B.Sc. in Geriatric Sciences 4 Years (8 Semesters)

Overview: B.Sc. in Geriatric Sciences is an undergraduate program designed to provide students with a comprehensive understanding of the aging process, geriatric healthcare, and the challenges faced by elderly populations. With the increasing global aging population, this program focuses on equipping students with the knowledge and skills to provide specialized care for older adults, including physical, mental, and social well-being. The course integrates aspects of healthcare, psychology, nursing, social work, and public health to prepare professionals who can work in geriatrics, gerontology, healthcare policy, and aging research.

Affiliated Institution: School of Medical Sciences and Technology, Malla Reddy Vishwavidyapeeth (Deemed to be University)****** The minimum eligibility for B.Sc. Geriatric Sciences is a pass in 10+2 with at least 50% marks in Physics, Chemistry and Biology from a recognized board (CBSE/ISC/PUC) or equivalent

Key Highlights:

- **Specialized Knowledge in Geriatrics**: The program provides in-depth knowledge about aging, age-related diseases, geriatric care, and the management of elderly health.
- **Multidisciplinary Approach**: Students gain knowledge from various fields such as healthcare, nursing, psychology, social sciences, and public health to address the complex needs of older adults.
- **Practical Exposure**: Students get hands-on experience through internships in geriatric care centers, healthcare facilities, old-age homes, and rehabilitation centers.
- **Increasing Demand for Geriatric Professionals**: With the world's aging population growing rapidly, there is a high demand for professionals who specialize in elder care and geriatric services.
- **Research Opportunities**: The course emphasizes the importance of research in aging and geriatrics, encouraging students to contribute to innovations in elder healthcare, policies, and aging-related research.

Course Curriculum:

The B.Sc. in Geriatric Sciences is typically a three-year program, and the curriculum includes both theoretical and practical components. The focus is on aging, health promotion for older adults, and management of age-related conditions.

Year 1:

- **Introduction to Geriatrics and Gerontology**
- **Human Physiology and Anatomy**
- **Fundamentals of Healthcare and Nursing**
- **Biochemistry and Metabolism**
- **Psychology of Aging**
- **Social Gerontology: Understanding Aging in Society**
- **Communication Skills for Elderly Care**

Year 2:

- **Aging and Chronic Diseases**
- **Geriatric Healthcare and Nursing**
- **Psychosocial Aspects of Aging**
- **Nutrition for the Elderly**
- **Physical Activity and Aging**
- **Health Policy and Ethics in Elderly Care**
- **Rehabilitation and Physical Therapy for Older Adults**

Year 3:

- **Age-Related Cognitive Disorders (Alzheimer's, Dementia)**
- **Elderly Care Management and Case Studies**
- **Palliative and End-of-Life Care**
- **Community Health for Older Adults**
- **Public Health and Aging**
- **Advanced Geriatric Healthcare Practices**
- **Internship in Geriatric Care or Elderly Healthcare Facilities**

Additional/Optional Modules:

- **Geriatric Pharmacology**: Understanding medication management for elderly patients, focusing on polypharmacy and age-related drug interactions.
- **Mental Health and Aging**: Focusing on mental health disorders in older adults, such as depression, anxiety, and dementia.
- **Technology in Elderly Care**: Using technology to assist in elderly care, including telemedicine and remote monitoring.
- **Geriatric Rehabilitation**: Focusing on the rehabilitation needs of older adults recovering from illness or surgery.
- **Ageing and Diversity**: Examining aging in diverse cultural, economic, and social contexts.

Career and Academic Opportunities:

Career Opportunities:

Graduates of B.Sc. in Geriatric Sciences can pursue diverse career paths in healthcare, elder care, and social services. Some of the career options include:

- **Geriatric Care Manager**: Coordinating and overseeing healthcare for elderly patients, including physical care, medication management, and family support.
- **Geriatric Nurse**: Specializing in nursing care for older adults in hospitals, clinics, nursing homes, and home care settings.
- **Elderly Care Specialist**: Providing specialized care for older adults, including managing chronic illnesses, mobility issues, and cognitive decline.

- **Social Worker (Geriatrics)**: Working with elderly clients and their families to navigate aging-related challenges, including social services, financial aid, and long-term care options.
- **Healthcare Policy Specialist**: Working in governmental or non-governmental organizations to design, implement, and evaluate policies related to elderly healthcare.
- **Rehabilitation Specialist**: Specializing in rehabilitation for older adults, helping them recover from surgery, injury, or illnesses like strokes.
- **Geriatric Consultant**: Advising healthcare organizations, hospitals, or retirement homes on best practices in elderly care.
- **Caregiver Trainer**: Training caregivers and healthcare staff in elderly care techniques and best practices for managing age-related issues.

Academic Opportunities:

Graduates can pursue higher education in specialized fields to enhance their knowledge and expertise in geriatrics and aging:

- **Master's in Geriatrics or Gerontology**: A postgraduate degree focusing on advanced studies in aging, geriatrics, and elderly healthcare.
- **Master's in Public Health (MPH) with a focus on Aging**: Specializing in policies and programs designed to improve elderly health at a community or national level.
- **Master's in Nursing (Geriatrics)**: Focusing on nursing practices and healthcare strategies specific to elderly populations.
- **Master's in Rehabilitation Science**: Specializing in rehabilitation practices for the elderly, including mobility issues, post-surgery recovery, and cognitive disorders.

Ph.D. programs in **Gerontology**, **Aging Research**, or **Geriatric Medicine** are also available for those pursuing academic careers or specialized research.

Professional Opportunities:

- **Certified Geriatric Care Manager (CGCM)**: Certification that validates expertise in managing care for older adults, often required for senior positions in geriatric healthcare.
- **Certified Elderly Care Specialist**: Certification for professionals working directly with the elderly in various healthcare settings.
- **Geriatric Nursing Certification**: For nurses specializing in elderly care, offering certifications in geriatric care, including dementia care and rehabilitation.
- **Geriatric Social Work Certification**: Certification for social workers focused on elderly populations, helping them manage aging-related social and mental health challenges.
- **Healthcare Administrator (Elderly Care)**: Managing hospitals, nursing homes, or healthcare facilities that specialize in elderly care.

Higher Education and Research Prospects:

- **Research Opportunities**: Graduates can participate in research that aims to improve elderly healthcare, such as studies on dementia, aging, chronic disease management, and geriatric rehabilitation techniques.
- **Postgraduate Studies**: Graduates may choose to pursue **Master's in Gerontology**, **Public Health**, **Geriatric Medicine**, or **Aging Psychology** for specialization.
- **Ph.D. in Gerontology or Aging Research**: Ph.D. programs are available for those wishing to pursue advanced research in geriatric science, exploring aging processes, health challenges, and quality of life in older populations.
- **Interdisciplinary Research**: Opportunities in interdisciplinary fields such as **aging and technology**, **aging and mental health**, or **geriatric pharmacology**.

Conclusion:

The **B.Sc. in Geriatric Sciences** is a specialized program that prepares students to address the challenges and complexities of aging. As the world's elderly population continues to grow, the demand for trained professionals in geriatrics and elderly care is increasing. This program provides students with the knowledge and skills needed to work in various settings, including hospitals, nursing homes, rehabilitation centers, and public health organizations.

Graduates of this program can pursue fulfilling careers in elderly care management, healthcare policy, and research. Furthermore, this degree offers excellent opportunities for higher education and research in aging, leading to even more specialized roles in the growing field of geriatric healthcare.

Labs

1. Geriatric Clinical Skills & Assessment Lab

- **Purpose**: Training in comprehensive geriatric assessment (CGA) and clinical examination of elderly patients.
- **Equipment & Facilities**:
  - ✓ Geriatric mannequins for simulation
  - ✓ Vital signs monitors (BP, pulse oximeters, thermometers)
  - ✓ ECG machines
  - ✓ Doppler ultrasound devices
  - ✓ Neurological examination tools (reflex hammers, tuning forks)
  - ✓ Fall risk assessment tools

2. Geriatric Physiotherapy & Rehabilitation Lab

- **Purpose**: Training in physical rehabilitation, mobility enhancement, and physiotherapy for elderly patients.
- **Equipment & Facilities**:

- ✓ Parallel bars and walking aids
- ✓ Balance training platforms
- ✓ Low-impact exercise equipment (treadmills, cycle ergometers)
- ✓ Resistance bands and weights
- ✓ Hydrotherapy setup
- ✓ Gait analysis tools

3. Neurocognitive & Dementia Care Lab

- **Purpose**: Understanding neurodegenerative disorders like Alzheimer's and Parkinson's disease.
- **Equipment & Facilities**:

  - ✓ Cognitive assessment tools (MMSE, MoCA, ADAS-Cog)
  - ✓ EEG and brain mapping devices
  - ✓ Virtual reality (VR) modules for cognitive training
  - ✓ Simulated dementia care environments
  - ✓ Assistive devices for memory enhancement

4. Geriatric Nutrition & Dietetics Lab

- **Purpose**: Training in elderly nutrition, dietary planning, and metabolic health.
- **Equipment & Facilities**:

  - ✓ Body composition analyzers (BIA, BMI calculators)
  - ✓ Diet planning software
  - ✓ Food texture modification stations
  - ✓ Calorimeters for energy expenditure analysis
  - ✓ Nutritional supplements and enteral feeding kits

5. Pharmacology & Polypharmacy Management Lab

- **Purpose**: Understanding drug interactions, polypharmacy risks, and geriatric pharmacotherapy.
- **Equipment & Facilities**:

  - ✓ Medication dispensing stations
  - ✓ Drug interaction simulation software
  - ✓ Automated pill dispensers
  - ✓ Medication adherence assessment tools

6. Assistive & Adaptive Technology Lab

- **Purpose**: Training in elderly assistive devices, home modifications, and mobility aids.
- **Equipment & Facilities**:

  - ✓ Wheelchairs, walkers, and canes

- ✓ Smart home adaptations (fall detection sensors, voice-activated devices)
- ✓ Hearing aids and speech therapy devices
- ✓ Pressure-relief mattresses

7. Palliative & End-of-Life Care Lab

- ➢ **Purpose**: Training in pain management, hospice care, and ethical decision-making.
- ➢ **Equipment & Facilities**:

  - ✓ Pain assessment tools
  - ✓ Oxygen therapy units
  - ✓ Simulated hospice care room
  - ✓ Communication training modules for end-of-life discussions

8. Microbiology & Infection Control Lab

- ➢ **Purpose**: Understanding geriatric infection prevention and antimicrobial stewardship.
- ➢ **Equipment & Facilities**:

  - ✓ Autoclaves and sterilization units
  - ✓ Culture media and microbial testing equipment
  - ✓ Hand hygiene and disinfection stations

PROGRAM OUTCOMES (POs)

PO	Program Outcomes
PO-1	**Comprehensive Knowledge of Geriatric Care:** Graduates will develop a deep understanding of the aging process, geriatric diseases, healthcare management, and rehabilitation techniques to provide holistic care for the elderly
PO-2	**Clinical and Practical Skills:** Students will acquire hands-on experience in assessing, diagnosing, and managing geriatric conditions through clinical training, internships, and practical exposure in hospitals, nursing homes, and community healthcare settings.
PO-3	**Research and Evidence-Based Practice:** Graduates will be equipped with research skills to analyze and implement evidence-based practices in geriatric care, enabling them to contribute to innovations in elderly healthcare and policy-making.
PO-4	**Communication and Ethical Decision-Making:** Students will develop effective communication skills to interact with elderly patients, caregivers, and healthcare professionals while adhering to ethical principles, empathy, and

	cultural sensitivity in geriatric healthcare.
PO-5	**Multidisciplinary and Community-Oriented Approach:** Graduates will be trained to work collaboratively in multidisciplinary teams, including physiotherapists, social workers, and psychologists, to improve the quality of life of elderly individuals and promote healthy aging at the community level.

COURSE STRUCTURE – B.Sc. Geriatric Sciences

Semester 1

Sl. No.	Broad Category	Course Code	Name of the Subject/Practical	Contact hours/week			Credits
				L	T	P	
1.	**Major (Core)**	BSGS101	Fundamentals of Human Anatomy & Physiology	2	1	0	3
2.		BSGS102	Introduction to Geriatrics	2	1	0	3
3.		BSGS103	Basics of Medical Biochemistry and Nutrition in Aging	2	0	2	3
4.		BSGS104	Fundamentals of Gerontological Nursing & Elder Care	1	1	0	2
5.	**Minor** Select any two minor courses, each worth 2 credits, for a maximum of 4 credits per semester	BSGS105	1. Basics of Sociology & Aging 2. Geriatric Psychology & Cognitive Health 3. Introduction to Palliative & Hospice Care	1	1	0	4
			4. Digital Health & Assistive Technology for Elderly Care 5. Health Communication & Counseling for Older Adults	1	1	0	
6.	**Skill Enhancement Courses**	BSGS106	1. Basic Life Support (BLS) & First Aid for Elderly	0	0	2	2
			2. Fundamentals of Physiotherapy & Mobility Assistance	0	0	2	

7.	**Ability Enhancement Courses**	BSGS107	1. English Communication Skills 2. Soft Skills & Professional Ethics in Healthcare	0	0	2	1
8.	**Value-Added Courses**	BSGS108	1. Yoga & Mindfulness for Aging Well 2. Geriatric Nutrition & Wellness	1	0	2	2
			Total	10	5	10	**20**
			Total Contact Hours	**25**			

Course outcomes for B.Sc. Geriatric Sciences MAJOR-Fundamentals of Human Anatomy & Physiology

Sr. No.	Course Outcome	Description
1	**Understand the Structural Organization of the Human Body**	Explain the levels of organization, from cells to organ systems, and their relevance in geriatric health.
2	**Describe the Anatomy and Physiology of Major Organ Systems**	Understand the structure and function of the cardiovascular, respiratory, nervous, musculoskeletal, digestive, and endocrine systems, with a focus on age-related changes.
3	**Analyze the Age-Related Changes in Organ Systems**	Explain how aging affects the cardiovascular, respiratory, nervous, renal, and musculoskeletal systems, leading to common geriatric conditions.
4	**Understand the Role of the Nervous System in Aging**	Describe the structure and function of the nervous system, including changes in cognitive function, memory, and neurodegenerative disorders.
5	**Explain the Impact of Aging on the Musculoskeletal System**	Understand the structural changes in bones, joints, and muscles, and their role in conditions like osteoporosis, arthritis, and sarcopenia.
6	**Describe the Physiology of the Endocrine System in Aging**	Explain hormonal changes with aging, including menopause, andropause, and alterations in metabolism and glucose regulation.
7	**Analyze the Role of the Circulatory and Respiratory Systems in Aging**	Understand how aging affects blood pressure regulation, lung function, and susceptibility to cardiovascular and pulmonary diseases.

Sr. No.	Course Outcome	Description
8	**Apply Knowledge of Anatomy and Physiology in Geriatric Care**	Integrate anatomical and physiological concepts in assessing, preventing, and managing age-related health issues in older adults.

Course outcomes for B.Sc. Geriatric Sciences MAJOR- Introduction to Geriatrics

Sr. No.	Course Outcome	Description
1	**Understand the Concept of Geriatrics and Gerontology**	Explain the differences between geriatrics and gerontology, and their significance in aging and elderly care.
2	**Describe the Demographics and Epidemiology of Aging**	Understand the global and national trends in aging populations, life expectancy, and the burden of geriatric diseases.
3	**Analyze the Biological and Psychological Aspects of Aging**	Explain the physiological changes, cognitive decline, and emotional well-being in older adults.
4	**Understand Common Geriatric Syndromes**	Describe age-related conditions such as frailty, falls, delirium, urinary incontinence, and polypharmacy.
5	**Explain the Role of Nutrition and Lifestyle in Healthy Aging**	Understand the importance of diet, exercise, and preventive healthcare in promoting longevity and quality of life.
6	**Describe the Social and Economic Aspects of Aging**	Analyze the impact of aging on families, healthcare systems, and economic sustainability, including elder abuse and neglect.
7	**Understand the Importance of Geriatric Care Models**	Explain different care approaches, including home care, assisted living, palliative care, and institutionalized care for the elderly.
8	**Apply Geriatric Principles in Holistic Elderly Care**	Develop a compassionate and multidisciplinary approach to assessing, managing, and improving the well-being of older adults.

Course outcomes for B.Sc. Geriatric Sciences MAJOR- Basics of Medical Biochemistry and Nutrition in Aging

Sr. No.	Course Outcome	Description
1	**Understand the Fundamentals of Medical Biochemistry**	Explain the structure and function of biomolecules (carbohydrates, proteins, lipids, nucleic acids) and their relevance in aging.
2	**Analyze Metabolic Changes Associated with Aging**	Understand how aging affects metabolism, including energy production, protein turnover, and lipid metabolism.
3	**Describe the Role of Enzymes and Hormones in Aging**	Explain the function of key enzymes and hormonal changes (e.g., insulin, thyroid hormones, and sex hormones) in elderly individuals.
4	**Understand Oxidative Stress and Antioxidant Defense Mechanisms**	Analyze the impact of free radicals and oxidative stress on aging and age-related diseases, and the role of antioxidants in mitigating damage.
5	**Explain Nutritional Requirements in Aging**	Describe macronutrient and micronutrient needs, and the importance of hydration in maintaining health in older adults.
6	**Analyze the Impact of Malnutrition and Deficiencies in the Elderly**	Understand the risks of malnutrition, protein-energy wasting, vitamin deficiencies (e.g., vitamin D, B12), and their effects on aging.
7	**Describe the Role of Diet in Preventing Age-Related Diseases**	Explain how dietary interventions can help manage diabetes, cardiovascular diseases, osteoporosis, and neurodegenerative disorders in aging individuals.
8	**Apply Biochemical and Nutritional Principles in Geriatric Care**	Develop nutrition-based strategies and biochemical assessments for improving the health and quality of life of elderly individuals.

Course outcomes for B.Sc. Geriatric Sciences MAJOR- Fundamentals of Gerontological Nursing & Elder Care

Sr. No.	Course Outcome	Description
1	**Understand the Principles of Gerontological Nursing**	Explain the fundamentals of nursing care specific to the needs of the elderly population.
2	**Analyze the Physiological and Psychological Changes in Aging**	Understand age-related changes in the body and their impact on physical and mental health.
3	**Describe Common Health Conditions in Older Adults**	Explain chronic diseases such as hypertension, diabetes, dementia, osteoporosis, and arthritis, and their management in geriatric care.

Sr. No.	Course Outcome	Description
4	**Understand Geriatric Assessment and Care Planning**	Learn to conduct comprehensive geriatric assessments (CGA) and develop individualized care plans for elderly patients.
5	**Explain the Role of Nutrition and Hydration in Elder Care**	Understand the importance of proper nutrition, hydration, and dietary modifications in preventing malnutrition and related disorders in older adults.
6	**Describe Palliative and End-of-Life Care Principles**	Explain pain management, emotional support, and ethical considerations in palliative and hospice care for elderly patients.
7	**Understand the Importance of Elderly Safety and Fall Prevention**	Learn about fall risk assessment, home modifications, and preventive strategies to enhance safety and mobility in older adults.
8	**Apply Gerontological Nursing Skills in Practical Settings**	Develop hands-on skills in elder care, including medication management, wound care, rehabilitation, and communication with aging patients.

Course outcomes for B.Sc. Geriatric Sciences MINOR- Basics of Sociology & Aging

Sr. No.	Course Outcome	Description
1	**Understand the Fundamental Concepts of Sociology**	Explain the key sociological concepts, theories, and their relevance to aging and elderly care.
2	**Analyze the Social Aspects of Aging**	Understand the impact of aging on social roles, relationships, and quality of life.
3	**Describe the Influence of Family and Community on Aging**	Explain the role of family support, intergenerational relationships, and community resources in elder care.
4	**Understand the Impact of Urbanization and Modernization on Aging**	Analyze how changing societal structures, urbanization, and modernization affect the elderly population.
5	**Explain Social Issues Faced by the Elderly**	Understand challenges such as loneliness, elder abuse, neglect, discrimination, and social isolation.
6	**Describe the Role of Social Institutions in Geriatric Care**	Explain the contribution of healthcare systems, old-age homes, NGOs, and government policies in elderly care.
7	**Understand the Concept of Active and Successful Aging**	Learn about strategies that promote healthy aging, social engagement, and independence in older adults.

Sr. No.	Course Outcome	Description
8	**Apply Sociological Perspectives in Elderly Care**	Develop a holistic approach to addressing social and psychological needs in geriatric healthcare settings.

Course outcomes for B.Sc. Geriatric Sciences MINOR- Geriatric Psychology & Cognitive Health

Sr. No.	Course Outcome	Description
1	**Understand the Fundamentals of Geriatric Psychology**	Explain the psychological changes and challenges associated with aging.
2	**Describe Cognitive Aging and Memory Changes**	Understand normal cognitive decline and differentiate it from pathological conditions like dementia and Alzheimer's disease.
3	**Analyze Common Mental Health Issues in the Elderly**	Identify and manage depression, anxiety, sleep disorders, and other psychiatric conditions in older adults.
4	**Understand Behavioral and Emotional Changes in Aging**	Explain coping mechanisms, resilience, and the impact of life transitions like retirement and loss.
5	**Describe Psychological Interventions for the Elderly**	Learn about cognitive behavioral therapy (CBT), reminiscence therapy, and other therapeutic approaches in geriatric care.
6	**Explain the Role of Social Engagement in Cognitive Health**	Understand how social activities, hobbies, and interactions contribute to mental well-being in older adults.
7	**Understand Neurocognitive Assessments**	Learn about tools and techniques to assess cognitive function and detect early signs of neurodegeneration.
8	**Apply Psychological Principles in Elderly Care**	Develop skills to support emotional and cognitive health in older adults within healthcare settings.

Course outcomes for B.Sc. Geriatric Sciences MINOR- Introduction to Palliative & Hospice Care

Sr. No.	Course Outcome	Description
1	**Understand the Concept of Palliative and Hospice Care**	Explain the principles and goals of palliative and end-of-life care.
2	**Describe Pain and Symptom Management in Palliative Care**	Understand pharmacological and non-pharmacological approaches to managing pain and discomfort.
3	**Analyze Psychosocial and Emotional Needs of Terminally Ill Patients**	Explain the importance of psychological support, dignity, and quality of life in end-of-life care.
4	**Understand Ethical and Legal Considerations in End-of-Life Care**	Learn about advance directives, euthanasia, and ethical decision-making in palliative care.
5	**Describe Family Support and Grief Counseling**	Understand how to support families and caregivers during and after the dying process.
6	**Understand the Role of Interdisciplinary Teams in Palliative Care**	Learn about the collaboration between doctors, nurses, social workers, and spiritual counselors in providing holistic care.
7	**Explain Palliative Care Approaches for Chronic and Terminal Illnesses**	Understand specialized care approaches for conditions like cancer, organ failure, and neurodegenerative diseases.
8	**Apply Palliative Care Principles in Clinical Practice**	Develop skills to provide compassionate care and improve the quality of life for terminally ill patients.

Course outcomes for B.Sc. Geriatric Sciences MINOR- Digital Health & Assistive Technology for Elderly Care

Sr. No.	Course Outcome	Description
1	**Understand the Role of Digital Health in Geriatric Care**	Explain the importance of telemedicine, health monitoring devices, and electronic health records in elderly care.
2	**Describe Assistive Technologies for Aging**	Learn about mobility aids, smart home technologies, and wearable health devices that enhance independence in older adults.

Sr. No.	Course Outcome	Description
3	**Analyze the Impact of AI and Robotics in Elderly Care**	Understand how artificial intelligence and robotic assistance improve healthcare and daily living for seniors.
4	**Understand E-Health and Mobile Applications for Aging Population**	Explore mobile health applications, online consultations, and virtual rehabilitation tools designed for geriatric patients.
5	**Describe the Benefits and Challenges of Technology Adoption in the Elderly**	Understand barriers to technology use among seniors and strategies to improve digital literacy.
6	**Understand Data Security and Ethical Considerations in Digital Health**	Learn about patient data privacy, cybersecurity risks, and ethical concerns in digital health solutions.
7	**Explain the Role of Remote Monitoring and Wearable Devices**	Describe how smartwatches, fall detectors, and health monitoring apps support aging in place.
8	**Apply Digital Health Solutions in Elderly Care**	Develop strategies to integrate technology into geriatric healthcare for improved patient outcomes.

Course Outcomes for B.Sc. Geriatric Sciences Minor- Health Communication & Counselling for Older Adults

Sr. No.	Course Outcome	Description
1	**Understand the Principles of Health Communication**	Explain the role of effective communication in promoting elderly health and well-being.
2	**Describe Verbal and Non-Verbal Communication Strategies**	Understand how to use active listening, empathy, and body language in interactions with older adults.
3	**Analyze Barriers to Communication in the Elderly**	Learn about hearing loss, cognitive impairments, and cultural differences that affect health communication.
4	**Understand Counselling Techniques for Older Adults**	Explain psychological counseling, grief support, and motivational interviewing for elderly patients.
5	**Describe Family and Caregiver Communication Strategies**	Understand how to facilitate conversations between seniors, their families, and healthcare providers.

Sr. No.	Course Outcome	Description
6	**Explain the Role of Health Literacy in Elderly Care**	Learn how to simplify medical information and ensure elderly patients understand their treatment plans.
7	**Understand Ethical and Cultural Aspects of Health Communication**	Analyze the role of cultural beliefs, informed consent, and ethical considerations in elderly care.
8	**Apply Counselling and Communication Skills in Geriatric Healthcare**	Develop practical skills to enhance patient-provider relationships and improve geriatric health outcomes.

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, patient case studies, and literature reviews
Seminars & Presentations	**5%** (Part of CIA)	Oral/poster presentations on diabetes management and treatment approaches
Practical Performance & Clinical Evaluation	**5%** (Part of CIA)	Skill-based assessments in diabetic labs and clinical settings
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, and clinical diabetes case handling

Assessment Component	Weightage (%)	Details
Dissertation/Research Project (Final Year)	**Mandatory**	Evaluated in the final year by internal & external examiners
Clinical Internship/Training in Diabetes Care Centers	**Pass/Fail**	Logbook-based evaluation with mentor review

Program Details

- **Duration**:4Years (8 Semesters)
- **Total Credits**: **160–180 credits**
- **Total Teaching & Training Hours**: **6,000–6,500 hours**
- **Mode**: Classroom, Laboratory, Clinical Training, and Internship
- **Assessment**: Continuous Internal Assessment (CIA), Semester-End Examinations, Practical Examinations, Clinical Case Presentations, and Research Project
- **Internship & Research**: **One-Year Clinical Internship (Final Year)**

Total Hours Distribution

- **Theory Classes** – 2,500–2,800 hours
- **Practical & Laboratory Training** – 1,500–1,800 hours
- **Clinical Training & Internship** – 1,000–1,200 hours
- **Research & Dissertation** – 300–500 hours

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
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 Scenarios	3 (Attempt any 2)	15	30
Section D	MCQs/Objective Type	10 (Compulsory)	1	10
Total				**100**

Weightage:

- Aging Physiology & Geriatric Syndromes – 40%
- Geriatric Nursing & Care Management – 30%
- Research & Case Studies in Elderly Care – 20%
- Public Health & Elderly Rehabilitation Strategies – 10%

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

B. Practical Examination Pattern

Total Marks: 100 (Converted to 20% for End-Semester Assessment)
Duration: 4–6 Hours

Component	Marks Distribution
Clinical Case Presentation & Geriatric Assessment	30
OSCE (Objective Structured Clinical Examination) – Skill Demonstration	25
Functional & Cognitive Assessment of Elderly Patients	20

Component	Marks Distribution
Lab-Based Examination (Geriatric Health Screening, Medication Review, Nutritional Analysis)	15
Record Work (Logbook & Assignments)	10
Total	**100**

OSCE (Skill-based Assessment) includes stations on:

- Blood Pressure & Cardiovascular Monitoring in Elderly
- Gait & Mobility Assessment (Timed Up & Go Test, Fall Risk Evaluation)
- Cognitive Screening (MMSE, MoCA) & Mental Health Assessment
- Medication Management & Polypharmacy Counseling

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

Recommended Books & E-Resources

Textbooks

- **"Principles of Geriatric Medicine and Gerontology"** – William Hazzard
- **"Essentials of Clinical Geriatrics"** – Robert Kane
- **"Geriatric Pharmacology: The Principles of Practice & Care"** – Thomas Finucane
- **"Cognitive Aging: Progress in Understanding & Opportunities for Action"** – National Academies Press

E-Resources & Journals

- **American Geriatrics Society (AGS)** – www.americangeriatrics.org
- **International Association of Gerontology & Geriatrics (IAGG)**
- **Journal of the American Geriatrics Society (JAGS)**
- **WHO Guidelines on Elderly Care & Aging**

Career Opportunities after B.Sc. in Geriatric Sciences

- Geriatric Healthcare Specialist in Hospitals & Clinics
- Elderly Care Manager in Nursing Homes & Assisted Living Centers
- Researcher in Geriatric Medicine & Aging Studies
- Consultant for Public Health & Aging Policies
- Social Worker in Elderly Welfare Programs