Understanding pain mechanisms, neuropathic pain, and sensory testing.
- **Equipment & Facilities:**
 - ✓ Nerve conduction velocity (NCV) and electromyography (EMG) machines
 - ✓ Quantitative sensory testing (QST) devices
 - ✓ Thermal, mechanical, and vibration pain threshold testing tools
 - ✓ Brain imaging (fMRI/EEG) setup for pain research (if available)
 - ✓ Heart rate variability monitors for autonomic pain responses

2. Pharmacology & Pain Management Lab



- **Purpose:** Hands-on training in pain medication, opioid titration, and pharmacokinetics.
- **Equipment & Facilities:**
 - ✓ Drug infusion pumps and PCA (Patient-Controlled Analgesia) devices
 - ✓ High-Performance Liquid Chromatography (HPLC) for drug analysis
 - ✓ Opioid rotation and titration simulation models
 - ✓ Bioassays for analgesic efficacy testing
 - ✓ Pharmacokinetic modeling software

3. Interventional Pain Procedures & Anesthesia Lab

- **Purpose:** Training in minimally invasive pain management techniques.
- **Equipment & Facilities:**
 - ✓ Fluoroscopy & ultrasound-guided injection systems
 - ✓ Nerve block simulation models (epidural, spinal, trigeminal, etc.)
 - ✓ Radiofrequency ablation (RFA) devices
 - ✓ Intrathecal drug delivery system (ITDD) models
 - ✓ Cryoablation & neurostimulation equipment

4. Palliative Care Simulation Lab

- **Purpose:** Enhancing patient care skills in end-of-life scenarios.
- **Equipment & Facilities:**
 - ✓ High-fidelity mannequins for palliative care simulations
 - ✓ Home-based palliative care kits
 - ✓ Symptom management (breathlessness, delirium, pain) training models
 - ✓ Communication & counseling simulation setups
 - ✓ Ethical decision-making case studies

5. Integrative & Non-Pharmacological Pain Therapy Lab

- **Purpose:** Training in complementary pain management techniques.
- **Equipment & Facilities:**
 - ✓ Biofeedback & neurofeedback systems
 - ✓ Transcutaneous electrical nerve stimulation (TENS) & neuromodulation devices
 - ✓ Acupuncture & dry needling models
 - ✓ Virtual reality (VR) pain distraction therapy
 - ✓ Cognitive-behavioral therapy (CBT) simulation tools

6. Clinical Research & Biostatistics Lab



- **Purpose:** Training in clinical trials, research methods, and data analysis.
- **Equipment & Facilities:**
 - ✓ SPSS, R, or Python for statistical analysis
 - ✓ Systematic review and meta-analysis software
 - ✓ Real-world data analytics for palliative care outcomes
 - ✓ AI-based pain prediction models (if available)

7. Hospice & Home-Based Care Training Unit (*Optional*)

- **Purpose:** Practical exposure to home-based palliative care and hospice settings.
- **Equipment & Facilities:**
 - ✓ Mobile pain relief units
 - ✓ Home oxygen therapy and palliative care devices
 - ✓ Bedside symptom control & medication delivery systems

PROGRAM OUTCOMES (POs)

PO	Program Outcomes
PO-1	Assess and manage chronic pain using multidisciplinary approaches.
PO-2	Apply palliative care principles for terminally ill patients.
PO-3	Integrate pharmacological and non-pharmacological pain management techniques.
PO-4	Address psychological, ethical, and social aspects of pain management.
PO-5	Conduct research to advance pain management and palliative care practices.
PO-6	Communicate effectively with patients, families, and healthcare providers.



School of Medical Sciences & Technology

COURSE STRUCTURE – M.Sc. Pain & Palliative care

SEMESTER – I

Sl. No.	Broad Category	Course Code	Name of the Subject/Practical	Contact hours/week			Credits
				L	T	P	
1.	Major (Core)	MSPPC 101	Principles of Pain and Palliative Care	2	1	0	3
2.		MSPPC102	Anatomy & Physiology of Pain	2	1	0	3
3.		MSPPC103	Pathophysiology and Assessment of Pain	2	0	2	3
4.		MSPPC104	Pharmacological and Non-Pharmacological Pain Management	2	1	0	3
5.	Minor Select any two minor courses, each worth 3 credits, for a maximum of 6 credits per semester	MSPPC105	1. Psychosocial Aspects of Chronic Illness 2. Geriatric and Pediatric Palliative Care	2	0	2	6
			3. Neuropathic Pain 4. Ethics and Communication in Palliative Care 5. Research Methodology & Biostatistics	2	0	2	
6.	Skill Enhancement Courses	MSPPC106	1. Counseling and Psychological Support in Palliative Settings	0	0	2	2
			2. Clinical Decision-Making and Symptom Management	0	0	2	
Total				12	3	10	20
Total Contact Hours				25			

Course outcomes for M.Sc. Pain & Palliative Care MAJOR- principles of Pain & Palliative Care



School of Medical Sciences & Technology

Sr. No.	Course Outcome	Description
1	Understand the Principles of Pain and Palliative Care	Explain the fundamentals of pain perception and palliative approaches to improve quality of life.
2	Describe the Multidimensional Nature of Pain	Learn about the physiological, psychological, and social aspects of pain and suffering.
3	Explain Pain Classification and Mechanisms	Understand acute, chronic, neuropathic, and nociceptive pain along with their underlying mechanisms.
4	Analyze Ethical and Legal Aspects in Palliative Care	Learn about patient rights, ethical dilemmas, and regulatory frameworks in pain management.
5	Understand the Role of Interdisciplinary Teams in Palliative Care	Explain the contributions of physicians, nurses, psychologists, and social workers in pain relief.
6	Describe Communication and Psychosocial Support in Palliative Care	Learn strategies for effective communication with patients and families, including end-of-life discussions.
7	Explain the Impact of Palliative Care on Quality of Life	Understand how symptom control, psychological support, and holistic care enhance patient well-being.
8	Apply Knowledge of Pain and Palliative Care in Clinical and Research Settings	Develop skills in pain assessment, management techniques, and evidence-based palliative care interventions.

Course outcomes for M.Sc. Pain & Palliative Care MAJOR- Anatomy & Physiology of Pain

Sr. No.	Course Outcome	Description
1	Understand the Anatomy of the Nervous System Related to Pain	Explain the structure of the nociceptive pathways, including the spinal cord, brainstem, and higher centers.
2	Describe Peripheral and Central Pain Pathways	Learn about the role of nociceptors, afferent neurons, spinal cord processing, and brain perception of pain.
3	Explain Neurotransmitters and Modulation of Pain	Understand the role of excitatory and inhibitory neurotransmitters in pain perception and relief.



School of Medical Sciences & Technology

Sr. No.	Course Outcome	Description
4	Analyze the Physiological Mechanisms of Pain Sensation	Learn about pain transduction, transmission, perception, and modulation at different levels of the nervous system.
5	Understand the Differences Between Acute and Chronic Pain	Explain how short-term pain responses differ from long-term maladaptive pain syndromes.
6	Describe the Role of the Autonomic Nervous System in Pain	Learn about sympathetic and parasympathetic involvement in pain processing and response.
7	Explain the Role of the Endocrine and Immune Systems in Pain	Understand how hormones and immune mediators influence pain perception and healing.
8	Apply Knowledge of Pain Physiology in Clinical and Research Settings	Develop skills in pain assessment, physiological monitoring, and research methodologies.

Course outcomes for M.Sc. Pain & Palliative Care MAJOR- Pathology & Assessment of Pain

Sr. No.	Course Outcome	Description
1	Understand the Mechanisms of Pain Pathophysiology	Explain how nociceptive, inflammatory, neuropathic, and psychogenic pain develop.
2	Describe Pain Sensitization and Chronic Pain Syndromes	Learn about central and peripheral sensitization and their role in persistent pain conditions.
3	Explain Pain Modulation and Pain Threshold Variability	Understand individual differences in pain perception and tolerance based on physiological and psychological factors.
4	Analyze Pain Assessment Methods and Tools	Learn about subjective and objective pain evaluation techniques, including scales and physiological indicators.
5	Understand the Role of Imaging and Biomarkers in Pain Diagnosis	Explain how MRI, PET scans, and biochemical markers aid in pain assessment.
6	Describe Psychological and Behavioral Aspects of Pain	Learn about the influence of emotions, cognition, and mental health on pain perception and coping strategies.
7	Explain the Impact of Pain on Functional and Emotional Well-being	Understand how chronic pain affects daily activities, mood, and social interactions.



School of Medical Sciences & Technology

Sr. No.	Course Outcome	Description
8	Apply Pain Assessment Knowledge in Clinical and Research Settings	Develop skills in patient evaluation, diagnostic reasoning, and evidence-based pain management.

Course outcomes for M.Sc. Pain & Palliative Care MAJOR- Pharmacological & Non-Pharmacological Pain Management

Sr. No.	Course Outcome	Description
1	Understand Pharmacological Approaches to Pain Management	Explain the mechanisms of action of analgesics, opioids, NSAIDs, and adjuvant drugs.
2	Describe the Role of Opioids and Their Safe Use	Learn about opioid pharmacodynamics, risks, addiction potential, and regulatory guidelines.
3	Explain Non-Opioid Medications and Adjuvants in Pain Relief	Understand the use of antidepressants, anticonvulsants, muscle relaxants, and local anesthetics in pain control.
4	Analyze the Mechanisms and Benefits of Non-Pharmacological Pain Therapies	Learn about physical therapy, acupuncture, transcutaneous electrical nerve stimulation (TENS), and cognitive behavioral therapy.
5	Understand Complementary and Alternative Medicine in Pain Management	Explain the role of herbal medicine, meditation, yoga, and lifestyle modifications in pain relief.
6	Describe the Role of Psychological and Behavioral Interventions in Pain Control	Learn about mindfulness, stress reduction techniques, and biofeedback as pain management strategies.
7	Explain Interventional and Surgical Pain Management Techniques	Understand the use of nerve blocks, spinal cord stimulation, and surgical options for severe pain conditions.
8	Apply Knowledge of Pain Management in Clinical and Research Settings	Develop skills in designing individualized pain treatment plans based on evidence-based practices.



School of Medical Sciences & Technology

Course outcomes for M.Sc. Pain & Palliative Care MINOR- Psychosocial aspects of Chronic Illness

Sr. No.	Course Outcome	Description
1	Understand the Psychological Impact of Chronic Illness	Explain how chronic diseases affect mental health, coping mechanisms, and emotional well-being.
2	Describe Social and Cultural Influences on Chronic Illness	Learn about how family, community, and cultural beliefs shape illness experiences and care-seeking behaviors.
3	Explain the Role of Stress, Anxiety, and Depression in Chronic Illness	Understand how mental health conditions interact with chronic diseases and impact quality of life.
4	Analyze the Impact of Chronic Illness on Relationships and Social Roles	Learn about role changes, caregiver burden, and social isolation in chronic disease patients.
5	Understand Coping Strategies and Psychological Interventions	Explain the role of counseling, cognitive behavioral therapy, and resilience-building strategies.
6	Describe Patient-Centered Approaches in Chronic Disease Management	Learn about shared decision-making, patient education, and empowerment in chronic illness care.
7	Explain the Influence of Chronic Illness on Work and Financial Stability	Understand the socioeconomic implications and disability management strategies for chronically ill individuals.
8	Apply Psychosocial Knowledge in Clinical and Research Settings	Develop skills in assessing psychosocial needs and designing holistic care interventions.

Course outcomes for M.Sc. Pain & Palliative Care MINOR- Geriatric & Pediatric Palliative Care

Sr. No.	Course Outcome	Description
1	Understand the Principles of Palliative Care for Older Adults	Explain aging-related physiological changes, comorbidities, and frailty in geriatric patients.
2	Describe Pain and Symptom Management in Geriatric Patients	Learn about medication considerations, polypharmacy risks, and multimodal approaches to symptom control.
3	Explain Psychosocial and Cognitive Issues in Geriatric Palliative Care	Understand dementia, depression, caregiver burden, and social isolation in elderly patients.



School of Medical Sciences & Technology

Sr. No.	Course Outcome	Description
4	Analyze Ethical and Legal Aspects of Geriatric Palliative Care	Learn about advance directives, end-of-life decision-making, and elder abuse prevention.
5	Understand the Unique Needs of Pediatric Palliative Care	Explain developmental considerations, pain assessment, and symptom management in children.
6	Describe Family-Centered Approaches in Pediatric Palliative Care	Learn about parental coping, sibling support, and bereavement care.
7	Explain Communication Strategies for Discussing Prognosis with Families	Understand how to navigate difficult conversations in geriatric and pediatric care settings.
8	Apply Geriatric and Pediatric Palliative Care Knowledge in Clinical and Research Settings	Develop skills in designing age-appropriate palliative interventions and family support strategies.

Course outcomes for M.Sc. Pain & Palliative Care MINOR- Neuropathic Pain

Sr. No.	Course Outcome	Description
1	Understand the Pathophysiology of Neuropathic Pain	Explain the mechanisms of nerve damage, central sensitization, and altered pain processing.
2	Describe Common Causes of Neuropathic Pain	Learn about diabetic neuropathy, postherpetic neuralgia, spinal cord injuries, and chemotherapy-induced neuropathy.
3	Explain the Clinical Presentation and Diagnosis of Neuropathic Pain	Understand symptoms such as burning, tingling, allodynia, and hyperalgesia, along with diagnostic tools.
4	Analyze Pharmacological Approaches to Neuropathic Pain Management	Learn about the use of antidepressants, anticonvulsants, opioids, and topical agents.
5	Understand Non-Pharmacological and Interventional Therapies	Explain the role of physiotherapy, cognitive behavioral therapy, nerve blocks, and neuromodulation.
6	Describe the Psychological and Emotional Impact of Neuropathic Pain	Learn about depression, anxiety, and sleep disturbances associated with chronic neuropathic pain.



School of Medical Sciences & Technology

Sr. No.	Course Outcome	Description
7	Explain Emerging Research and Future Directions in Neuropathic Pain Management	Understand advancements in regenerative medicine, stem cell therapy, and novel drug developments.
8	Apply Knowledge of Neuropathic Pain in Clinical and Research Settings	Develop skills in pain assessment, treatment planning, and evidence-based neuropathic pain interventions.

Course outcomes for M.Sc. Pain & Palliative Care MINOR- Psychosocial aspects of Chronic Illness

Sr. No.	Course Outcome	Description
1	Understand Ethical Principles in Palliative Care	Explain autonomy, beneficence, non-maleficence, and justice in end-of-life decision-making.
2	Describe Legal Aspects of Palliative Care	Learn about patient rights, do-not-resuscitate (DNR) orders, and withdrawal of life-sustaining treatments.
3	Explain Cultural Sensitivity in Ethical Decision-Making	Understand how diverse beliefs influence end-of-life preferences and ethical dilemmas.
4	Analyze Challenges in Communicating Prognosis and End-of-Life Decisions	Learn strategies for discussing terminal illness, bad news, and treatment limitations.
5	Understand the Role of Advanced Care Planning	Explain advance directives, living wills, and shared decision-making with patients and families.
6	Describe Strategies for Managing Family Conflicts in Palliative Care	Learn techniques for conflict resolution, mediation, and emotional support.
7	Explain Professional Boundaries and Self-Care for Healthcare Providers	Understand burnout, compassion fatigue, and maintaining emotional resilience in palliative settings.
8	Apply Ethical and Communication Skills in Clinical and Research Settings	Develop skills in ethical case analysis, effective patient-provider communication, and advocacy.



Course outcomes for M.Sc. Pain & Palliative Care MINOR- Research Methodology & Biostatistics

Sr. No.	Course Outcome	Description
1	Understand the Basics of Research Methodology	Explain study design, research ethics, and scientific inquiry principles.
2	Describe Data Collection Techniques in Clinical Research	Learn about surveys, observational studies, and experimental trials.
3	Explain Statistical Methods for Data Analysis	Understand descriptive and inferential statistics, probability distributions, and hypothesis testing.
4	Analyze the Interpretation of Biostatistical Data	Learn how to interpret p-values, confidence intervals, and regression analysis.
5	Understand Research Ethics and Good Clinical Practice	Explain informed consent, institutional review board (IRB) approvals, and ethical considerations in human research.
6	Describe Systematic Reviews and Meta-Analysis	Learn about evidence synthesis, bias assessment, and critical appraisal of literature.
7	Explain Research Writing and Publication Ethics	Understand manuscript preparation, peer review, and plagiarism prevention.
8	Apply Research and Biostatistics Knowledge in Clinical and Academic Settings	Develop skills in designing research studies, analyzing data, and presenting scientific findings.

M.Sc. in Pain & Palliative Care – Course Structure & Syllabus

Course Duration: 2 Years (4 Semesters)

Total Credits: 80–100

Total Teaching & Training Hours: ~3,600

Total Teaching Hours Distribution

- **Theory Classes:** ~1,200–1,500 hours
- **Clinical Training & Practical Sessions:** ~800–1,000 hours
- **Internship & Hands-on Patient Care:** ~800–1,000 hours
- **Research Project & Dissertation:** ~300–500 hours



Assessment Methods

Assessment Component	Weightage (%)	Details
Continuous Internal Assessment (CIA)	40%	Includes internal exams, assignments, presentations, case studies, and practical performance
End-Semester Examination (ESE)	60%	Divided into theory (40%) and practical (20%)
Mid-Semester Exams	20% (Part of CIA)	Two internal tests per semester
Assignments & Case Studies	5% (Part of CIA)	Research-based assignments, literature reviews, clinical case reports
Seminars & Presentations	5% (Part of CIA)	Oral/poster presentations on diabetes management
Practical Performance & Clinical Evaluation	5% (Part of CIA)	Skill-based assessments in labs/hospitals
Attendance & Participation	5% (Part of CIA)	Regularity in theory & practical sessions
Theory Examination (Final)	40% (Part of ESE)	Structured written paper covering subject knowledge
Practical Examination (Final)	20% (Part of ESE)	Includes viva, skill demonstration, case handling
Dissertation/Research Project	Mandatory	Evaluated in the final year by internal & external examiners
Clinical Internship/Training	Pass/Fail	Logbook-based evaluation with hospital mentor review

Marking System & Grading

Marks (%)	Grade	Grade Point (GPA/CGPA Equivalent)	Classification
90 - 100	O (Outstanding)	10	First Class with Distinction
80 - 89	A+ (Excellent)	9	First Class with Distinction
70 - 79	A (Very Good)	8	First Class
60 - 69	B+ (Good)	7	First Class



Marks (%)	Grade	Grade Point (GPA/CGPA Equivalent)	Classification
50 - 59	B (Satisfactory)	6	Second Class
<50 (Fail)	F (Fail)	0	Fail (Re-exam Required)

Pass Criteria:

- **Minimum 50% marks in each subject** (Theory & Practical separately).
- **Aggregate of 55% required for progression** to the next semester.
- **No more than two backlogs** allowed for promotion to the final year.

Exam Pattern for Theory & Practical

A. Theory Examination Pattern

Total Marks: 100 (Converted to 40% for End-Semester Assessment)

Duration: 3 Hours

Section	Question Type	No. of Questions	Marks per Question	Total Marks
Section A	Short Answer Type (SAQ)	10 (Attempt all)	2	20
Section B	Long Answer Type (LAQ)	5 (Attempt any 4)	10	40
Section C	Case-Based/Clinical Scenario	3 (Attempt any 2)	15	30
Section D	MCQs/Objective Type	10 (Compulsory)	1	10
Total				100

Weightage:

- Pain Physiology & Assessment Techniques – 40%
- Clinical Management & Pharmacological Interventions – 30%
- Research & Case Studies in Pain & Palliative Care – 20%
- Psychosocial, Ethical & Holistic Approaches in Palliative Care – 10%

Passing Criteria: Minimum 50% (50/100 marks)

B. Practical Examination Pattern



School of Medical Sciences & Technology

Total Marks: 100 (Converted to 20% for End-Semester Assessment)

Duration: 4–6 Hours

Component	Marks Distribution
Clinical Case Presentation & Pain Assessment	30
OSCE (Objective Structured Clinical Examination) – Skill Demonstration	25
Palliative Care Counseling & End-of-Life Care Planning	20
Lab-Based Examination (Pain Management Techniques, Pharmacological & Non-Pharmacological Interventions)	15
Record Work (Logbook & Assignments)	10
Total	100

OSCE (Skill-based Assessment) includes stations on:

- Pain Assessment Tools & Patient Evaluation
- Administration of Analgesics & Opioid Management
- Psychological & Emotional Support for Palliative Patients
- Symptom Management in Terminal Illness (Dyspnea, Fatigue, Nausea)

Passing Criteria: Minimum 50% (50/100 marks) in practicals.

Recommended Books & E-Resources

Textbooks

- "Oxford Textbook of Palliative Medicine" – Geoffrey Hanks, Nathan Cherny
- "Principles & Practice of Palliative Care & Supportive Oncology" – Ann Berger
- "Pain Management: Evidence, Outcomes, and Quality of Life" – Mellar P. Davis
- "Interventional Pain Medicine" – Timothy R. Deer

E-Resources & Journals

- Journal of Pain & Palliative Care Pharmacotherapy
- International Association for the Study of Pain (IASP) Resources
- Palliative Medicine (SAGE Journal)
- WHO Guidelines on Palliative Care

Career Opportunities after M.Sc. in Pain & Palliative Care

- **Pain Management Specialist** in Hospitals & Pain Clinics
- **Palliative Care Consultant** in Hospices & Home Care Settings



School of Medical Sciences & Technology

- **Clinical Researcher** in Pain & Palliative Care Therapeutics
- **Medical Educator** in Allied Health & Nursing Programs
- **Policy & Advocacy Expert** in Government & NGOs

