

GURU KASHI UNIVERSITY



B.VOC. in Patient Care Management

Session 2025-26

Faculty of Health and Allied Sciences

Graduates Attributes

The programme B.VOC. in Patient Care Management imparts to the students an Intensive knowledge to perform key patient care procedures such as monitoring vital signs, assisting in daily activities, maintaining hygiene, providing basic nursing support, and ensuring patient safety. Graduates develop competence in communication, ethics, and teamwork, preparing them to deliver quality care in hospitals, clinics, and community healthcare settings.

Programme Learning Outcomes: After Completion Of this Course Gradates will able to:

- Apply knowledge of anatomy, physiology, and healthcare practices to provide safe, ethical, and effective care to patients under the supervision of healthcare professionals.
- Perform essential patient care procedures, including monitoring vital signs, maintaining hygiene, assisting in mobility, and supporting diagnostic and therapeutic interventions.
- Communicate effectively with patients, families, and healthcare teams using empathy, professionalism, and cultural sensitivity to enhance patient satisfaction and cooperation.
- Educate patients and caregivers about personal hygiene, nutrition, preventive measures, and lifestyle modifications to promote overall health and well-being.
- Work as a responsible member of the healthcare team, adhering to legal, ethical, and professional standards while demonstrating accountability, teamwork, and problem-solving abilities.

Programme Structure

Semester 1st										
S. No.	Course Code	Course Title	Type of Course	L	T	P	Cr .	Int	Ext	Total Marks
1	BVP101	Anatomy & Physiology	Core Based	2	0	0	2	15	35	50
2	BVP102	Fundamentals of Patient Care	Core Based	2	0	0	2	15	35	50
3	BVP103	Basic Microbiology & Infection Control	Core Based	2	0	0	2	15	35	50
4	BVP104	Biomedical Waste Management	Core Based	2	0	0	2	15	35	50
5	BVP105	Entrepreneurship Setup & Launch	Skill Based	0	0	4	2	15	35	50
6	BVP106	Anatomy & Physiology Practical	Skill Based	0	0	4	2	15	35	50
7	BVP107	Fundamentals of Patient Care Practical	Skill Based	0	0	4	2	15	35	50
8	BVP108	Basic Microbiology & Infection Control Practical	Skill Based	0	0	4	2	15	35	50
9	BVP109	Biomedical Waste Management Practical	Skill Based	0	0	4	2	15	35	50
10	BVP110	Communication and Soft Skills	Compulsory Foundation	2	0	0	2	15	35	50
11	BVP111	Human Rights and Duties	Multi-Disciplinary	3	0	0	3	25	50	75
Total				13	0	20	23	175	400	575

Semester 2nd										
S. No.	Course Code	Course Title	Type of Course	L	T	P	Cr .	Int	Ext	Total Marks
1	BVP201	Pharmacology for Patient Care	Core Based	2	0	0	2	15	35	50
2	BVP202	Nutrition & Dietetics in Patient Care	Core Based	2	0	0	2	15	35	50
3	BVP203	Psychology & Patient Counselling	Core Based	2	0	0	2	15	35	50
4	BVP204	Clinical Biochemistry	Core Based	2	0	0	2	15	35	50
5	BVP205	Health Education and Health Communication	Core Based	2	0	0	2	15	35	50
6	BVP206	Pharmacology for Patient Care Practical	Skill Based	0	0	4	2	15	35	50
7	BVP207	Nutrition & Dietetics in Patient Care Practical	Skill Based	0	0	4	2	15	35	50
8	BVP208	Psychology & Patient Counselling Practical	Skill Based	0	0	4	2	15	35	50
9	BVP209	Clinical Biochemistry Practical	Skill Based	0	0	4	2	15	35	50
10	BVP210	Health Education and Health Communication Practical	Skill Based	0	0	4	2	15	35	50
11	BVP211	Environmental Sciences	Compulsory Foundation	2	0	0	2	15	35	50

12	BVP212	First Aid	Value Added Courses	2	0	0	2	15	35	50
Total				14	0	20	24	180	420	600

Semester 3rd										
S. No.	Course Code	Course Title	Type of Course	L	T	P	Cr .	Int	Ext	Total Marks
1	BVP301	Medical–Surgical Procedures & Nursing Techniques	Core Based	2	0	0	2	15	35	50
2	BVP302	Operation Theatre Techniques	Core Based	2	0	0	2	15	35	50
3	BVP303	Diagnostic & Therapeutic Procedures	Core Based	2	0	0	2	15	35	50
4	BVP304	Fundamental of Nursing	Core Based	2	0	0	2	15	35	50
5	BVP305	Local Anaesthesia and Pain Management	Core Based	2	0	0	2	15	35	50
6	BVP306	Medical–Surgical Procedures & Nursing Techniques Practical	Skill Based	0	0	4	2	15	35	50
7	BVP307	Operation Theatre Techniques Practical	Skill Based	0	0	4	2	15	35	50
8	BVP308	Diagnostic & Therapeutic Procedures Practical	Skill Based	0	0	4	2	15	35	50
9	BVP309	Fundamental of Nursing Practical	Skill Based	0	0	4	2	15	35	50
10	BVP310	Local Anaesthesia and Pain Management Practical	Skill Based	0	0	4	2	15	35	50
11	BVP311	Community Health & Primary Care	Compulsory	3	0	0	3	25	50	75

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Total				13	0	20	23	175	400	575

Semester 4th										
S. No.	Course Code	Course Title	Type of Course	L	T	P	Cr .	Int	Ext	Total Marks
1	BVP401	Critical Care & ICU Management	Core Based	2	0	0	2	15	35	50
2	BVP402	Geriatric & Palliative Care	Core Based	2	0	0	2	15	35	50
3	BVP403	Maternal & Child Care	Core Based	2	0	0	2	15	35	50
4	BVP404	Advanced Nursing Procedures I	Core Based	2	0	0	2	15	35	50
5	BVP405	Cardiac Care	Core Based	2	0	0	2	15	35	50
6	BVP406	Patient Care and Hospital Administration	Core Based	2	0	0	2	15	35	50
7	BVP407	Critical Care & ICU Management Practical	Skill Based	0	0	4	2	15	35	50
8	BVP408	Geriatric & Palliative Care Practical	Skill Based	0	0	4	2	15	35	50
9	BVP409	Maternal & Child Care Practical	Skill Based	0	0	4	2	15	35	50
10	BVP410	Advanced Nursing Procedures I Practical	Skill Based	0	0	4	2	15	35	50
11	BVP411	Cardiac Care Practical	Skill Based	0	0	4	2	15	35	50
12	BVP412	Patient Care and Hospital Administration Practical	Skill Based	0	0	4	2	15	35	50

Total	12	0	24	24	180	420	600
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Semester 5th										
S. No.	Course Code	Course Title	Type of Course	L	T	P	Cr.	Int	Ext	Total Marks
1	BVP501	Rehabilitation & Physiotherapy Support	Core Based	2	0	0	2	15	35	50
2	BVP502	Mental Health & Counselling Skills	Core Based	2	0	0	2	15	35	50
3	BVP503	Preventive Oral Care	Core Based	2	0	0	2	15	35	50
4	BVP504	Health and Safety Regulation	Core Based	2	0	0	2	15	35	50
5	BVP505	Advanced Nursing Procedures II	Core Based	2	0	0	2	15	35	50
6	BVP506	Research Methodology & Biostatistics	Core Based	2	0	0	2	15	35	50
7	BVP507	Rehabilitation & Physiotherapy Support Practical	Skill Based	0	0	4	2	15	35	50
8	BVP508	Mental Health & Counselling Skills Practical	Skill Based	0	0	4	2	15	35	50
9	BVP509	Preventive Oral Care Practical	Skill Based	0	0	4	2	15	35	50
10	BVP510	Health and Safety Regulation Practical	Skill Based	0	0	4	2	15	35	50
11	BVP511	Advanced Nursing Procedures II Practical	Skill Based	0	0	4	2	15	35	50
12	BVP512	Research Methodology & Biostatistics Practical	Skill Based	0	0	4	2	15	35	50

Total	12	0	24	24	180	420	600
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Semester 6th										
S. No.	Course Code	Course Title	Type of Course	L	T	P	Cr.	Int	Ext	Total Mark s
1	BVP601	Internship	Skill Based	0	0	40	20	150	350	500
Total				0	0	40	20	150	350	500
Grand Total				64	0	148	138	1040	2410	3450

Semester 1st

Course Title: Anatomy & Physiology	L	T	P	Cr
Course Code: BVP101	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Describe the basic structure and functions of human organ systems.
2. Explain the anatomical organization of cells, tissues, and organs.
3. Illustrate physiological mechanisms essential for maintaining homeostasis.
4. Correlate structure and function of different systems in health and disease.
5. Apply basic anatomical and physiological knowledge to patient care settings.

Course Contents

UNIT-I (10 Hours)

- Introduction to Anatomy and Physiology
- Anatomical terms, body planes, cavities, and structural organization of the human body
- Cell structure and functions, cell membrane, organelles, cell cycle
- Tissues – epithelial, connective, muscular, and nervous tissues

UNIT-II (10 Hours)

- Skeletal system: classification of bones, joints, types of movements
- Muscular system: types of muscles, physiology of muscle contraction
- Nervous system: structure of neuron, central and peripheral nervous system, autonomic nervous system

UNIT-III (5 Hours)

- Cardiovascular system: structure and function of heart, circulation, blood pressure
- Respiratory system: structure of respiratory organs, mechanism of breathing, exchange of gases

UNIT-IV (5 Hours)

- Digestive system: anatomy of GIT, digestion and absorption
- Excretory system: structure of kidney, urine formation
- Endocrine system: major glands and their secretions, regulation of body functions

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- TORTORA GJ, DERRICKSON BH. *Principles of Anatomy and Physiology*. 15th ed. Hoboken (NJ): Wiley; 2017.
- MARIEB EN, HOEHN K. *Human Anatomy & Physiology*. 11th ed. New York: Pearson; 2018.
- ROSS MH, WOJNAROWSKI L, PAWLINA W. *Histology: A Text and Atlas*. 8th ed. Philadelphia: Wolters Kluwer; 2020.
- HALL JE, GUYTON AC. *Guyton and Hall Textbook of Medical Physiology*. 14th ed. Philadelphia: Elsevier; 2020.
- CHAITOW L, WALKER B. *Applied Anatomy & Physiology for Manual Therapists*. Edinburgh: Churchill Livingstone; 2010.

Course Title: Fundamentals of Patient Care	L	T	P	Cr
Course Code: BVP102	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic principles of patient care and professional responsibilities of healthcare workers.
2. Demonstrate understanding of infection control, personal hygiene, and patient safety measures.
3. Describe procedures related to patient positioning, mobility, and comfort.
4. Apply communication skills for effective interaction with patients, families, and healthcare teams.
5. Recognize ethical and legal considerations in patient care.

Course Contents

UNIT-I (10 Hours)

- Introduction to patient care: roles and responsibilities of patient care professionals
- Basic needs of patients: physical, psychological, and social aspects
- Patient rights, dignity, and confidentiality
- Principles of communication in patient care

UNIT-II (10 Hours)

- Infection control practices: hand hygiene, use of PPE, biomedical waste management
- Basic nursing care: bed making, vital signs measurement (temperature, pulse, respiration, blood pressure)
- Patient nutrition: feeding techniques, assisting with meals
- Personal hygiene: oral care, bathing, grooming, elimination needs

UNIT-III (5 Hours)

- Patient mobility and positioning: turning, transferring, ambulation, use of assistive devices
- Pressure sore prevention and basic skin care

- Safety measures in patient care settings (falls, burns, injuries)

UNIT-IV (5 Hours)

- First aid basics: bandaging, bleeding control, CPR overview
- Ethical and legal issues in patient care
- End-of-life care: comfort, dignity, and palliative approaches

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- POTTER PA, PERRY AG. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2020.
- TREAS LS, WILKINSON JM. *Basic Nursing: Thinking, Doing, and Caring*. 3rd ed. Philadelphia: F.A. Davis; 2018.
- CRAVEN RF, HIRNLE CJ. *Fundamentals of Nursing: Human Health and Function*. 8th ed. Philadelphia: Wolters Kluwer; 2017.
- ELLIS JR, NOWLIS EA, BENTZ PM. *Patient Care Fundamentals*. 4th ed. Stamford: Cengage Learning; 2015.
- WILLIAMS LS, HOPPER PD. *Understanding Medical-Surgical Nursing*. 6th ed. Philadelphia: F.A. Davis; 2019.

Course Title: Basic Microbiology & Infection Control	L	T	P	Cr
Course Code: BVP103	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the fundamentals of microbiology and classification of microorganisms.
2. Describe the structure, growth, and significance of bacteria, viruses, fungi, and parasites in healthcare.
3. Apply infection control principles in clinical and hospital settings.
4. Demonstrate knowledge of sterilization, disinfection, and aseptic techniques.
5. Recognize hospital-acquired infections and implement standard precautions to reduce risks.

Course Contents

UNIT-I (10 Hours)

- Introduction to microbiology and its importance in healthcare
- Classification of microorganisms: bacteria, viruses, fungi, protozoa
- Structure and morphology of bacteria and viruses
- Growth, nutrition, and reproduction of microorganisms

UNIT-II (10 Hours)

- Normal microbial flora of the human body
- Pathogenic microorganisms of medical importance
- Host-pathogen interaction and basic mechanisms of disease production
- Laboratory diagnosis of infections (microscopy, culture, staining, sensitivity tests)

UNIT-III (5 Hours)

- Infection control: principles and practices
- Hospital-acquired infections (HAIs): sources, transmission, prevention
- Standard precautions and isolation techniques

UNIT-IV (5 Hours)

- Sterilization: physical and chemical methods
- Disinfection: levels, methods, and commonly used agents
- Biomedical waste management: segregation, handling, and disposal

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- TORTORA GJ, FUNKE BR, CASE CL. *Microbiology: An Introduction*. 13th ed. New York: Pearson; 2021.
- PRESCOTT LM, HARLEY JP, KLEIN DA. *Microbiology*. 10th ed. New York: McGraw Hill; 2017.
- WILLEY JM, SHERWOOD LM, WOOLVERTON CJ. *Prescott's Microbiology*. 11th ed. New York: McGraw Hill; 2021.
- PELCZAR MJ, CHAN ECS, KRIEG NR. *Microbiology: Concepts and Applications*. 5th ed. New York: McGraw Hill; 2016.
- ANANTHANARAYAN R, PANIKER CKJ. *Textbook of Microbiology*. 10th ed. Hyderabad: Universities Press; 2017.

Course Title: Biomedical Waste Management	L	T	P	Cr
Course Code: BVP104	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Define biomedical waste and classify its different categories.
2. Explain national and international guidelines related to biomedical waste management.
3. Demonstrate knowledge of segregation, collection, transport, treatment, and disposal of biomedical waste.
4. Apply color coding and labeling systems for safe waste handling in healthcare facilities.
5. Recognize occupational hazards and implement safety measures for healthcare workers.

Course Contents

UNIT-I (10 Hours)

- Introduction to biomedical waste (BMW): definition, sources, and types
- Classification of biomedical waste as per Biomedical Waste Management Rules (India, 2016 and amendments)
- Public health importance of proper waste management

UNIT-II (10 Hours)

- Collection, segregation, and storage of biomedical waste
- Color coding and barcoding of containers and bags
- Transportation of biomedical waste: on-site and off-site practices
- Occupational safety and infection control in BMW handling

UNIT-III (5 Hours)

- Treatment methods: incineration, autoclaving, microwaving, chemical treatment
- Disposal of sharps, pathological waste, and radioactive waste
- Environmental impact of improper BMW management

UNIT-IV (5 Hours)

- **Legal aspects: Biomedical Waste Management Rules (2016, amendments in 2018, 2019, 2022)**
- **Roles and responsibilities of healthcare workers in BMW management**
- **Monitoring, training, and reporting systems in hospitals**

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- GOVT. OF INDIA. *Biomedical Waste Management Rules 2016 & Amendments*. New Delhi: Ministry of Environment, Forest and Climate Change; 2016–2022.
- PARK K. *Park's Textbook of Preventive and Social Medicine*. 27th ed. Jabalpur: Bhanot; 2023.
- WORLD HEALTH ORGANIZATION. *Safe Management of Wastes from Health-care Activities*. 2nd ed. Geneva: WHO Press; 2014.
- JOSHI R, MAHAJAN S. *Handbook of Hospital Waste Management*. 2nd ed. New Delhi: Jaypee Brothers; 2017.
- MATHUR P, PATAN S, SHOBHA M. *Biomedical waste management: situational analysis & predictors of performance in 25 districts across India*. *Indian J Med Res*. 2018;147(4):418-26.

Course Title: Entrepreneurship Setup & Launch	L	T	P	Cr.
Course Code: BVP105	0	0	4	2

Introduction: This semester lays the foundation for the learner to understand what entrepreneurship is, beyond just starting a business. It introduces key ideas like problem-solving, value creation, and self-awareness. The learner will begin exploring basic business concepts while discovering their own interests and strengths.

Learners Objective: After Completion of this course, the learner will be able to:

1. Understand the core concepts of entrepreneurship through relatable, real-life examples.
2. Begin to see themselves as problem-solvers and creators.
3. Learn about business paths and choose one to try based on interest or local fit.
4. Launch a micro-hustle (online or offline) to earn their first income.
5. Build confidence and self-belief by doing.

Outcome: By the end of this semester, learners will start a simple business activity, earn their first income, and build belief in their ability to do business.

Guiding Principles/Approach: This syllabus is built on principles of experiential learning, growth mindset development, and identity-first learning. Drawing from learning science and behavior design, the course shifts students from passive learning to active doing, where they try out small business activities in real contexts. The design helps students not just learn entrepreneurship, but begin to see themselves as entrepreneurs. Emphasis is placed on small wins, peer collaboration, and locally relevant opportunities to ensure learning feels achievable and connected to their realities. The curriculum focuses on conceptual understanding without heavy theory, combining practical action, reflection, and collaboration. By making progress visible

and success feel possible, it plants the seeds of self-reliance, initiative, and long-term motivation.

Semester Syllabus:

Format: 12 weeks, 4 hours/week | 2 credits

Revenue Target: ₹10,000

Week	Learning Goal	Measurable Outcome
1	Understand what entrepreneurship is and who can be an entrepreneur	Students define entrepreneurship in their own words and list 2 entrepreneurs from their local area or community
2	Connect personal identity to entrepreneurship (strengths, interests, struggles)	Students create a “value map” showing how a skill/interest/problem from their life could become a business opportunity
3	Learn about 5 business paths: content creation, dropshipping, cloud kitchen/food business, gig economy and local services	Students explore 1–2 examples from each domain and share one they’re most curious to try and why
4	Choose a path and generate a basic business idea	Students write down a clear offer (what, for whom, why) and one way to reach their customer
5	Take first real action: message, post, pitch, or sell	Students reach out to or serve 1 real potential customer and record what happened
6	Reflect on first attempt and share with peers	Students share their result, a challenge faced, and one idea to improve next time

7	Improve and try again: aim for first ₹100	Students apply a change, try again, and aim to make their first ₹100 or get meaningful response
8	Learn how to identify and understand your target customer	Students talk to 2 potential customers or observe them and list 3 insights about their needs
9	Learn how to serve your target audience better	Students improve one part of their offer (product, delivery, messaging, or interaction) based on customer feedback or need
10	Explore core entrepreneurial values (resilience, honesty, effort)	Students reflect on 1 value they're building and show it in a business task or peer story
11	Focus on earning and staying consistent	Students complete a second earning task and track their consistency (e.g., same product or message for 3 days)
12	Reflect on earnings, grit, and how to keep going	Students record total earnings, one resilience moment, and one support system or habit they'll continue with

Weekly Component:

Component	Duration	Description
Learning Module	~1.5 hrs	<ul style="list-style-type: none"> Introduces key concepts in a simple and engaging way Includes, examples, and 1–2 interactive discussions or quizzes

Action Lab	~2 hrs	<ul style="list-style-type: none"> • Hands-on task on the weekly concept • Includes step-by-step guidance, templates, and worksheets • Ends with a submission (e.g., video, reflection, or proof of action)
Resources	Self-paced	<ul style="list-style-type: none"> • Supplementary videos, short readings, real- life stories, and tools to deepen understanding at their own pace

Evaluation Criteria

Evaluation Component	Description	Weightage
Weekly Task Completion	Timely submission of weekly tasks including reflections, activities, quizzes etc.	40%
Target Completion	Performance-based evaluation on hitting revenue or profit targets (e.g., generating ₹10,000 revenue)	30%
Final Project	A comprehensive project based on the semester's theme	30%

Course Title: Anatomy & Physiology Practical	L	T	P	Cr.
Course Code: BVP106	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Describe the basic structure and functions of human organ systems.
2. Explain the anatomical organization of cells, tissues, and organs.
3. Illustrate physiological mechanisms essential for maintaining homeostasis.
4. Correlate structure and function of different systems in health and disease.
5. Apply basic anatomical and physiological knowledge to patient care settings.

Course Content

List of Practicals / Experiments (60 Hours)

- Demonstration of anatomical terms, body planes, and cavities using models and charts.
- Identification of human bones (long bones, skull, vertebrae, ribs, pelvis, etc.).
- Identification of major muscles using charts and models.
- Identification of major organs in preserved specimens (heart, lungs, liver, kidney, brain).
- Microscopic study of permanent slides (epithelium, connective tissue, muscle tissue, nervous tissue).
- Estimation of hemoglobin (Sahli's method).
- Determination of blood groups (ABO and Rh typing).
- Measurement of pulse rate and respiratory rate in normal individuals.
- Measurement of blood pressure using sphygmomanometer.
- Demonstration of simple reflexes (plantar, knee-jerk, pupillary light reflex).
- Spirometry: demonstration of vital capacity and tidal volume.

- Practical record submission and viva-voce.

Suggested Readings

- CHHATERJEE CC. *Human Physiology*. 12th ed. Kolkata: Academic Publishers; 2019.
- TORTORA GJ, DERRICKSON BH. *Principles of Anatomy and Physiology*. 15th ed. Hoboken (NJ): Wiley; 2017.
- HALL JE, GUYTON AC. *Guyton and Hall Textbook of Medical Physiology*. 14th ed. Philadelphia: Elsevier; 2020.
- MARIEB EN, SMITH LA. *Human Anatomy & Physiology Laboratory Manual*. 13th ed. New York: Pearson; 2019.
- PRASAD TK. *Practical Physiology for Undergraduate Students*. 2nd ed. Hyderabad: Universities Press; 2018.

Course Title: Fundamentals of Patient Care Practical	L	T	P	Cr.
Course Code: BVP107	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate basic patient care procedures with safety and empathy.
2. Apply infection control practices during patient care activities.
3. Record vital signs and assist in maintaining patient hygiene and comfort.
4. Perform safe patient positioning, transfer, and mobility techniques.
5. Practice effective communication with patients and healthcare teams during care delivery.

Course Content

List of Practicals / Skill-based Activities (60 Hours)

- Hand hygiene techniques and use of personal protective equipment (PPE).
- Preparation and techniques of bed making (empty bed, occupied bed).
- Measurement and recording of vital signs (temperature, pulse, respiration, blood pressure).
- Assisting in feeding of dependent patients.
- Oral hygiene procedures (tooth brushing, denture care).
- Assisting patients with bathing, grooming, and elimination needs.
- Techniques of patient positioning (supine, prone, lateral, Fowler's, Trendelenburg).
- Methods of transferring patients: wheelchair transfer, stretcher transfer, and use of assistive devices.
- Prevention of pressure sores: positioning, back care, use of aids.
- Oxygen administration (demonstration on manikins or models).
- Recording intake-output chart and fluid balance.
- First aid procedures: bandaging techniques, control of bleeding, basic CPR (demonstration).

- Communication role-play: interacting with patients and relatives.
- Practical record maintenance and viva-voce.

Suggested Readings

- POTTER PA, PERRY AG. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2020.
- TREAS LS, WILKINSON JM. *Basic Nursing: Thinking, Doing, and Caring*. 3rd ed. Philadelphia: F.A. Davis; 2018.
- ELLIS JR, NOWLIS EA, BENTZ PM. *Patient Care Fundamentals*. 4th ed. Stamford: Cengage Learning; 2015.
- CRAVEN RF, HIRNLE CJ. *Fundamentals of Nursing: Human Health and Function*. 8th ed. Philadelphia: Wolters Kluwer; 2017.
- WILLIAMS LS, HOPPER PD. *Understanding Medical-Surgical Nursing*. 6th ed. Philadelphia: F.A. Davis; 2019.

Course Title: Basic Microbiology & Infection Control Practical	L	T	P	Cr.
Course Code: BVP108	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate safe laboratory practices in handling microorganisms.
2. Perform basic staining, culture, and microscopic techniques.
3. Identify common pathogenic microorganisms using simple laboratory methods.
4. Apply aseptic techniques and infection control measures.
5. Segregate and dispose biomedical waste according to standard protocols.

Course Content

List of Practicals / Experiments (60 Hours)

- Introduction to laboratory safety, use of personal protective equipment (PPE).
- Demonstration of biosafety cabinet and aseptic practices.
- Preparation and sterilization of culture media (autoclave, hot air oven).
- Microscopic examination of prepared slides: bacteria, fungi, protozoa.
- Gram staining technique and identification of Gram-positive and Gram-negative bacteria.
- Acid-fast staining (Ziehl–Neelsen method).
- Simple culture methods: streak plate, pour plate, and spread plate techniques.
- Observation of colony characteristics of common bacteria.
- Demonstration of motility (hanging drop technique).
- Hand hygiene techniques: handwashing and use of sanitizers.
- Disinfection methods: use of physical and chemical disinfectants.
- Segregation of biomedical waste according to color coding system.

- Visit to hospital infection control unit / waste management site (demonstration/field exposure).
- Practical record maintenance and viva-voce.

Suggested Readings

- ANANTHANARAYAN R, PANIKER CKJ. *Textbook of Microbiology*. 10th ed. Hyderabad: Universities Press; 2017.
- TORTORA GJ, FUNKE BR, CASE CL. *Microbiology: An Introduction*. 13th ed. New York: Pearson; 2021.
- PRESCOTT LM, HARLEY JP, KLEIN DA. *Microbiology*. 10th ed. New York: McGraw Hill; 2017.
- WORLD HEALTH ORGANIZATION. *Laboratory Biosafety Manual*. 4th ed. Geneva: WHO Press; 2020.
- MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (India). *Biomedical Waste Management Rules, 2016 with Amendments*. New Delhi: Govt. of India; 2016–2022.

Course Title: Biomedical Waste Management Practical	L	T	P	Cr.
Course Code: BVP109	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate segregation, collection, and disposal of biomedical waste using proper color-coded bins.
2. Apply infection prevention and safety practices while handling biomedical waste.
3. Operate sterilization and disinfection equipment under supervision.
4. Maintain records and follow reporting protocols for waste management.
5. Evaluate risks and implement protective measures in biomedical waste handling.

Course Content

List of Practicals / Skill-based Activities (60 Hours)

- Demonstration of biomedical waste categories and their segregation.
- Use of color-coded bins and bags according to BMW rules.
- Labeling, barcoding, and transportation methods for biomedical waste.
- Handling and disposal of sharps and needlestick safety.
- Demonstration of autoclaving process for infectious waste.
- Chemical disinfection methods: preparation and use of common disinfectants (bleaching powder, phenol, glutaraldehyde).
- Demonstration of incineration and alternative technologies (model/field exposure).
- Practical on handling liquid biomedical waste.
- Visit to hospital waste management unit / common biomedical waste treatment facility (CBWTF).
- PPE usage in BMW handling (gloves, masks, aprons, face shields).
- Record keeping: BMW logbook and reporting system.
- Mock drill for spill management (blood/body fluids).

- Role-play: healthcare worker's responsibility in BMW handling.
- Practical record submission and viva-voce.

Suggested Readings

- GOVT. OF INDIA. *Biomedical Waste Management Rules 2016 & Amendments (2018, 2019, 2022)*. New Delhi: Ministry of Environment, Forest and Climate Change; 2016–2022.
- PARK K. *Park's Textbook of Preventive and Social Medicine*. 27th ed. Jabalpur: Bhanot; 2023.
- JOSHI R, MAHAJAN S. *Handbook of Hospital Waste Management*. 2nd ed. New Delhi: Jaypee Brothers; 2017.
- WORLD HEALTH ORGANIZATION. *Safe Management of Wastes from Health-care Activities*. 2nd ed. Geneva: WHO Press; 2014.
- MATHUR P, PATAN S, SHOBHA M. *Biomedical waste management: situational analysis & predictors of performance in 25 districts across India*. *Indian J Med Res*. 2018;147(4):418-26.

Course Title: Communication and Soft Skills	L	T	P	Cr
Course Code: BVP110	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate effective verbal and non-verbal communication in personal and professional contexts.
2. Apply listening, speaking, reading, and writing skills for academic and workplace needs.
3. Practice soft skills such as teamwork, leadership, time management, and problem-solving.
4. Develop confidence in public speaking, presentations, and interviews.
5. Apply communication ethics and cultural sensitivity in healthcare and social interactions.

Course Contents

UNIT-I (10 Hours)

- Basics of communication: definition, process, types (verbal, non-verbal, written, visual)
- Barriers to communication and strategies to overcome them
- Listening skills: active listening, empathetic listening
- Introduction to soft skills and their importance in healthcare and professional life

UNIT-II (10 Hours)

- Oral communication: conversation, telephone skills, group discussion
- Written communication: email etiquette, report writing, note-making, drafting applications
- Presentation skills: structure, design, delivery, and use of audiovisual aids
- Non-verbal communication: body language, gestures, posture, eye contact

UNIT-III (5 Hours)

- Interpersonal skills: empathy, conflict resolution, teamwork

- Leadership and motivation: styles, qualities of effective leaders
- Time management and stress management strategies
- Critical thinking and problem-solving techniques

UNIT-IV (5 Hours)

- Interview skills: preparation, commonly asked questions, mock interviews
- Public speaking: speech preparation, overcoming stage fear
- Communication in multicultural settings and healthcare environment
- Professional ethics, courtesy, and workplace etiquette

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- KUMAR S. *Communication Skills for Professionals*. 3rd ed. New Delhi: Pearson; 2019.
- BISWAS A. *Principles of Management and Soft Skills*. 2nd ed. New Delhi: Cengage Learning; 2020.
- LESIKAR RV, FLATLEY ME, RENTZ K, PADERA K. *Business Communication: Making Connections in a Digital World*. 12th ed. New York: McGraw Hill; 2017.
- VERMA S. *Soft Skills for Health Professionals*. New Delhi: Jaypee Brothers; 2018.
- KANDELWAL A. *Developing Communication Skills*. 2nd ed. New Delhi: Sage Publications; 2021.

Course Title: Human Rights and Duties	L	T	P	Cr
Course Code: BVP111	3	0	0	3

Total Hours 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Define the concept, evolution, and significance of human rights.
2. Explain constitutional provisions of human rights and fundamental duties in India.
3. Identify national and international instruments for the protection of human rights.
4. Recognize issues of human rights violations and their implications in healthcare and society.
5. Apply ethical, legal, and civic responsibilities in personal and professional contexts.

Course Contents

UNIT-I (15 Hours)

- Introduction to human rights: meaning, nature, and scope
- Historical development of human rights (global and Indian context)
- Classification of human rights: civil, political, economic, social, and cultural rights
- The Universal Declaration of Human Rights (UDHR, 1948)

UNIT-II (10 Hours)

- Constitution of India and human rights
- Fundamental rights and Directive Principles of State Policy
- Fundamental duties of citizens under the Constitution
- Role of judiciary in protection of human rights in India

UNIT-III (10 Hours)

- National Human Rights Commission (NHRC) and State Human Rights Commissions

- Human rights and vulnerable groups: women, children, differently-abled, minorities, and elderly
- Human rights in healthcare: patient rights, dignity, and ethics
- Right to education, environment, and information

UNIT-IV (10 Hours)

- International human rights instruments: ICCPR, ICESCR, CEDAW, CRC
- United Nations and its role in promoting human rights
- Issues and challenges in implementation of human rights
- Case studies on human rights and duties in India

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- BASU DD. *Introduction to the Constitution of India*. 26th ed. Gurgaon: LexisNexis; 2022.
- MEHTA P. *Human Rights and Duties in India: Law, Policy and Society*. New Delhi: Sage Publications; 2019.
- JAYAKUMAR N. *Human Rights Law*. 6th ed. Lucknow: Eastern Book Company; 2020.
- UNITED NATIONS. *Universal Declaration of Human Rights*. New York: UN; 1948.
- SUBRAMANIAN S. *Human Rights: International and National Perspectives*. 2nd ed. New Delhi: PHI Learning; 2018.

Semester 2nd

Course Title: Pharmacology for Patient Care	L	T	P	Cr
Course Code: BVP201	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic principles of pharmacology relevant to patient care.
2. Classify commonly used drugs and describe their therapeutic uses and side effects.
3. Demonstrate knowledge of safe drug administration practices.
4. Identify adverse drug reactions and outline their management.
5. Apply pharmacological knowledge to improve patient safety and compliance.

Course Contents

UNIT-I (10 Hours)

- Introduction to pharmacology: definitions, scope, and importance in patient care
- Routes of drug administration: oral, parenteral, topical, inhalational
- Pharmacokinetics: absorption, distribution, metabolism, and excretion
- Pharmacodynamics: mechanism of drug action, dose-response relationship

UNIT-II (10 Hours)

- Drugs acting on the central nervous system: analgesics, sedatives, antipyretics
- Drugs acting on the cardiovascular system: antihypertensives, diuretics, antianginal drugs
- Drugs acting on the respiratory system: bronchodilators, antitussives, antihistamines
- Drugs acting on the gastrointestinal system: antacids, laxatives, antiemetics

UNIT-III (5 Hours)

- Antibiotics and antimicrobial agents: classification, uses, precautions
- Antiviral, antifungal, and antiparasitic drugs
- Principles of antimicrobial resistance

UNIT-IV (5 Hours)

- Adverse drug reactions and drug interactions
- Essential medicines and rational drug use
- Patient education, compliance, and safe handling of drugs in healthcare settings

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- *TRIPATHI KD. Essentials of Medical Pharmacology. 9th ed. New Delhi: Jaypee Brothers; 2019.*
- *SHARMA HL, SHARMA KK. Principles of Pharmacology. 4th ed. Hyderabad: Paras Medical Publishers; 2017.*
- *KATZUNG BG, TREVOR AJ. Basic and Clinical Pharmacology. 15th ed. New York: McGraw Hill; 2021.*
- *BENNETT PN, BROWN MJ. Clinical Pharmacology. 12th ed. Edinburgh: Churchill Livingstone; 2017.*
- *WORLD HEALTH ORGANIZATION. Model List of Essential Medicines. 22nd ed. Geneva: WHO Press; 2021.*

Course Title: Nutrition & Dietetics in Patient Care	L	T	P	Cr
Course Code: BVP202	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the principles of nutrition and their relevance to patient care.
2. Identify macronutrients and micronutrients along with their sources, functions, and deficiencies.
3. Assess nutritional needs of patients in different health conditions.
4. Apply dietary modifications for common diseases (diabetes, hypertension, renal, gastrointestinal disorders).
5. Educate patients and caregivers on balanced diet and therapeutic nutrition.

Course Contents

UNIT-I (10 Hours)

- Introduction to nutrition: definition, importance in patient care
- Balanced diet: components and dietary guidelines (ICMR/NIN)
- Energy requirements and calculation of calories
- Macronutrients: carbohydrates, proteins, fats – functions, sources, and requirements

UNIT-II (10 Hours)

- Micronutrients: vitamins and minerals – functions, sources, deficiencies, and excess
- Water and electrolytes: role in health and disease
- Nutrition across the lifespan: infant, child, adolescent, adult, elderly
- Nutrition during pregnancy and lactation

UNIT-III (5 Hours)

- Assessment of nutritional status: BMI, dietary surveys, clinical and biochemical methods
- Malnutrition: undernutrition, obesity, protein-energy malnutrition, micronutrient deficiencies

UNIT-IV (5 Hours)

- Diet therapy for common conditions:
 - Diabetes mellitus
 - Hypertension and cardiovascular diseases
 - Renal disorders
 - Gastrointestinal disorders
- Role of nutrition education in patient care

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- SWAMINATHAN M. *Advanced Textbook on Food & Nutrition. 2nd ed. Bangalore: Bappco; 2012.*
- GIBNEY MJ, LANHAM-NEW SA, CASSIDY A, VORSTER HH. *Introduction to Human Nutrition. 3rd ed. Oxford: Wiley-Blackwell; 2013.*
- BAMJI MS, KRISHNASWAMY K, BRAHMAN GNV. *Textbook of Human Nutrition. 4th ed. New Delhi: Oxford & IBH; 2019.*
- SRINIVASAN K. *Clinical Nutrition and Dietetics. 2nd ed. New Delhi: Jaypee Brothers; 2018.*
- NATIONAL INSTITUTE OF NUTRITION (NIN). *Dietary Guidelines for Indians. Hyderabad: ICMR-NIN; 2020.*

Course Title: Psychology & Patient Counselling	L	T	P	Cr
Course Code: BVP203	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic concepts of psychology and their application in patient care.
2. Identify psychological responses to illness, stress, and hospitalization.
3. Apply communication skills to establish rapport and trust with patients.
4. Demonstrate counselling techniques for patients and their families in healthcare settings.
5. Recognize the importance of empathy, ethics, and cultural sensitivity in patient counselling.

Course Contents

UNIT-I (10 Hours)

- Introduction to psychology: scope and relevance in healthcare
- Human behavior: determinants, motivation, emotion, personality, learning, and memory
- Stress and coping mechanisms
- Psychological needs of patients in different age groups

UNIT-II (10 Hours)

- Patient psychology: reactions to illness, hospitalization, surgery, and chronic disease
- Role of family and caregivers in patient recovery
- Psychological aspects of terminal illness and palliative care
- Basics of mental health and common psychological disorders (anxiety, depression, adjustment disorders)

UNIT-III (5 Hours)

- Fundamentals of patient counselling: principles, goals, and process
- Qualities of an effective counsellor: listening, empathy, confidentiality, non-judgmental attitude

UNIT-IV (5 Hours)

- Counselling techniques: supportive counselling, cognitive-behavioral approaches (basics), crisis intervention
- Patient counselling in special situations: substance abuse, adherence to treatment, lifestyle modification
- Ethical and legal aspects in counselling

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- MORGAN CT, KING RA, WEISZ JR, SCHOPLER J. *Introduction to Psychology*. 7th ed. New Delhi: Tata McGraw Hill; 2013.
- ATKINSON RL, HILGARD ER. *Introduction to Psychology*. 15th ed. Boston: Cengage Learning; 2016.
- FELTHAM C, DRYDEN W. *Counselling and Communication Skills for Health Professionals*. 2nd ed. London: Sage Publications; 2017.
- NEERU M. *Psychology for Nurses*. 2nd ed. New Delhi: Jaypee Brothers; 2018.
- GELSO CJ, FRETZ BR. *Counseling Psychology*. 3rd ed. Belmont: Wadsworth; 2014.

Course Title: Clinical Biochemistry	L	T	P	Cr
Course Code: BVP204	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the biochemical basis of human health and disease.
2. Describe the structure, functions, and clinical significance of carbohydrates, proteins, lipids, and enzymes.
3. Interpret common biochemical tests used in diagnosis and monitoring of diseases.
4. Recognize biochemical alterations in metabolic and systemic disorders.
5. Apply knowledge of biochemistry in patient care and laboratory medicine.

Course Contents

UNIT-I (10 Hours)

- Introduction to clinical biochemistry: scope and applications
- Carbohydrate metabolism: glycolysis, gluconeogenesis, glycogen metabolism
- Clinical aspects: blood glucose regulation, diabetes mellitus, diagnostic tests for diabetes

UNIT-II (10 Hours)

- Proteins: structure, functions, plasma proteins
- Protein metabolism: urea cycle, amino acid metabolism
- Clinical aspects: protein-energy malnutrition, liver function tests, renal function tests

UNIT-III (5 Hours)

- Lipids: classification, functions, metabolism (cholesterol, triglycerides, lipoproteins)
- Clinical aspects: hyperlipidemia, atherosclerosis, lipid profile tests

UNIT-IV (5 Hours)

- Enzymes: properties, classification, diagnostic importance of serum enzymes (AST, ALT, CK, LDH, ALP)

- Acid-base balance and electrolytes in health and disease
- Clinical biochemistry in endocrine disorders: thyroid and adrenal function tests

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- SATYANARAYANA U, CHAKRAPANI U. *Biochemistry*. 6th ed. New Delhi: Elsevier; 2017.
- VASUDEVAN DM, SREEKUMARI S, KANNAN V. *Textbook of Biochemistry for Medical Students*. 8th ed. New Delhi: Jaypee Brothers; 2019.
- HARPER HA, RODWELL VW, BENDER DA. *Harper's Illustrated Biochemistry*. 32nd ed. New York: McGraw Hill; 2021.
- TIETZ NW. *Fundamentals of Clinical Chemistry and Molecular Diagnostics*. 8th ed. Philadelphia: Elsevier; 2017.
- NELSON DL, COX MM. *Lehninger Principles of Biochemistry*. 8th ed. New York: W.H. Freeman; 2021.

Course Title: Health Education and Health Communication	L	T	P	Cr
Course Code: BVP205	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the principles and importance of health education in promoting community health.
2. Describe methods and media of health communication in healthcare and public health settings.
3. Apply effective interpersonal and group communication techniques for patient and community health awareness.
4. Design and deliver health education sessions for individuals and groups.
5. Recognize the role of healthcare workers in behavior change and community participation.

Course Contents

UNIT-I (10 Hours)

- Introduction to health education: concept, scope, objectives, and principles
- Importance of health education in patient care and community health
- Levels of prevention and role of health education
- Models of health education (knowledge–attitude–practice model, behavioral change model)

UNIT-II (10 Hours)

- Health communication: definition, scope, and relevance
- Types of health communication: interpersonal, group, and mass communication
- Media for health communication: print, audio-visual, digital, folk media
- Barriers to effective communication and strategies to overcome them

UNIT-III (5 Hours)

- Planning and organizing health education sessions

- Preparation of IEC (Information, Education, and Communication) materials
- Use of modern technology (ICT, social media, mobile apps) in health education

UNIT-IV (5 Hours)

- Role of healthcare professionals in health education and counseling
- Health education in special settings: schools, hospitals, workplaces, community centers
- Monitoring and evaluation of health education programs

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- *PARK K. Park's Textbook of Preventive and Social Medicine. 27th ed. Jabalpur: Bhanot; 2023.*
- *COTTRELL RR, MCKENZIE JF. Health Promotion & Education Research Methods. 3rd ed. Burlington: Jones & Bartlett Learning; 2018.*
- *RAO RS, PILLAI A, RAO S. Principles of Health Education and Communication. 2nd ed. New Delhi: Jaypee Brothers; 2017.*
- *GLANZ K, RIMER BK, VISWANATH K. Health Behavior: Theory, Research, and Practice. 6th ed. San Francisco: Jossey-Bass; 2020.*
- *WORLD HEALTH ORGANIZATION. Health Promotion Glossary. Geneva: WHO; 2021.*

Course Title: Pharmacology for Patient Care Practical	L	T	P	Cr.
Course Code: BVP206	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate safe handling and administration of drugs under supervision.
2. Identify commonly used drugs and describe their dosage forms, routes, and uses.
3. Perform basic calculations related to drug dosages.
4. Recognize and report adverse drug reactions.
5. Maintain drug administration records and follow legal and ethical guidelines.

Course Content

List of Practicals / Experiments (60 Hours)

- Introduction to drug information sources and hospital pharmacy.
- Identification of dosage forms: tablets, capsules, syrups, injections, ointments, creams, inhalers.
- Demonstration of routes of drug administration (oral, topical, parenteral, inhalation) using models/simulators.
- Calculation of doses (adult and pediatric) – based on body weight and surface area.
- Preparation of ORS (Oral Rehydration Solution) and demonstration of administration.
- Intramuscular and subcutaneous injection techniques (simulation-based).
- Intravenous infusion set assembly and calculation of IV flow rate (manikin/simulation).
- Observation of drug storage practices (temperature, light sensitivity, expiry).
- Identification of commonly used emergency drugs in healthcare settings.

- Demonstration of adverse drug reactions (case study/simulation) and reporting system.
- Prescription reading and interpretation exercises.
- Maintenance of drug administration chart and safe documentation.
- Visit to hospital pharmacy / drug dispensing unit.
- Practical record submission and viva-voce.

Suggested Readings

- *TRIPATHI KD. Essentials of Medical Pharmacology. 9th ed. New Delhi: Jaypee Brothers; 2019.*
- *SHARMA HL, SHARMA KK. Principles of Pharmacology. 4th ed. Hyderabad: Paras Medical Publishers; 2017.*
- *KATZUNG BG, TREVOR AJ. Basic and Clinical Pharmacology. 15th ed. New York: McGraw Hill; 2021.*
- *BENNETT PN, BROWN MJ. Clinical Pharmacology. 12th ed. Edinburgh: Churchill Livingstone; 2017.*
- *WORLD HEALTH ORGANIZATION. Guide to Good Prescribing: A Practical Manual. Geneva: WHO; 1994.*

Course Title: Nutrition & Dietetics in Patient Care Practical	L	T	P	Cr.
Course Code: BVP207	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Assess nutritional status of patients using anthropometric and dietary methods.
2. Demonstrate preparation of balanced diets for different age groups and health conditions.
3. Apply dietary modifications for patients with common diseases.
4. Educate patients and families on healthy eating practices.
5. Maintain diet charts and records for clinical and community settings.

Course Content

List of Practicals / Experiments (60 Hours)

- Introduction to food groups and portion sizes (using ICMR/NIN guidelines).
- Calculation of daily energy and nutrient requirements for adults and children.
- Preparation of balanced diet plans for:
 - Infant and child
 - Adolescent
 - Adult and elderly
 - Pregnant and lactating mothers
- Demonstration of diet planning for:
 - Diabetes mellitus
 - Hypertension and cardiovascular diseases
 - Renal disorders
 - Gastrointestinal disorders
- Preparation of oral rehydration solution (ORS) and demonstration of its use.
- Assessment of nutritional status:
 - Body Mass Index (BMI)

- Mid-arm circumference (MAC)
- Waist-hip ratio
- Use of food exchange lists for therapeutic diets.
- Role play: patient counselling on nutrition and lifestyle changes.
- Preparation of low-cost nutritious recipes for community health programs.
- Visit to a hospital dietary department / community nutrition unit.
- Record maintenance of diet charts and case studies.
- Practical record submission and viva-voce.

Suggested Readings

- SWAMINATHAN M. *Advanced Textbook on Food & Nutrition. 2nd ed. Bangalore: Bappco; 2012.*
- BAMJI MS, KRISHNASWAMY K, BRAHMAN GNV. *Textbook of Human Nutrition. 4th ed. New Delhi: Oxford & IBH; 2019.*
- SRINIVASAN K. *Clinical Nutrition and Dietetics. 2nd ed. New Delhi: Jaypee Brothers; 2018.*
- GIBNEY MJ, LANHAM-NEW SA, CASSIDY A, VORSTER HH. *Introduction to Human Nutrition. 3rd ed. Oxford: Wiley-Blackwell; 2013.*
- NATIONAL INSTITUTE OF NUTRITION (NIN). *Dietary Guidelines for Indians. Hyderabad: ICMR–NIN; 2020.*

Course Title: Psychology & Patient Counselling Practical	L	T	P	Cr.
Course Code: BVP208	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate basic counselling techniques in patient care settings.
2. Practice effective communication skills including active listening, empathy, and non-verbal communication.
3. Conduct role plays to understand patient reactions to illness, stress, and hospitalization.
4. Apply counselling approaches in special situations (chronic illness, lifestyle changes, terminal care).
5. Maintain counselling records and practice ethical and professional standards.

Course Content

List of Practicals / Activities (60 Hours)

- Introduction to counselling: demonstration of effective communication techniques.
- Practice of active listening, empathy, and rapport building.
- Role plays on patient–counsellor interaction in common scenarios (fear before surgery, diagnosis disclosure, anxiety).
- Counselling for stress and coping strategies (case-based discussions).
- Role play: counselling for adherence to treatment in chronic illnesses (diabetes, hypertension, TB).
- Counselling for lifestyle modification (diet, exercise, substance abuse).
- Counselling in terminal illness and palliative care: comfort and dignity.
- Group counselling sessions: patient support groups (demonstration/role play).
- Family counselling and caregiver support strategies.
- Observation and practice of patient counselling sessions in hospital/community settings.

- Ethical issues in counselling: confidentiality, informed consent, non-judgmental attitude.
- Case study preparation and counselling report writing.
- Simulation: crisis intervention and counselling during emergencies.
- Practical record submission and viva-voce.

Suggested Readings

- *FELTHAM C, DRYDEN W. Counselling and Communication Skills for Health Professionals. 2nd ed. London: Sage Publications; 2017.*
- *GELSO CJ, FRETZ BR. Counseling Psychology. 3rd ed. Belmont: Wadsworth; 2014.*
- *NEERU M. Psychology for Nurses. 2nd ed. New Delhi: Jaypee Brothers; 2018.*
- *NELSON-JONES R. Basic Counselling Skills: A Helper's Manual. 4th ed. London: Sage Publications; 2015.*
- *COREY G. Theory and Practice of Counseling and Psychotherapy. 10th ed. Boston: Cengage Learning; 2021.*

Course Title: Clinical Biochemistry Practical	L	T	P	Cr.
Course Code: BVP209	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Perform basic biochemical tests on blood, urine, and serum samples.
2. Interpret biochemical test results in relation to normal and abnormal values.
3. Demonstrate skills in handling laboratory instruments and maintaining safety practices.
4. Apply biochemical investigations for diagnosis and monitoring of common diseases.
5. Maintain laboratory records and prepare clinical biochemistry reports.

Course Content

List of Practicals / Experiments (60 Hours)

- Introduction to biochemistry laboratory, safety rules, and equipment handling.
- Preparation of buffers and standard solutions.
- Estimation of blood glucose (glucose oxidase/peroxidase method).
- Estimation of serum proteins (Biuret method).
- Estimation of serum urea (Urease method).
- Estimation of serum creatinine (Jaffe's method).
- Estimation of serum cholesterol (Enzymatic method).
- Estimation of serum bilirubin (Van den Bergh reaction).
- Enzyme activity assay: ALT, AST (liver function markers).
- Qualitative tests for carbohydrates, proteins, and lipids in biological samples.
- Urine analysis:
 - Normal constituents (glucose, protein, ketone bodies)
 - Abnormal constituents (albumin, blood, bile salts, bile pigments)
- Demonstration of electrolyte estimation (Na⁺, K⁺, Cl⁻) using flame photometer/ion-selective electrode.

- Interpretation of liver function test (LFT) and renal function test (RFT) profiles.
- Practical record submission and viva-voce.

Suggested Readings

- VASUDEVAN DM, SREEKUMARI S, KANNAN V. *Textbook of Biochemistry for Medical Students*. 8th ed. New Delhi: Jaypee Brothers; 2019.
- SATYANARAYANA U, CHAKRAPANI U. *Biochemistry*. 6th ed. New Delhi: Elsevier; 2017.
- TIETZ NW. *Fundamentals of Clinical Chemistry and Molecular Diagnostics*. 8th ed. Philadelphia: Elsevier; 2017.
- NELSON DL, COX MM. *Lehninger Principles of Biochemistry*. 8th ed. New York: W.H. Freeman; 2021.
- HARPER HA, RODWELL VW, BENDER DA. *Harper's Illustrated Biochemistry*. 32nd ed. New York: McGraw Hill; 2021.

Course Title: Health Education and Health Communication Practical	L	T	P	Cr.
Course Code: BVP210	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate effective communication skills for patient and community health education.
2. Prepare and use IEC (Information, Education, Communication) materials for health promotion.
3. Conduct individual and group health education sessions.
4. Apply modern media and technology tools in health communication.
5. Evaluate the effectiveness of health education programs in different settings.

Course Content

List of Practicals / Activities (60 Hours)

- Demonstration of interpersonal communication techniques with patients.
- Role play on overcoming barriers in patient-provider communication.
- Preparation of posters, charts, and pamphlets for health education.
- Development of PowerPoint presentations for health topics.
- Use of audiovisual aids (models, videos) in health teaching.
- Practice of group discussion and health talks.
- Conducting a mock health education session in classroom setting.
- Use of social media/digital tools for health communication (WhatsApp, Facebook, YouTube).
- Demonstration of counselling techniques in community health programs.
- Planning and execution of a small health awareness campaign (hospital/school/community).
- Visit to a health education unit / community health center for field observation.

- Evaluation of IEC materials based on effectiveness and clarity.
- Participation in debates and skits on public health issues.
- Practical record submission and viva-voce.

Suggested Readings

- *PARK K. Park's Textbook of Preventive and Social Medicine. 27th ed. Jabalpur: Bhanot; 2023.*
- *RAO RS, PILLAI A, RAO S. Principles of Health Education and Communication. 2nd ed. New Delhi: Jaypee Brothers; 2017.*
- *COTTRELL RR, MCKENZIE JF. Health Promotion & Education Research Methods. 3rd ed. Burlington: Jones & Bartlett Learning; 2018.*
- *GLANZ K, RIMER BK, VISWANATH K. Health Behavior: Theory, Research, and Practice. 6th ed. San Francisco: Jossey-Bass; 2020.*
- *WORLD HEALTH ORGANIZATION. Health Promotion Glossary. Geneva: WHO; 2021.*

Course Title: Environmental Sciences	L	T	P	Cr
Course Code: BVP211	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the structure and functions of ecosystems and their relevance to human health.
2. Identify environmental pollution types, sources, and their effects on health.
3. Demonstrate understanding of natural resource management and sustainable development.
4. Recognize the role of healthcare professionals in environmental protection.
5. Apply knowledge of environmental laws and policies for community health improvement.

Course Contents

UNIT-I (10 Hours)

- Introduction to environmental sciences: scope and importance
- Ecosystems: structure, functions, food chains, and ecological balance
- Natural resources: renewable and non-renewable resources – conservation and management
- Biodiversity and its conservation

UNIT-II (10 Hours)

- Environmental pollution:
 - Air pollution: sources, effects, and control
 - Water pollution: causes, health hazards, purification methods
 - Soil pollution and noise pollution
- Impact of pollution on human health

UNIT-III (5 Hours)

- Global environmental issues: climate change, global warming, ozone depletion, acid rain
- Environmental health hazards: radiation hazards, e-waste, biomedical waste

- Role of public health in tackling environmental challenges

UNIT-IV (5 Hours)

- Sustainable development and environmental management
- Environmental laws and policies in India: Environment Protection Act, Air & Water Acts, Biomedical Waste Rules
- Role of healthcare professionals in environmental protection and awareness programs

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- AGARWAL KC. *Environmental Biology*. 8th ed. New Delhi: Nidhi Publishers; 2019.
- MISHRA DD. *Fundamentals of Environmental Studies*. 3rd ed. New Delhi: S. Chand; 2017.
- PARK K. *Park's Textbook of Preventive and Social Medicine*. 27th ed. Jabalpur: Bhanot; 2023.
- MILLER GT, SPOOLMAN SE. *Environmental Science*. 16th ed. Boston: Cengage Learning; 2017.
- GOVT. OF INDIA. *Environment (Protection) Act, 1986 with Rules and Amendments*. New Delhi: Ministry of Environment, Forest and Climate Change; 2022.

Course Title: First Aid	L	T	P	Cr
Course Code: BVP212	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the principles and importance of first aid in emergencies.
2. Demonstrate knowledge of first aid for common injuries and medical conditions.
3. Apply safe techniques in handling fractures, wounds, burns, and bleeding.
4. Provide first aid for shock, poisoning, and environmental emergencies.
5. Recognize when to provide first aid and when to refer for professional medical care.

Course Contents

UNIT-I (10 Hours)

- Introduction to first aid: scope, objectives, and responsibilities of first aider
- Basic life support (BLS): airway, breathing, circulation (ABC approach)
- Cardiopulmonary resuscitation (CPR) – adults and children (theoretical introduction)
- First aid kit: contents and uses

UNIT-II (10 Hours)

- First aid for bleeding, shock, fainting, and unconsciousness
- First aid for wounds, burns, scalds, and fractures
- First aid for head, neck, and spinal injuries
- Bandaging techniques and immobilization methods

UNIT-III (5 Hours)

- First aid for poisoning (ingestion, inhalation, bites, stings)
- First aid for choking and aspiration
- First aid for medical emergencies: asthma, epilepsy, heart attack, stroke, diabetic emergencies

UNIT-IV (5 Hours)

- First aid in environmental emergencies: drowning, hypothermia, heat stroke, sunburn
- Disaster preparedness: role of first aid in mass casualty incidents
- Transportation of injured and safe lifting techniques
- Legal and ethical aspects of providing first aid

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- *AMERICAN RED CROSS. First Aid/CPR/AED Participant's Manual. 3rd ed. Washington, DC: StayWell; 2016.*
- *ST. JOHN AMBULANCE. First Aid Manual. 11th ed. London: Dorling Kindersley; 2021.*
- *SUBRAMANIAN P. A Textbook of First Aid and Emergency Care. New Delhi: Jaypee Brothers; 2018.*
- *INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES (IFRC). First Aid Guidelines. Geneva: IFRC; 2016.*
- *AMERICAN HEART ASSOCIATION. Highlights of the 2020 American Heart Association Guidelines for CPR and ECC. Dallas: AHA; 2020.*

Semester 3rd

Course Title: Medical–Surgical Procedures & Nursing Techniques	L	T	P	Cr
Course Code: BVP301	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Understand the fundamental principles of medical–surgical procedures and their applications in patient care.
2. Demonstrate knowledge of aseptic techniques and infection control measures in surgical settings.
3. Identify instruments, equipment, and materials used in common medical–surgical procedures.
4. Assist in pre-operative, intra-operative, and post-operative care of patients.
5. Apply nursing techniques safely and effectively in various clinical situations.

Course Contents

UNIT I – Introduction to Medical–Surgical Nursing (10 Hours)

- Overview of medical–surgical nursing
- Roles and responsibilities of the nurse in surgical procedures
- Infection control practices: asepsis, sterilization, disinfection
- Patient safety and preparation for surgical interventions

UNIT II – Pre-Operative and Intra-Operative Care (10 Hours)

- Patient assessment and preparation for surgery
- Consent and psychological support
- Surgical positioning, draping, and operating room protocols
- Handling of surgical instruments and equipment
- Role of nurse during intra-operative procedures

UNIT III – Post-Operative Care and Complications (5 Hours)

- Immediate post-operative care in recovery room
- Monitoring vital signs and wound assessment
- Management of pain, bleeding, and shock
- Prevention of post-operative complications (DVT, infections, respiratory issues)

UNIT IV – Common Nursing Techniques in Medical–Surgical Care (5 Hours)

- Catheterization techniques
- IV-line insertion and infusion care
- Dressing and wound care techniques
- Tracheostomy and chest tube care
- Emergency procedures (CPR, management of acute shock)

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- BRUNNER LS, SUDDARTH DS. *Textbook of Medical-Surgical Nursing*. 14th ed. Philadelphia: Lippincott Williams & Wilkins; 2017.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. Elsevier; 2020.
- POTTER PA, PERRY AG, STOCKERT P, HALL A. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier Mosby; 2020.
- SMELTZER SC, BARE BG, HINKLE JL, CHEEVER KH. *Brunner & Suddarth's Textbook of Medical-Surgical Nursing*. 13th ed. Wolters Kluwer Health; 2013.
- TAYLOR C, LYNN P, BARTLETT J. *Fundamentals of Nursing: The Art and Science of Person-Centered Care*. 9th ed. Wolters Kluwer; 2018.

Course Title: Operation Theatre Techniques	L	T	P	Cr
Course Code: BVP302	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Describe the structure, layout, and organization of an operation theatre.
2. Demonstrate knowledge of sterilization, disinfection, and aseptic practices.
3. Identify and handle operation theatre instruments and equipment.
4. Assist in surgical procedures by applying appropriate OT protocols.
5. Manage pre-operative, intra-operative, and post-operative responsibilities effectively.

Course Contents

UNIT I – Introduction to Operation Theatre (10 Hours)

- Operation theatre (OT) layout, zones, and workflow
- Classification of OT (general, specialty-based)
- Roles and responsibilities of OT staff (surgeons, nurses, anesthetists, technicians)
- Principles of aseptic technique and infection control in OT

UNIT II – Sterilization, Disinfection & OT Equipment (10 Hours)

- Methods of sterilization: autoclaving, ETO, chemical methods
- Disinfection of OT surfaces, instruments, and equipment
- Surgical instruments: classification, handling, and care
- Introduction to anesthesia machines, cautery, suction apparatus, lights, and tables

UNIT III – Pre-Operative & Intra-Operative Techniques (5 Hours)

- Patient preparation and positioning
- Draping techniques

- Handling of surgical specimens
- Surgical counts (sponges, instruments, needles) and safety protocols

UNIT IV – Post-Operative OT Management (5 Hours)

- Recovery room setup and immediate post-op care
- Management of biomedical waste in OT
- Documentation and record-keeping
- Safety measures and emergency protocols in OT

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- *BERRY & KOHN'S. Operating Room Technique. 13th ed. St. Louis: Mosby Elsevier; 2021.*
- *JOTKOWITZ A, BARKER C. Textbook of Operating Theatre Technology. New Delhi: Jaypee Brothers Medical Publishers; 2017.*
- *WILSON J. Infection Control in Clinical Practice. 3rd ed. Baillière Tindall; 2019.*
- *GUPTA P, JAIN A. Manual of Surgical Instruments and OT Techniques. 2nd ed. Jaypee Brothers Medical Publishers; 2018.*
- *CLAYMAN M. Basic Surgical Techniques. 6th ed. Hodder Arnold; 2018.*

Course Title: Diagnostic & Therapeutic Procedures	L	T	P	Cr
Course Code: BVP303	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Understand the principles and applications of common diagnostic and therapeutic procedures in healthcare.
2. Demonstrate knowledge of basic laboratory, radiological, and clinical diagnostic tests.
3. Identify patient preparation, indications, and contraindications for selected diagnostic procedures.
4. Describe common therapeutic procedures and the role of healthcare providers in assisting them.
5. Apply safety measures, infection control, and ethical considerations during diagnostic and therapeutic interventions.

Course Contents

UNIT I – Introduction to Diagnostic Procedures (10 Hours)

- Principles of diagnosis in patient care
- Overview of laboratory tests: hematology, biochemistry, microbiology
- Imaging modalities: X-ray, ultrasound, CT, MRI – basics and clinical utility
- Endoscopy, ECG, and pulmonary function tests – indications and interpretation basics

UNIT II – Introduction to Therapeutic Procedures (10 Hours)

- Principles of therapeutic interventions in medicine
- Oxygen therapy and nebulization techniques
- Blood transfusion and infusion therapy
- Physiotherapy and rehabilitation procedures (basics)
- Role of nursing/paramedical staff in therapeutic procedures

UNIT III – Patient Preparation & Monitoring (5 Hours)

- Pre-procedure preparation and patient consent
- Vital signs monitoring before, during, and after procedures
- Management of procedural complications (allergic reactions, shock, bleeding)

UNIT IV – Safety, Ethics & Infection Control (5 Hours)

- Universal precautions and infection control during procedures
- Radiation safety in diagnostic imaging
- Ethical aspects in diagnostic and therapeutic care
- Documentation and reporting of procedures

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. Elsevier; 2020.
- BRUNNER LS, SUDDARTH DS. *Textbook of Medical-Surgical Nursing*. 14th ed. Lippincott Williams & Wilkins; 2017.
- KUMAR P, CLARK M. *Kumar and Clark's Clinical Medicine*. 10th ed. Elsevier; 2020.
- HARRISON TR, JAMESON JL. *Harrison's Principles of Internal Medicine*. 20th ed. McGraw-Hill; 2018.
- HOEHN MM. *Fundamentals of Diagnostic Radiology*. 5th ed. Wolters Kluwer; 2018

Course Title: Fundamental of Nursing	L	T	P	Cr
Course Code: BVP304	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic concepts and principles of nursing care.
2. Demonstrate understanding of the nursing process and its application in patient care.
3. Identify and perform essential nursing procedures related to hygiene, comfort, and safety.
4. Apply communication and documentation skills in nursing practice.
5. Integrate ethical principles, professionalism, and patient-centered care in nursing practice.

Course Contents

UNIT I – Introduction to Nursing (10 Hours)

- Definition, scope, and history of nursing
- Roles and responsibilities of nurses in healthcare
- Principles of nursing practice
- Nursing ethics and professional conduct
- Holistic approach to patient care

UNIT II – Nursing Process & Basic Care Needs (10 Hours)

- Steps of nursing process: assessment, diagnosis, planning, implementation, evaluation
- Activities of daily living: feeding, bathing, elimination, mobility, rest, and sleep
- Patient hygiene and comfort measures
- Patient safety and environmental hygiene

UNIT III – Communication & Documentation (5 Hours)

- Nurse–patient communication: verbal and non-verbal

- Therapeutic communication techniques
- Documentation and record keeping in nursing
- Importance of reporting and handover

UNIT IV – Basic Nursing Skills & First-Line Interventions (5 Hours)

- Vital signs: temperature, pulse, respiration, blood pressure
- Infection control and aseptic techniques
- Positioning and moving patients safely
- Basic first aid and emergency care principles

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- POTTER PA, PERRY AG, STOCKERT P, HALL AM. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2020.
- TAYLOR C, LYNN P, BARTLETT J. *Fundamentals of Nursing: The Art and Science of Person-Centered Care*. 9th ed. Wolters Kluwer; 2018.
- KOZIER B, ERB G, BERMAN A, SNYDER S. *Fundamentals of Nursing: Concepts, Process and Practice*. 10th ed. Pearson Education; 2017.
- CRAVEN RF, HIRNLE CJ. *Fundamentals of Nursing: Human Health and Function*. 8th ed. Wolters Kluwer Health; 2016.
- ELLIS JR, NOWLIS EA, BENTZ PM. *Nursing in Today's World: Trends, Issues, and Management*. 11th ed. Wolters Kluwer Health; 2015.

Course Title: Local Anaesthesia and Pain Management	L	T	P	Cr
Course Code: BVP305	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the pharmacology, mechanism of action, and types of local anaesthetics.
2. Demonstrate knowledge of techniques for administering local anaesthesia in various clinical procedures.
3. Recognize complications, toxicity, and management of adverse reactions related to local anaesthetics.
4. Understand the principles of acute and chronic pain management.
5. Apply evidence-based pain management strategies in clinical practice.

Course Contents

UNIT I – Basics of Local Anaesthesia (10 Hours)

- Definition and history of local anaesthesia
- Mechanism of action of local anaesthetic agents
- Classification of local anaesthetics (esters and amides)
- Pharmacokinetics and pharmacodynamics
- Indications and contraindications

UNIT II – Techniques of Local Anaesthesia Administration (10 Hours)

- Topical anaesthesia, infiltration anaesthesia, nerve block techniques
- Regional anaesthesia: spinal, epidural, peripheral nerve blocks (overview)
- Use of vasoconstrictors (e.g., adrenaline) in local anaesthesia
- Equipment and safety protocols for administration
- Role of healthcare provider in monitoring patients during procedures

UNIT III – Complications and Management (5 Hours)

- Local and systemic complications of local anaesthesia

- Allergic reactions, toxicity, and overdose management
- Failed anaesthesia and troubleshooting
- Prevention of complications through safe practice

UNIT IV – Pain Management in Clinical Practice (5 Hours)

- Concept and physiology of pain
- Pharmacological methods: NSAIDs, opioids, adjuvant drugs
- Non-pharmacological methods: physiotherapy, relaxation techniques, psychological support
- Multimodal pain management strategies
- Ethical and professional aspects of pain management

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- MILLER RD, ERIKSSON LI, FLEISHER LA, WIENER-KRONISH JP, YOUNG WL. *Miller's Anesthesia*. 9th ed. Philadelphia: Elsevier; 2020.
- COUSINS MJ, CARR DB, HORLOCKER TT, BREIVIK H. *Cousins and Bridenbaugh's Neural Blockade in Clinical Anesthesia and Pain Medicine*. 5th ed. Wolters Kluwer; 2017.
- MOORE PA, HERSH EV. *Local Anesthesia and Pain Control in Dental Practice*. 2nd ed. Saunders; 2019.
- RAJ PP. *Pain Medicine: A Comprehensive Review*. 3rd ed. Mosby Elsevier; 2017.
- HADZIC A. *Textbook of Regional Anesthesia and Acute Pain Management*. 2nd ed. McGraw-Hill; 2017.

Course Title: Medical–Surgical Procedures & Nursing Techniques Practical	L	T	P	Cr.
Course Code: BVP306	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate proficiency in basic and advanced nursing procedures used in medical–surgical care.
2. Perform aseptic techniques and infection control measures in clinical practice.
3. Assist in pre-operative, intra-operative, and post-operative procedures effectively.
4. Provide safe patient care through accurate monitoring and intervention.
5. Apply theoretical knowledge of medical–surgical nursing into hands-on skills for clinical readiness.

Course Content

List of Practicals / Experiments (60 Hours)

- Hand hygiene techniques (hand washing, use of antiseptics, surgical scrub).
- Gowning, gloving, and mask application (aseptic practices).
- Preparation of surgical trolley and instrument sets.
- Administration of oral, intramuscular, subcutaneous, and intravenous medications (on models/manikins).
- Recording of vital signs (temperature, pulse, respiration, blood pressure).
- Patient positioning for surgical and diagnostic procedures.
- Wound care: dressing, suturing assistance, and removal of sutures/staples.
- Urinary catheterization (male and female manikins).
- Tracheostomy care and suctioning techniques.
- Oxygen administration and nebulization.

- Setting up IV infusion and blood transfusion (simulation).
- Assisting in minor surgical procedures (biopsy, incision and drainage).
- Cardiopulmonary resuscitation (CPR) and use of automated external defibrillator (AED).
- Care of drains, chest tubes, and nasogastric tubes.
- Preparation of operation theatre for surgical procedures.
- Biomedical waste segregation and disposal.
- Documentation and reporting of procedures performed.

Suggested Readings

- POTTER PA, PERRY AG, STOCKERT P, HALL AM. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2020.
- BRUNNER LS, SUDDARTH DS. *Textbook of Medical-Surgical Nursing*. 14th ed. Philadelphia: Lippincott Williams & Wilkins; 2017.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. Elsevier; 2020.
- JARVIS C. *Physical Examination and Health Assessment*. 8th ed. St. Louis: Elsevier Saunders; 2019.
- BERMAN A, SNYDER S, LEVETT-JONES T, et al. *Kozier & Erb's Fundamentals of Nursing*. 5th ed. Pearson Education; 2018.

Course Title: Operation Theatre Techniques Practical	L	T	P	Cr.
Course Code: BVP307	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate knowledge and skills in maintaining asepsis and sterile techniques in the OT.
2. Prepare the operation theatre, surgical instruments, and equipment for various procedures.
3. Assist in pre-operative, intra-operative, and post-operative patient care.
4. Apply safe handling of surgical instruments and biomedical waste management.
5. Develop competence in emergency preparedness and teamwork in OT settings.

Course Content

List of Practicals / Experiments (60 Hours)

- Orientation to operation theatre layout, zones, and workflow.
- Handwashing, scrubbing, gowning, and gloving techniques.
- Preparation and sterilization of surgical instruments.
- Draping techniques for different surgical procedures.
- Preparation of surgical trolley for minor and major operations.
- Identification and handling of surgical instruments.
- Use of suction apparatus, cautery, and anesthesia machine (demonstration).
- Patient positioning for common surgical procedures.
- Counting and documentation of instruments, sponges, and needles.
- Assisting in minor surgical procedures (simulation).
- Immediate care and transfer of post-operative patients to recovery room.
- Preparation of recovery room for post-operative care.
- Biomedical waste segregation and disposal in OT.

- Mock drills for OT emergencies (fire, power failure, cardiac arrest).
- Documentation and record-keeping in OT.

Suggested Readings

- *BERRY & KOHN. Operating Room Technique. 13th ed. St. Louis: Mosby Elsevier; 2021.*
- *JOTKOWITZ A, BARKER C. Textbook of Operating Theatre Technology. New Delhi: Jaypee Brothers Medical Publishers; 2017.*
- *GUPTA P, JAIN A. Manual of Surgical Instruments and OT Techniques. 2nd ed. Jaypee Brothers Medical Publishers; 2018.*
- *WILSON J. Infection Control in Clinical Practice. 3rd ed. Baillière Tindall; 2019.*
- *CLAYMAN M. Basic Surgical Techniques. 6th ed. Hodder Arnold; 2018.*

Course Title: Diagnostic & Therapeutic Procedures Practical	L	T	P	Cr.
Course Code: BVP308	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Perform basic diagnostic procedures and assist in advanced diagnostic tests.
2. Demonstrate skills in therapeutic procedures such as oxygen therapy, nebulization, and infusion care.
3. Collect, handle, and transport biological samples safely.
4. Apply monitoring techniques for patients before, during, and after procedures.
5. Maintain infection control and safety standards during diagnostic and therapeutic interventions.

Course Content

List of Practicals / Experiments (60 Hours)

- Measurement of vital signs (temperature, pulse, respiration, blood pressure).
- Collection of blood, urine, and sputum samples (simulation and demonstration).
- Preparation of patients for diagnostic imaging (X-ray, ultrasound, CT) – mock demonstration.
- Performing ECG recording and basic interpretation.
- Spirometry and peak expiratory flow measurement (demonstration).
- Blood sugar estimation using glucometer.
- Administration of oxygen therapy by nasal cannula, mask, and rebreather.
- Nebulization procedure using different devices.
- IV-line setup and infusion management (simulation).
- Preparation and monitoring of patients for minor diagnostic endoscopic procedures (demo).

- Demonstration of blood transfusion setup and safety protocols.
- Post-procedure monitoring and documentation of patient condition.
- Handling of diagnostic/therapeutic complications (shock, allergic reactions) – simulation drills.
- Biomedical waste segregation in diagnostic and therapeutic settings.
- Case-based practice sessions integrating diagnostic and therapeutic procedures.

Suggested Readings

- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. Elsevier; 2020.
- BRUNNER LS, SUDDARTH DS. *Textbook of Medical-Surgical Nursing*. 14th ed. Lippincott Williams & Wilkins; 2017.
- JARVIS C. *Physical Examination and Health Assessment*. 8th ed. Elsevier Saunders; 2019.
- KUMAR P, CLARK M. *Kumar and Clark's Clinical Medicine*. 10th ed. Elsevier; 2020.
- HARRISON TR, JAMESON JL. *Harrison's Principles of Internal Medicine*. 20th ed. McGraw-Hill; 2018.

Course Title: Fundamental of Nursing Practical	L	T	P	Cr.
Course Code: BVP309	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate essential nursing skills related to hygiene, comfort, and patient safety.
2. Perform accurate measurement of vital signs and patient assessment.
3. Apply aseptic techniques and infection control measures in clinical settings.
4. Document and report patient care activities effectively.
5. Integrate theoretical knowledge of nursing fundamentals into practical, patient-centered care.

Course Content

List of Practicals / Experiments (60 Hours)

- Hand hygiene techniques (hand washing and use of hand rubs).
- Bed making (occupied and unoccupied bed).
- Admission and discharge procedures of patients.
- Measuring and recording vital signs (temperature, pulse, respiration, blood pressure).
- Assessment of nutritional status and feeding a dependent patient.
- Providing oral care, hair care, nail care, and eye care.
- Assisting with bathing and maintaining personal hygiene.
- Positioning and moving patients in bed (supine, prone, Fowler's, Trendelenburg).
- Application of restraints and comfort devices.
- Assisting with elimination needs: bedpan, urinal, commode use.
- Catheter care and perineal care (simulation).
- Oxygen administration (nasal prongs and mask).
- Care of pressure sores and prevention techniques.
- First aid in emergencies (bleeding, burns, fractures).
- Documentation and maintenance of nursing records and reports.

Suggested Readings

- POTTER PA, PERRY AG, STOCKERT P, HALL AM. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2020.
- TAYLOR C, LYNN P, BARTLETT J. *Fundamentals of Nursing: The Art and Science of Person-Centered Care*. 9th ed. Wolters Kluwer; 2018.
- KOZIER B, ERB G, BERMAN A, SNYDER S. *Fundamentals of Nursing: Concepts, Process and Practice*. 10th ed. Pearson Education; 2017.
- CRAVEN RF, HIRNLE CJ. *Fundamentals of Nursing: Human Health and Function*. 8th ed. Wolters Kluwer Health; 2016.
- BERMAN A, SNYDER S, LEVETT-JONES T, et al. *Kozier & Erb's Fundamentals of Nursing*. 5th ed. Pearson Education; 2018.

Course Title: Local Anaesthesia and Pain Management Practical	L	T	P	Cr.
Course Code: BVP310	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate preparation and safe administration techniques for local anaesthesia (on models/simulation).
2. Identify instruments, syringes, and drugs used in local anaesthetic procedures.
3. Recognize and manage complications related to local anaesthesia.
4. Apply techniques of pain assessment and management in clinical practice.
5. Integrate pharmacological and non-pharmacological strategies for safe pain management.

Course Content

List of Practicals / Experiments (60 Hours)

- Identification of local anaesthetic agents and cartridges.
- Familiarization with syringes, needles, and aspirating syringes used in local anaesthesia.
- Demonstration of topical anaesthesia application.
- Infiltration anaesthesia technique on models/manikins.
- Nerve block techniques (inferior alveolar, mental, infraorbital – simulation practice).
- Preparation of anaesthetic tray for minor surgical/dental procedures.
- Use of vasoconstrictors (e.g., adrenaline) – precautions and mixing demonstration.
- Monitoring patient vital signs during and after local anaesthesia.
- Recognition and management of adverse effects and toxicity (simulation).
- Pain assessment techniques using standardized pain scales.

- Demonstration of pharmacological pain management (NSAIDs, opioids – simulation and case studies).
- Non-pharmacological pain management: relaxation, distraction, and breathing exercises.
- Mock drills for management of emergency complications (anaphylaxis, syncope, cardiac arrest).
- Documentation and reporting of anaesthetic and pain management procedures.

Suggested Readings

- MILLER RD, ERIKSSON LI, FLEISHER LA, WIENER-KRONISH JP, YOUNG WL. *Miller's Anesthesia*. 9th ed. Philadelphia: Elsevier; 2020.
- COUSINS MJ, CARR DB, HORLOCKER TT, BREIVIK H. *Cousins and Bridenbaugh's Neural Blockade in Clinical Anesthesia and Pain Medicine*. 5th ed. Wolters Kluwer; 2017.
- HADZIC A. *Textbook of Regional Anesthesia and Acute Pain Management*. 2nd ed. New York: McGraw-Hill; 2017.
- MOORE PA, HERSH EV. *Local Anesthesia and Pain Control in Dental Practice*. 2nd ed. Saunders; 2019.
- RAJ PP. *Pain Medicine: A Comprehensive Review*. 3rd ed. Mosby Elsevier; 2017.

Course Title: Community Health & Primary Care	L	T	P	Cr
Course Code: BVP311	3	0	0	3

Total Hours 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the concepts and principles of community health and primary health care.
2. Identify determinants of health, disease prevention strategies, and health promotion activities.
3. Describe the structure and functions of the primary health care system in India.
4. Apply knowledge of national health programmes and community-based interventions.
5. Demonstrate skills in health education, communication, and community participation for improved health outcomes.

Course Contents

UNIT I – Introduction to Community Health (15 Hours)

- Definition, concept, and scope of community health
- Determinants of health and disease (social, cultural, economic, environmental)
- Natural history of disease and levels of prevention
- Indicators of health and their importance in planning
- Role of community health worker in health promotion and disease prevention

UNIT II – Primary Health Care System (10 Hours)

- Principles of primary health care (Alma-Ata Declaration)
- Structure and organization of health services in India (sub-centre, PHC, CHC)
- Role of multipurpose health workers, ASHAs, and ANMs
- Essential components of primary health care

- Referral system and intersectoral coordination

UNIT III – Maternal & Child Health and Family Welfare (10 Hours)

- Antenatal, intranatal, and postnatal care
- Child health services: growth monitoring, immunization, IMNCI
- Reproductive and child health (RCH) programme
- Family planning methods and counselling
- School health services and adolescent health

UNIT IV – National Health Programmes & Community Interventions (10 Hours)

- Overview of major national health programmes (TB, malaria, HIV/AIDS, NCDs, immunization, etc.)
- Health education and communication methods in community settings
- Community participation in health care delivery
- Epidemiological surveillance and outbreak investigation basics
- Role of NGOs and public-private partnerships in primary care

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question-Answer sessions

Suggested Readings

- *PARK K. Park's Textbook of Preventive and Social Medicine. 27th ed. Jabalpur: Banarsidas Bhanot Publishers; 2023.*
- *GHAI OP, PAUL VK, BAGGA A. Ghai Essential Pediatrics. 9th ed. CBS Publishers; 2018.*
- *GUPTA MC, MAHESHWARI N. Textbook of Community Medicine. 5th ed. New Delhi: Jaypee Brothers Medical Publishers; 2021.*
- *DETELS R, GULLIFORD M, KANNY K, TAN CC. Oxford Textbook of Global Public Health. 7th ed. Oxford: Oxford University Press; 2022.*
- *WHO. Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 1978. Geneva: World Health Organization; 1978*

Semester 4th

Course Title: Critical Care & ICU Management	L	T	P	Cr
Course Code: BVP401	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Describe the principles of critical care and organization of an ICU.
2. Demonstrate knowledge of common ICU equipment and monitoring systems.
3. Identify and manage common emergencies encountered in critical care.
4. Apply infection control and patient safety measures in ICU settings.
5. Interpret clinical data to assist in critical care decision-making.

Course Contents

UNIT I – Introduction to Critical Care & ICU Setup (10 Hours)

- Definition, scope, and importance of critical care
- ICU design, organization, and staffing patterns
- Levels of ICU care (primary, secondary, tertiary)
- Ethical and legal aspects in ICU

UNIT II – Monitoring & Equipment in ICU (10 Hours)

- Basic monitoring: ECG, BP, oxygen saturation, capnography
- Advanced monitoring: invasive BP, CVP, arterial blood gases
- Ventilators: types, principles of mechanical ventilation, modes
- Common ICU equipment: infusion pumps, defibrillators, suction units

UNIT III – Emergency & Critical Conditions Management (5 Hours)

- Airway management and resuscitation basics
- Shock: types, recognition, and management
- Cardiac arrest and ACLS/BLS overview
- Fluid and electrolyte balance in critical care

UNIT IV – Patient Safety, Infection Control & Documentation (5 Hours)

- ICU-acquired infections and prevention strategies

- Use of personal protective equipment (PPE)
- Sterilization and disinfection practices in ICU
- Documentation, communication, and handover in ICU

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- FINK MP, ABRAHAM E, VINCENT JL, KOHNEN W. *Textbook of Critical Care*. 7th ed. Philadelphia: Elsevier; 2017.
- MARINO PL. *The ICU Book*. 4th ed. Philadelphia: Wolters Kluwer; 2014.
- TINTINALLI JE, STAPCZYNSKI J, MA OJ, YEALY DM, MECKLER GD, CLINE DM. *Tintinalli's Emergency Medicine: A Comprehensive Study Guide*. 9th ed. New York: McGraw-Hill; 2020.
- PARTHASARATHY S, SRINIVASAN V. *Essentials of Critical Care*. 3rd ed. New Delhi: Jaypee Brothers Medical Publishers; 2019.
- DAGA SR. *ICU Protocols: A Stepwise Approach*. 3rd ed. New Delhi: Jaypee Brothers; 2019.

Course Title: Geriatric & Palliative Care	L	T	P	Cr
Course Code: BVP402	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the physiological and psychological changes associated with aging.
2. Identify common health problems in the elderly and their management strategies.
3. Demonstrate understanding of the principles and practices of palliative care.
4. Apply ethical and communication skills while dealing with geriatric and terminally ill patients.
5. Recognize the importance of a multidisciplinary approach in geriatric and palliative care.

Course Contents

UNIT I – Introduction to Geriatric Care (10 Hours)

- Demography and aging population trends
- Physiological changes in aging (cardiovascular, musculoskeletal, neurological, etc.)
- Psychological and social aspects of aging
- Principles of geriatric assessment and comprehensive geriatric care

UNIT II – Common Health Problems in Elderly (10 Hours)

- Chronic diseases: diabetes, hypertension, COPD, dementia, Parkinson's disease
- Nutritional needs and deficiencies in the elderly
- Polypharmacy and medication safety
- Rehabilitation and physiotherapy in geriatrics
- Elder abuse and legal issues in geriatric care

UNIT III – Principles of Palliative Care (5 Hours)

- Concept and philosophy of palliative care
- Pain assessment and management
- Symptom control (dyspnea, nausea, constipation, anxiety)

- Communication with patients and families in palliative care

UNIT IV – End-of-Life Care & Ethical Issues (5 Hours)

- Hospice care and home-based care
- Spiritual and cultural aspects of end-of-life care
- Ethical dilemmas and decision-making in terminal illness
- Role of healthcare team in bereavement support

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- HAZRA NC, PAL R. *Geriatrics and Gerontology: A Textbook*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2019.
- HAZRA R, MITRA S. *Principles and Practice of Geriatric Medicine*. 4th ed. New Delhi: Jaypee Brothers; 2016.
- CHERNY NI, FALLON M, KAASA S, PORTENOY RK, CURROW DC. *Oxford Textbook of Palliative Medicine*. 6th ed. Oxford: Oxford University Press; 2021.
- MACLEOD R, VAN DEN BLOCK L. *Textbook of Palliative Care*. Cham: Springer; 2019.
- WHO. *Palliative Care for Older People: Better Practices*. Copenhagen: World Health Organization Regional Office for Europe; 2011.

Course Title: Maternal & Child Care	L	T	P	Cr
Course Code: BVP403	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the physiological changes during pregnancy and their clinical significance.
2. Describe antenatal, intranatal, and postnatal care of mothers.
3. Identify common maternal and neonatal complications and their management.
4. Demonstrate knowledge of child growth, development, and immunization.
5. Apply preventive and promotive strategies for maternal and child health in the community.

Course Contents

UNIT I – Maternal Health & Antenatal Care (10 Hours)

- Importance of maternal health in public health
- Physiological changes during pregnancy
- Antenatal care: objectives, components, risk assessment
- High-risk pregnancy and its management
- Nutrition during pregnancy and lactation

UNIT II – Intranatal & Postnatal Care (10 Hours)

- Normal labor: stages, conduct, and monitoring
- Complications of labor and their management
- Postnatal care of mother: physical and psychological aspects
- Family planning methods and counseling
- Maternal morbidity and mortality: causes and prevention strategies

UNIT III – Child Health & Neonatal Care (5 Hours)

- Care of the normal newborn
- Low birth weight and preterm baby care
- Common neonatal disorders (asphyxia, sepsis, jaundice)
- Essential newborn care practices

UNIT IV – Child Development & Preventive Pediatrics (5 Hours)

- Growth and developmental milestones
- Immunization schedule (national & WHO recommendations)
- Common childhood illnesses and management
- Integrated Management of Childhood Illness (IMCI) approach

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- DATTA P. *Textbook of Obstetrics. 9th ed. New Delhi: Jaypee Brothers Medical Publishers; 2018.*
- DUTTA DC. *Textbook of Obstetrics. 8th ed. Kolkata: New Central Book Agency; 2015.*
- PARK K. *Park's Textbook of Preventive and Social Medicine. 27th ed. Jabalpur: Banarsidas Bhanot Publishers; 2023.*
- WHO. *Integrated Management of Childhood Illness: Handbook. Geneva: World Health Organization; 2013.*
- GOPALAN C, SASTRI BV, BALASUBRAMANIAN SC. *Nutrition for Mother and Child. 3rd ed. New Delhi: National Institute of Nutrition; 2017.*

Course Title: Advanced Nursing Procedures I	L	T	P	Cr
Course Code: BVP404	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate knowledge of advanced nursing procedures used in critical and specialized care.
2. Apply aseptic techniques and infection control measures in advanced nursing practice.
3. Assist in specialized diagnostic and therapeutic procedures.
4. Provide safe and effective care using advanced equipment and technology.
5. Integrate ethical, legal, and professional principles in advanced nursing interventions.

Course Contents

UNIT I – Advanced Nursing in Medical-Surgical Care (10 Hours)

- Intravenous therapy: cannulation, infusion, complications
- Blood transfusion procedures and monitoring
- Central venous access devices and their care
- Catheterization (urinary, gastric, rectal) and care of drainage systems
- Pain management techniques

UNIT II – Critical Care Nursing Procedures (10 Hours)

- Oxygen therapy: methods, indications, hazards
- Airway management: suctioning, tracheostomy care
- Mechanical ventilation: nursing care and monitoring
- Cardiac monitoring and interpretation of basic ECG
- Emergency procedures: CPR, defibrillation, use of crash cart

UNIT III – Perioperative Nursing Procedures (5 Hours)

- Preoperative preparation of patient and equipment
- Intraoperative nursing roles and responsibilities
- Post-anesthesia care unit (PACU) nursing management
- Sterile techniques and handling of instruments

UNIT IV – Specialized Nursing Interventions (5 Hours)

- Dialysis care: nursing role in hemodialysis and peritoneal dialysis
- Chemotherapy and safe handling of cytotoxic drugs
- Infection control practices in advanced procedures
- Documentation and evaluation in advanced nursing procedures

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- POTTER PA, PERRY AG. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2021.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. St. Louis: Elsevier; 2019.
- CRAVEN RF, HIRNLE CJ, HENSHAW CM. *Fundamentals of Nursing: Human Health and Function*. 8th ed. Philadelphia: Wolters Kluwer; 2021.
- ELKINS M, PERRY A. *Clinical Nursing Skills and Techniques*. 10th ed. St. Louis: Elsevier; 2022.
- HINKLE JL, CHEEVER KH. *Brunner & Suddarth's Textbook of Medical-Surgical Nursing*. 15th ed. Philadelphia: Wolters Kluwer; 2022.

Course Title: Cardiac Care	L	T	P	Cr
Course Code: BVP405	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Describe the anatomy and physiology of the cardiovascular system relevant to cardiac care.
2. Identify common cardiac diseases, their signs, symptoms, and nursing management.
3. Demonstrate knowledge of diagnostic and therapeutic cardiac procedures.
4. Apply emergency cardiac care protocols, including BLS and ACLS.
5. Integrate patient education, lifestyle modification, and rehabilitation strategies in cardiac care.

Course Contents

UNIT I – Basics of Cardiac Care (10 Hours)

- Anatomy and physiology of the heart and blood vessels
- Cardiac cycle, conduction system, and hemodynamics
- Risk factors and prevention of cardiovascular diseases
- Common cardiac symptoms: chest pain, palpitations, dyspnea, edema

UNIT II – Cardiac Disorders and Nursing Management (10 Hours)

- Coronary artery disease (angina, myocardial infarction)
- Heart failure: types, clinical features, nursing care
- Valvular heart diseases and rheumatic heart disease
- Arrhythmias: recognition and basic management
- Hypertension and its complications

UNIT III – Cardiac Diagnostics and Interventions (5 Hours)

- ECG: basics of interpretation
- Echocardiography, stress test, Holter monitoring

- Cardiac catheterization and angiography
- Pacemakers and implantable devices (ICD, CRT)

UNIT IV – Emergency and Rehabilitation in Cardiac Care (5 Hours)

- Cardiac arrest: BLS and ACLS protocols
- Use of defibrillator and crash cart
- Post-MI rehabilitation and lifestyle modification
- Patient counseling, education, and follow-up care

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings (Vancouver Style)

- LILLY LS. *Pathophysiology of Heart Disease: A Collaborative Project of Medical Students and Faculty*. 7th ed. Philadelphia: Wolters Kluwer; 2021.
- BRAUNWALD E, ZIPES DP, LIBBY P. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine*. 12th ed. Philadelphia: Elsevier; 2021.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. St. Louis: Elsevier; 2019.
- MARINO PL. *The ICU Book*. 4th ed. Philadelphia: Wolters Kluwer; 2014.
- AMERICAN HEART ASSOCIATION. *Advanced Cardiovascular Life Support (ACLS) Provider Manual*. Dallas: AHA; 2020.

Course Title: Patient Care and Hospital Administration	L	T	P	Cr.
Course Code: BVP406	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate skills in basic patient care procedures within hospital settings.
2. Apply infection control and safety measures in patient handling.
3. Understand hospital administrative processes including admission, discharge, and record-keeping.
4. Coordinate effectively with healthcare teams for patient-centered care.
5. Manage resources and maintain ethical and professional standards in patient care and hospital administration.

Course Content

List of Practicals / Experiments (60 Hours)

- Patient Care Skills
 - Measurement of vital signs (BP, temperature, pulse, respiration)
 - Bed making: occupied and unoccupied beds
 - Patient hygiene: assisted bathing, oral care, grooming
 - Feeding techniques for dependent patients
 - Positioning, moving, and lifting patients safely
- Infection Control & Safety
 - Hand hygiene practices (WHO technique)
 - Use of PPE (gloves, masks, gowns)
 - Waste segregation and biomedical waste management
 - Sterilization and disinfection procedures
 - Handling of spills and sharp injuries
- Hospital Administration Skills
 - Admission and discharge procedures
 - Patient record maintenance and documentation
 - Inventory management of ward supplies and equipment
 - Coordination with various hospital departments (lab, radiology, pharmacy)

- Handling medico-legal cases and reporting
- Emergency & Supportive Care
 - Basic life support (BLS) demonstration
 - First aid in common emergencies (bleeding, burns, fractures)
 - Assisting in emergency procedures (oxygen therapy, IV setup)
 - Patient transport within the hospital (stretcher, wheelchair, ambulance)
 - Communication and counseling skills in patient care

Suggested Readings

- POTTER PA, PERRY AG. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2021.
- TREAS LS, WILKINSON JM. *Basic Nursing: Thinking, Doing, and Caring*. 3rd ed. Philadelphia: F.A. Davis; 2019.
- PARK K. *Park's Textbook of Preventive and Social Medicine*. 27th ed. Jabalpur: Banarsidas Bhanot; 2023.
- GOYAL RC. *Hospital Administration and Human Resource Management*. 8th ed. New Delhi: PHI Learning; 2017.
- SINGH S. *Hospital Administration: Principles and Practice*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2018.

Course Title: Critical Care & ICU Management Practical	L	T	P	Cr.
Course Code: BVP407	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate basic and advanced patient monitoring skills in ICU.
2. Perform airway management and oxygen therapy procedures.
3. Assist in the operation and care of ventilators and infusion devices.
4. Apply infection control measures and safety protocols in ICU.
5. Manage emergency situations in ICU using BLS/ACLS protocols.

Course Content

List of Practicals / Experiments (60 Hours)

- ICU Orientation & Setup
 - Familiarization with ICU layout, equipment, and protocols
 - Understanding ICU staffing and patient categories
- Patient Monitoring Skills
 - Measurement and recording of vital signs in ICU
 - ECG recording and basic interpretation
 - Arterial blood pressure and CVP monitoring (demonstration)
 - Pulse oximetry and capnography use
- Airway & Oxygen Therapy
 - Oxygen delivery methods (nasal cannula, mask, NRBM, Venturi)
 - Endotracheal suctioning and care
 - Tracheostomy care and management
 - Airway positioning and bag-mask ventilation
- Ventilator & Device Management
 - Introduction to mechanical ventilators: modes and alarms
 - Assisting in ventilator setup and troubleshooting
 - Infusion pumps and syringe pumps: operation and safety
 - Defibrillator use (hands-on demonstration on manikin)
- Emergency & Critical Care Skills
 - Basic Life Support (BLS) – adult and pediatric
 - Advanced Cardiac Life Support (ACLS) – simulation-based

- Shock management: IV fluid administration, monitoring
- Crash cart organization and usage
- Infection Control & Safety in ICU
 - Hand hygiene and use of PPE in ICU
 - Sterilization and disinfection of ICU equipment
 - Prevention of ventilator-associated pneumonia (VAP) and catheter-related infections
 - Documentation, reporting, and communication in ICU

Suggested Readings

- MARINO PL. *The ICU Book. 4th ed. Philadelphia: Wolters Kluwer; 2014.*
- FINK MP, ABRAHAM E, VINCENT JL, KOHNEN W. *Textbook of Critical Care. 7th ed. Philadelphia: Elsevier; 2017.*
- AMERICAN HEART ASSOCIATION. *Advanced Cardiovascular Life Support (ACLS) Provider Manual. Dallas: AHA; 2020.*
- ELLIOTT D, AITKEN LM, CHESNUTT M. *Critical Care Nursing: A Holistic Approach. 12th ed. Philadelphia: Wolters Kluwer; 2021.*
- HINKLE JL, CHEEVER KH. *Brunner & Suddarth's Textbook of Medical-Surgical Nursing. 15th ed. Philadelphia: Wolters Kluwer; 2022.*

Course Title: Geriatric & Palliative Care Practical	L	T	P	Cr.
Course Code: BVP408	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate essential nursing skills in the care of elderly patients.
2. Apply principles of communication, empathy, and counseling in geriatric and palliative care.
3. Provide supportive care for common geriatric problems and end-of-life conditions.
4. Assist in pain management and symptom relief for palliative patients.
5. Maintain patient dignity, ethical standards, and documentation in geriatric and palliative settings.

Course Content

List of Practicals / Experiments (60 Hours)

- Geriatric Care Skills
 - Assessment of geriatric patient (physical, mental, social aspects)
 - Measurement of vital signs in elderly patients
 - Nutritional assessment and dietary planning for geriatrics
 - Mobility assistance: safe transfer, use of walking aids
 - Fall prevention strategies in the elderly
- Daily Living Support for Elderly
 - Personal hygiene and grooming for elderly patients
 - Feeding and hydration support
 - Bowel and bladder care in geriatric patients
 - Pressure sore prevention and management
 - Recreational and social activities for elderly well-being
- Palliative Care Skills
 - Pain assessment using standard scales (e.g., Numeric, Wong-Baker)
 - Symptom management: nausea, dyspnea, constipation, anxiety
 - Oxygen therapy and supportive nursing interventions
 - Communication with terminally ill patients and families

- Psychological, spiritual, and cultural support in end-of-life care
- Ethical & Administrative Practices
 - Documentation in geriatric and palliative care
 - Home-based and hospice care demonstration
 - Ethical dilemmas and decision-making role play
 - Family counseling and bereavement support
 - Multidisciplinary teamwork in geriatric and palliative settings

Suggested Readings

- HAZRA NC, PAL R. *Geriatrics and Gerontology: A Textbook*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2019.
- CHERNY NI, FALLON M, KAASA S, PORTENOY RK, CURROW DC. *Oxford Textbook of Palliative Medicine*. 6th ed. Oxford: Oxford University Press; 2021.
- MACLEOD R, VAN DEN BLOCK L. *Textbook of Palliative Care*. Cham: Springer; 2019.
- POTTER PA, PERRY AG. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2021.
- WORLD HEALTH ORGANIZATION. *Palliative Care for Older People: Better Practices*. Copenhagen: WHO Regional Office for Europe; 2011.

Course Title: Maternal & Child Care Practical	L	T	P	Cr.
Course Code: BVP409	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate skills in antenatal, intranatal, and postnatal maternal care.
2. Provide safe and effective newborn and child care.
3. Identify and manage common maternal and neonatal emergencies.
4. Apply knowledge of growth monitoring, immunization, and nutrition in child health.
5. Practice documentation, counseling, and health education in maternal and child care.

Course Content

List of Practicals / Experiments (60 Hours)

- Antenatal Care Skills
 - Registration of antenatal mother and case history taking
 - Measurement of vital signs and maternal anthropometry
 - Antenatal examination: abdominal palpation, fundal height
 - Urine testing for sugar and albumin
 - Nutrition counseling and iron-folic acid supplementation
- Intranatal Care Skills
 - Preparation of labor room and instruments
 - Assisting in normal vaginal delivery
 - Monitoring labor using partograph
 - Immediate care of the newborn (APGAR scoring, cord care)
 - Assisting in episiotomy and suturing (observation/demonstration)
- Postnatal & Maternal Care
 - Postnatal assessment and care of mother
 - Breastfeeding techniques and counselling
 - Identification and management of postnatal complications

- Family planning counseling and demonstration of contraceptive methods
- Child Health & Preventive Care
 - Growth monitoring: weight, height, head and chest circumference
 - Developmental milestone assessment
 - Immunization techniques and cold chain maintenance
 - Essential newborn care and management of low-birth-weight babies
 - Health education for mothers on hygiene, nutrition, and common childhood illnesses

Suggested Readings

- DATTA P. *Textbook of Obstetrics. 9th ed. New Delhi: Jaypee Brothers Medical Publishers; 2018.*
- DUTTA DC. *Textbook of Obstetrics. 8th ed. Kolkata: New Central Book Agency; 2015.*
- GOPALAN C, SASTRI BV, BALASUBRAMANIAN SC. *Nutrition for Mother and Child. 3rd ed. New Delhi: National Institute of Nutrition; 2017.*
- PARK K. *Park's Textbook of Preventive and Social Medicine. 27th ed. Jabalpur: Banarsidas Bhanot; 2023.*
- WHO. *Integrated Management of Childhood Illness: Handbook. Geneva: World Health Organization; 2013.*

Course Title: Advanced Nursing Procedures I Practical	L	T	P	Cr.
Course Code: BVP410	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Perform advanced nursing procedures safely and effectively in clinical and simulated settings.
2. Demonstrate aseptic techniques and infection control measures during advanced procedures.
3. Assist in specialized diagnostic and therapeutic interventions.
4. Operate and maintain advanced nursing equipment used in patient care.
5. Document and evaluate nursing interventions according to professional standards.

Course Content

List of Practicals / Experiments (60 Hours)

- Intravenous & Infusion Therapy
 - IV cannulation and infusion setup
 - Preparation and administration of IV medications
 - Blood transfusion procedures and monitoring
 - Care of central venous catheters (CVC, PICC line – demonstration)
- Airway & Oxygen Management
 - Administration of oxygen therapy by various devices
 - Airway suctioning (oral, nasopharyngeal, tracheal)
 - Tracheostomy care and tube suctioning
 - Bag-mask ventilation techniques (manikin practice)
- Critical Care Nursing Skills
 - ECG recording and interpretation of basic rhythms
 - Use of defibrillator (simulation on manikin)
 - Arterial blood sampling (demonstration)
 - Monitoring fluid balance and intake-output charting
- Perioperative Nursing Skills

- Preoperative patient preparation and checklist
- Setting up a sterile field and handling instruments
- Assisting in minor surgical procedures
- Post-anesthesia care: monitoring and interventions
- Specialized Procedures & Safety
 - Dialysis care (demonstration: hemodialysis and peritoneal dialysis)
 - Chemotherapy administration: precautions and safe handling
 - Catheterization and management of drainage systems
 - Documentation and reporting of advanced procedures

Suggested Readings

- POTTER PA, PERRY AG. *Fundamentals of Nursing*. 10th ed. St. Louis: Elsevier; 2021.
- ELKINS M, PERRY A. *Clinical Nursing Skills and Techniques*. 10th ed. St. Louis: Elsevier; 2022.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. St. Louis: Elsevier; 2019.
- HINKLE JL, CHEEVER KH. *Brunner & Suddarth's Textbook of Medical-Surgical Nursing*. 15th ed. Philadelphia: Wolters Kluwer; 2022.
- CRAVEN RF, HIRNLE CJ, HENSHAW CM. *Fundamentals of Nursing: Human Health and Function*. 8th ed. Philadelphia: Wolters Kluwer; 2021.

Course Title: Cardiac Care Practical	L	T	P	Cr
Course Code: BVP411	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Perform basic and advanced cardiac monitoring, including ECG recording and interpretation.
2. Assess and monitor vital signs in cardiac patients accurately.
3. Identify and manage common cardiac emergencies, such as arrhythmias, myocardial infarction, and heart failure, using appropriate interventions.
4. Demonstrate proficiency in administering cardiac medications and performing basic life support (BLS) and advanced cardiac life support (ACLS) procedures.
5. Educate patients and caregivers on lifestyle modifications, medication compliance, and preventive cardiac care.

Course Content – List of Practicals / Experiments (60 Hours):

- Measurement and recording of blood pressure, pulse rate, respiratory rate, and oxygen saturation.
- ECG electrode placement and 12-lead ECG recording on mannequins or patients.
- Interpretation of normal and abnormal ECG rhythms, including arrhythmias, ischemia, and infarction patterns.
- Monitoring and interpretation of heart sounds using a stethoscope.
- Assessment and documentation of patients with cardiac complaints (chest pain, palpitations, syncope).
- Administration of emergency cardiac medications (simulation or under supervision).
- Performance of BLS and CPR on mannequins following current guidelines.
- Simulated management of acute cardiac emergencies: angina, myocardial infarction, cardiac arrest.

- Demonstration of use of cardiac assist devices: defibrillator, AED, pacemaker monitoring.
- Patient education sessions on diet, exercise, smoking cessation, and medication adherence.
- Recording and interpretation of hemodynamic parameters (CVP, pulse pressure, MAP) in simulation settings.
- Identification and management of complications in patients with chronic heart diseases.
- Role-playing patient counseling for post-discharge cardiac care and rehabilitation.
- Maintaining accurate and detailed cardiac care records and charts.
- Case-based discussion and review of clinical scenarios for preventive and critical cardiac care.

Suggested Readings:

- *Hurst JW, et al. Hurst's The Heart. 14th Edition, McGraw-Hill, 2017.*
- *Zipes DP, Jalife J. Cardiac Electrophysiology: From Cell to Bedside. 7th Edition, Elsevier, 2018.*
- *Bonnici F, et al. Manual of Cardiac Nursing. Springer, 2020.*
- *American Heart Association. Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. 2020.*
- *Marriott HJL. Practical Cardiac Nursing. 3rd Edition, Elsevier, 2016.*

Course Title: Patient Care and Hospital Administration Practical	L	T	P	Cr
Course Code: BVP412	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate basic patient care skills including hygiene, comfort, and mobility assistance.
2. Monitor and record patient vital signs accurately.
3. Apply infection control practices and safe handling of biomedical waste.
4. Perform documentation and administrative tasks in hospital settings.
5. Participate in effective communication and teamwork for smooth hospital operations.

Course Content – List of Practicals / Experiments (60 Hours):

- Bed-making techniques (occupied and unoccupied bed).
- Hand hygiene demonstration and use of personal protective equipment (PPE).
- Recording and monitoring vital signs: temperature, pulse, respiration, blood pressure.
- Assisting patients with feeding, oral care, and personal hygiene.
- Safe patient positioning, transfer, and mobility support.
- Recording intake and output chart, fluid balance.
- Infection control practices: sterilization, disinfection, biomedical waste segregation.
- Assisting in admission and discharge procedures.
- Documentation of patient case files and hospital records.
- Handling hospital equipment safely (wheelchair, stretcher, oxygen cylinder).
- Preparation of nursing care plans.
- Observing hospital administration workflows: scheduling, patient registration, and billing.

- Role plays on effective patient communication and counseling.
- Emergency response drills: fire safety, evacuation, and basic first aid.
- Case-based discussions on ethical and legal aspects of patient care and hospital management.

Suggested Readings:

- *Kozier B., Erb G. Fundamentals of Nursing: Concepts, Process and Practice. Pearson, 2018.*
- *Ellis JR, Nowlis EA. Patient Care in Health Practice. Lippincott, 2017.*
- *Gupta S., Joshi A. Hospital Administration and Management. Jaypee Brothers, 2015.*
- *WHO. Patient Safety Curriculum Guide. World Health Organization, 2020.*
- *Gulati A. Essentials of Hospital Administration. CBS Publishers, 2019.*

Semester 5th

Course Title: Rehabilitation & Physiotherapy Support	L	T	P	Cr
Course Code: BVP501	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic principles of rehabilitation and physiotherapy support.
2. Identify common conditions requiring physiotherapy interventions.
3. Demonstrate knowledge of assistive devices and their applications in patient care.
4. Support physiotherapists in routine clinical procedures and patient mobilization.
5. Apply safety measures and ethical considerations in rehabilitation practices.

Course Contents

UNIT I: Introduction to Rehabilitation (10 Hours)

- Concept and scope of rehabilitation.
- Role of rehabilitation in healthcare delivery.
- Multidisciplinary approach in rehabilitation teams.
- Psychosocial aspects of rehabilitation.

UNIT II: Basics of Physiotherapy Support (10 Hours)

- Principles of physiotherapy.
- Common modalities: heat, cold, electrotherapy, and exercises.
- Patient positioning and mobilization.
- Role of physiotherapy in orthopedic, neurological, and cardiopulmonary conditions.

UNIT III: Assistive Devices & Patient Care (5 Hours)

- Types of assistive devices: crutches, walkers, wheelchairs, braces, and prosthetics.
- Safe handling and transfer of patients.

- Care and maintenance of assistive devices.

UNIT IV: Safety, Ethics & Documentation (5 Hours)

- Infection control and safety measures in physiotherapy practice.
- Ethical issues in rehabilitation care.
- Basic record keeping and patient documentation.

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- KISNER C, COLBY LA, BORSTAD J. *Therapeutic Exercise: Foundations and Techniques*. 7th ed. Philadelphia: F.A. Davis; 2017.
- BRUCKNER P, KHAN K. *Clinical Sports Medicine*. 5th ed. McGraw Hill; 2017.
- MAITLAND GD, HENGVELD E, BANKS K, ENGLISH K. *Maitland's Vertebral Manipulation*. 8th ed. Elsevier; 2013.
- O'SULLIVAN SB, SCHMITZ TJ, FULK GD. *Physical Rehabilitation*. 7th ed. F.A. Davis; 2019.
- FRONTERA WR, SILVER JK, RAPPORT LJ. *Essentials of Physical Medicine and Rehabilitation*. 4th ed. Elsevier; 2019.

Course Title: Mental Health & Counselling Skills	L	T	P	Cr
Course Code: BVP502	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Describe the concept of mental health and its importance in overall well-being.
2. Identify common mental health disorders and their basic features.
3. Demonstrate effective counselling skills for patient care and support.
4. Apply communication and listening techniques in counselling situations.
5. Recognize ethical and cultural considerations in mental health counselling.

Course Contents

UNIT I: Introduction to Mental Health (10 Hours)

- Concept, definition, and importance of mental health.
- Determinants of mental health.
- Myths and misconceptions about mental illness.
- Role of healthcare professionals in promoting mental health.

UNIT II: Common Mental Disorders (10 Hours)

- Overview of depression, anxiety, psychosis, and stress-related disorders.
- Substance abuse and its impact on mental health.
- Early identification and referral mechanisms.
- Role of family and community in care and support.

UNIT III: Basics of Counselling (5 Hours)

- Definition, goals, and principles of counselling.
- Communication skills: listening, empathy, rapport-building.
- Stages of counselling process.
- Barriers to effective counselling.

UNIT IV: Applied Counselling Skills & Ethics (5 Hours)

- Counselling in specific settings: hospitals, schools, workplaces.

- Crisis intervention and stress management techniques.
- Ethical issues and confidentiality in counselling.
- Self-care for counsellors.

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- COREY G. *Theory and Practice of Counseling and Psychotherapy*. 10th ed. Cengage Learning; 2016.
- NEZU AM, NEZU CM, D’ZURILLA TJ. *Problem-Solving Therapy: A Positive Approach to Clinical Intervention*. 3rd ed. Springer; 2013.
- GELSO CJ, FRETZ BR. *Counseling Psychology*. 3rd ed. American Psychological Association; 2014.
- WHO. *Mental Health: Strengthening Our Response*. Geneva: World Health Organization; 2018.
- KAPLAN HI, SADOCK BJ, GREBB JA. *Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry*. 11th ed. Wolters Kluwer; 2015.

Course Title: Preventive Oral Care	L	T	P	Cr
Course Code: BVP503	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the principles and importance of preventive dentistry.
2. Identify risk factors for common oral diseases.
3. Demonstrate knowledge of oral hygiene methods and preventive measures.
4. Counsel patients on diet, lifestyle, and oral health practices.
5. Recognize the role of community-based programs in promoting oral health.

Course Contents

UNIT I: Introduction to Preventive Dentistry (10 Hours)

- Concept and scope of preventive dentistry.
- Natural defense mechanisms of the oral cavity.
- Dental caries: etiology, risk factors, and prevention.
- Periodontal diseases: causes and preventive strategies.

UNIT II: Oral Hygiene Practices & Patient Education (10 Hours)

- Brushing techniques and interdental cleaning.
- Use of fluorides: topical and systemic.
- Role of mouth rinses, sealants, and dentifrices.
- Patient motivation and behavior change communication.

UNIT III: Diet & Lifestyle in Oral Health (5 Hours)

- Diet and nutrition in prevention of dental caries and periodontal diseases.
- Tobacco and alcohol-related oral conditions.
- Preventive strategies for high-risk groups.

UNIT IV: Public Health and Preventive Programs (5 Hours)

- School dental health programs.
- Oral health promotion in the community.
- Preventive role of auxiliary healthcare providers.

- Screening and referral for oral health problems.

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- SOH G. *Preventive Dentistry*. 2nd ed. World Scientific Publishing; 2017.
- HARRIS NO, GARCIA-GODOY F, NATHE CN. *Primary Preventive Dentistry*. 9th ed. Pearson; 2019.
- FEATHERSTONE JD. The continuum of dental caries—Evidence for a dynamic disease process. *J Dent Res*. 2004;83 Spec No C:C39–42.
- MURRAY JJ, NUNN JH, STEELE JG. *Prevention of Oral Disease*. 5th ed. Oxford University Press; 2003.
- WHO. *Oral Health Promotion: An Essential Element of a Health-Promoting School*. Geneva: World Health Organization; 2003.

Course Title: Health and Safety Regulation	L	T	P	Cr
Course Code: BVP504	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic principles of workplace health and safety.
2. Identify key national and international health and safety regulations.
3. Apply safety protocols in healthcare and institutional settings.
4. Recognize hazards, assess risks, and implement preventive measures.
5. Demonstrate awareness of rights, responsibilities, and ethics in occupational safety.

Course Contents

UNIT I: Introduction to Health & Safety (10 Hours)

- Concept and importance of occupational health and safety.
- Common workplace hazards: physical, chemical, biological, and ergonomic.
- Accident causation and prevention strategies.
- Safety culture and employee responsibilities.

UNIT II: Health & Safety Legislation (10 Hours)

- Overview of Indian health and safety laws (Factories Act, 1948; Employees' State Insurance Act; Biomedical Waste Rules).
- International guidelines: WHO, ILO, OSHA standards.
- Institutional policies and compliance requirements.
- Rights and responsibilities of employers and employees.

UNIT III: Risk Management & Safety Practices (5 Hours)

- Risk assessment and hazard control methods.
- Fire safety, electrical safety, and chemical handling.
- Safe use of equipment and personal protective equipment (PPE).

UNIT IV: Emergency Preparedness & Ethical Issues (5 Hours)

- First aid and emergency response planning.
- Disaster preparedness in healthcare facilities.
- Ethical and legal issues in health and safety.

- Reporting, documentation, and continuous improvement.

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- GOEL S. *Textbook of Hospital and Healthcare Administration*. 2nd ed. PHI Learning; 2014.
- GOYAL RC. *Hospital Administration and Human Resource Management*. 5th ed. PHI Learning; 2013.
- LEVESON NG. *Engineering a Safer World: Systems Thinking Applied to Safety*. MIT Press; 2011.
- WORLD HEALTH ORGANIZATION. *Occupational Health: A Manual for Primary Health Care Workers*. Geneva: WHO; 2001.
- ILO. *Guidelines on Occupational Safety and Health Management Systems (ILO-OSH 2001)*. Geneva: International Labour Organization; 2001.

Course Title: Advanced Nursing Procedures II	L	T	P	Cr
Course Code: BVP505	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the principles and techniques of advanced nursing procedures.
2. Demonstrate knowledge of specialized nursing care in critical and surgical settings.
3. Apply infection control and safety measures during advanced procedures.
4. Assist in monitoring and managing patients with complex health conditions.
5. Integrate ethical and legal considerations into nursing practice.

Course Contents

UNIT I: Advanced Patient Care Techniques (10 Hours)

- Intravenous therapy: cannulation, fluid administration, and monitoring.
- Blood transfusion: indications, procedure, and complications.
- Catheterization: urinary and central line care.
- Pain management strategies in advanced care.

UNIT II: Critical Care Nursing (10 Hours)

- Nursing care of patients in ICU and emergency units.
- Use of ventilators, oxygen therapy, and suctioning.
- Management of patients with cardiac emergencies.
- Observation and interpretation of vital signs and critical parameters.

UNIT III: Surgical Nursing Support (5 Hours)

- Preoperative and postoperative care.
- Assisting in minor surgical procedures.

Wound care, dressings, and infection control in surgical patients.

UNIT IV: Professional and Ethical Aspects (5 Hours)

- Legal responsibilities of nurses in advanced care.
- Documentation and record keeping.
- Ethical issues in nursing procedures.
- Communication and teamwork in multidisciplinary settings.

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- POTTER PA, PERRY AG, STOCKERT P, HALL A. *Fundamentals of Nursing*. 10th ed. Elsevier; 2020.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. Elsevier; 2019.
- TIMBY BK, SMITH NE. *Introductory Medical-Surgical Nursing*. 12th ed. Wolters Kluwer; 2021.
- TAYLOR CR, LYNN P, BARTLETT J. *Fundamentals of Nursing: The Art and Science of Person-Centered Care*. 9th ed. Wolters Kluwer; 2018.
- WHO. *Patient Safety Curriculum Guide: Multi-professional Edition*. Geneva: World Health Organization; 2011.

Course Title: Research Methodology & Biostatistics	L	T	P	Cr
Course Code: BVP506	2	0	0	2

Total Hours 30

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the basic principles of research and scientific inquiry.
2. Formulate research problems, objectives, and hypotheses.
3. Describe study designs and data collection methods.
4. Apply basic statistical tools for data analysis and interpretation.
5. Prepare a research report following ethical guidelines.

Course Contents

UNIT I: Introduction to Research Methodology (10 Hours)

- Definition, scope, and importance of research in healthcare.
- Types of research: qualitative and quantitative.
- Steps in research process.
- Identification of research problems and formulation of objectives.

UNIT II: Research Designs & Data Collection (10 Hours)

- Study designs: descriptive, analytical, experimental, observational.
- Sampling techniques: probability and non-probability.
- Methods of data collection: questionnaire, interview, observation, records.
- Reliability and validity of research tools.

UNIT III: Introduction to Biostatistics (5 Hours)

- Role of statistics in research.
- Types of data: qualitative and quantitative.
- Measures of central tendency (mean, median, mode).
- Measures of dispersion (range, variance, standard deviation).

UNIT IV: Data Analysis, Interpretation & Reporting (5 Hours)

- Presentation of data: tables, graphs, and charts.

- Basics of statistical tests: t-test, chi-square test (conceptual only).
- Interpretation of results.
- Research ethics and writing a research report.

Transaction Modes: Video-based teaching, Collaborative teaching, Case-based teaching, Question–Answer sessions

Suggested Readings

- KOTHARI CR, GARG G. *Research Methodology: Methods and Techniques*. 4th ed. New Delhi: New Age International; 2019.
- INDERJEET K, VIJAY G. *Biostatistics: Basic Concepts and Methodology for the Health Sciences*. 2nd ed. Wiley; 2014.
- GUPTA S, KAPOOR VK. *Fundamentals of Mathematical Statistics*. 11th ed. Sultan Chand & Sons; 2017.
- PARAHOO K. *Nursing Research: Principles, Process and Issues*. 3rd ed. Palgrave Macmillan; 2014.
- WHO. *Ethical Issues in Patient Safety Research*. Geneva: World Health Organization; 2013.

Course Title: Rehabilitation & Physiotherapy Support Practical	L	T	P	Cr.
Course Code: BVP507	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate safe handling and mobilization of patients.
2. Assist in basic physiotherapy techniques under supervision.
3. Operate and maintain simple physiotherapy equipment and aids.
4. Support patients in the use of mobility and assistive devices.
5. Document patient progress and assist in rehabilitation care planning.

Course Content

List of Practicals / Experiments (60 Hours):

- Demonstration and practice of patient positioning techniques (supine, prone, lateral, Fowler's, Trendelenburg).
- Bed-to-chair transfer and wheelchair handling.
- Use and demonstration of mobility aids: crutches, walkers, canes, and wheelchairs.
- Range of Motion (ROM) exercises: passive, active-assisted, and active.
- Demonstration of breathing exercises and chest physiotherapy techniques.
- Application of hot and cold therapy (packs, compresses).
- Demonstration of simple electrotherapy equipment (TENS, ultrasound) – familiarization.
- Basic gait training techniques with and without assistive devices.
- Care and maintenance of physiotherapy equipment.
- Record keeping: patient progress notes and therapy documentation.

Suggested Readings

- KISNER C, COLBY LA, BORSTAD J. *Therapeutic Exercise: Foundations and Techniques*. 7th ed. Philadelphia: F.A. Davis; 2017.
- O'SULLIVAN SB, SCHMITZ TJ, FULK GD. *Physical Rehabilitation*. 7th ed. F.A. Davis; 2019.

- GOWDA TM, RAMAKRISHNA Y. *Physiotherapy in Medical Conditions*. 2nd ed. Jaypee Brothers; 2014.
- LOW J, REED A. *Electrotherapy Explained: Principles and Practice*. 4th ed. Elsevier; 2000.
- WORLD HEALTH ORGANIZATION. *Community-Based Rehabilitation: CBR Guidelines*. Geneva: WHO; 2010.

Course Title: Mental Health & Counselling Skills Practical	L	T	P	Cr.
Course Code: BVP508	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate effective communication and active listening in counselling situations.
2. Apply basic counselling techniques in simulated and real scenarios.
3. Conduct role-plays for handling common mental health concerns such as stress, anxiety, and depression.
4. Provide supportive counselling to patients, families, and peers.
5. Maintain confidentiality, empathy, and professionalism during counselling practice.

Course Content

List of Practicals / Experiments (60 Hours):

- Role-play on building rapport and establishing trust with clients.
- Demonstration of active listening and empathy skills.
- Practice of questioning techniques: open-ended vs. closed-ended.
- Counselling for stress management and relaxation exercises (breathing, mindfulness).
- Case discussions on depression, anxiety, and substance abuse.
- Role-play on crisis intervention (suicidal ideation, grief counselling).
- Group counselling techniques – handling group discussions and peer support sessions.
- Counselling in healthcare settings: patients with chronic illness, families of critically ill patients.
- Practising ethical considerations: confidentiality, non-judgmental attitude.
- Documentation and record-keeping of counselling sessions.

Suggested Readings

- COREY G. *Theory and Practice of Counseling and Psychotherapy*. 10th ed. Cengage Learning; 2016.
- GELSO CJ, FRETZ BR. *Counseling Psychology*. 3rd ed. American Psychological Association; 2014.
- NEZU AM, NEZU CM, D’ZURILLA TJ. *Problem-Solving Therapy: A Positive Approach to Clinical Intervention*. 3rd ed. Springer; 2013.
- WHO. *Mental Health Action Plan 2013–2020*. Geneva: World Health Organization; 2013.
- FELTHAM C, DRYDEN W. *Handbook of Counselling and Psychotherapy*. 3rd ed. Sage Publications; 2014.

Course Title: Preventive Oral Care Practical	L	T	P	Cr.
Course Code: BVP509	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate proper oral hygiene techniques to patients.
2. Apply preventive measures such as fluoride application and fissure sealants.
3. Educate individuals and groups on diet and lifestyle for oral health promotion.
4. Identify early signs of dental caries and periodontal problems for referral.
5. Organize and participate in community oral health awareness programs.

Course Content

List of Practicals / Experiments (60 Hours):

- Demonstration of tooth brushing techniques (Modified Bass, Fones, Stillman).
- Interdental cleaning methods: flossing, interdental brushes, water flossers.
- Preparation and demonstration of oral health education models/charts.
- Fluoride application: topical gels, varnishes, and rinses (demonstration).
- Pit and fissure sealant application (simulation exercises).
- Identification of dental plaque and gingival inflammation using disclosing agents.
- Dietary counselling for caries prevention – role play and case discussion.
- Demonstration of tobacco cessation counselling.
- Screening for oral lesions and referral protocols.
- Participation in a mock school/community oral health program.

Suggested Readings

- HARRIS NO, GARCIA-GODOY F, NATHE CN. *Primary Preventive Dentistry*. 9th ed. Pearson; 2019.
- MURRAY JJ, NUNN JH, STEELE JG. *Prevention of Oral Disease*. 5th ed. Oxford University Press; 2003.
- FEATHERSTONE JD. *The science and practice of caries prevention*. J Am Dent Assoc. 2000;131(7):887–99.
- SOH G. *Preventive Dentistry*. 2nd ed. World Scientific Publishing; 2017.
- WHO. *Oral Health Promotion: An Essential Element of a Health-Promoting School*. Geneva: World Health Organization; 2003.

Course Title: Health and Safety Regulation Practical	L	T	P	Cr.
Course Code: BVP510	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate safe handling of equipment, biomedical waste, and hazardous materials.
2. Conduct basic risk assessment and apply control measures in healthcare settings.
3. Implement standard infection control practices, including PPE usage.
4. Respond effectively to fire, chemical, and medical emergencies.
5. Maintain documentation and reporting related to workplace safety.

Course Content

List of Practicals / Experiments (60 Hours):

- Demonstration of donning and doffing of PPE (gloves, masks, gowns, face shields).
- Practice of biomedical waste segregation and disposal as per color coding.
- Demonstration of hand hygiene (WHO 7-step technique).
- Fire safety drill: use of fire extinguishers and evacuation procedures.
- Electrical safety: safe use and inspection of medical equipment.
- Handling and storage of chemicals and hazardous materials.
- Demonstration of spill management protocols (blood and chemical spills).
- Basic first aid in workplace injuries (cuts, burns, fractures).
- Mock drill for disaster preparedness and emergency response.
- Documentation of accidents, incident reporting, and safety audits.

Suggested Readings

- *GOEL S. Textbook of Hospital and Healthcare Administration. 2nd ed. PHI Learning; 2014.*

- *PARK K. Park's Textbook of Preventive and Social Medicine. 26th ed. Bhanot; 2021.*
- *WORLD HEALTH ORGANIZATION. Patient Safety Curriculum Guide: Multi-professional Edition. Geneva: WHO; 2011.*
- *MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA. Biomedical Waste Management Rules. New Delhi; 2016.*
- *ILO. Guidelines on Occupational Safety and Health Management Systems (ILO-OSH 2001). Geneva: International Labour Organization; 2001.*

Course Title: Advanced Nursing Procedures II Practical	L	T	P	Cr.
Course Code: BVP511	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Perform advanced nursing procedures such as IV therapy, transfusion setup, and catheterization under supervision.
2. Provide safe and effective preoperative and postoperative patient care.
3. Assist in critical care procedures, including oxygen therapy and suctioning.
4. Apply infection control and aseptic techniques during advanced nursing care.
5. Document procedures and patient responses systematically.

Course Content

List of Practicals / Experiments (60 Hours):

- Intravenous (IV) cannulation and infusion setup (simulation practice).
- Preparation and administration of IV medications (under supervision).
- Setting up and monitoring blood transfusion.
- Urinary catheterization and central line care (demonstration and supervised practice).
- Oxygen therapy administration: nasal prongs, face masks, and venturi masks.
- Endotracheal suctioning and tracheostomy care.
- Preoperative patient preparation: consent, fasting, and skin preparation.
- Postoperative nursing care: vital signs monitoring, wound care, pain management.
- Assisting in minor surgical procedures and aseptic dressing techniques.
- Documentation: procedure notes, nursing care records, and incident reporting.

Suggested Readings

- POTTER PA, PERRY AG, STOCKERT P, HALL A. *Fundamentals of Nursing*. 10th ed. Elsevier; 2020.
- LEWIS SL, BUCHER L, HEITKEMPER MM, HARDING M. *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*. 11th ed. Elsevier; 2019.
- TIMBY BK, SMITH NE. *Introductory Medical-Surgical Nursing*. 12th ed. Wolters Kluwer; 2021.
- TAYLOR CR, LYNN P, BARTLETT J. *Fundamentals of Nursing: The Art and Science of Person-Centered Care*. 9th ed. Wolters Kluwer; 2018.
- WHO. *Patient Safety Curriculum Guide: Multi-professional Edition*. Geneva: World Health Organization; 2011.

Course Title: Research Methodology & Biostatistics Practical	L	T	P	Cr
Course Code: BVP512	0	0	4	2

Total Hours 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Formulate a research problem, objectives, and hypotheses relevant to healthcare.
2. Conduct literature reviews using journals, databases, and online resources.
3. Collect, organize, and manage research data effectively.
4. Apply descriptive and inferential statistical techniques using manual and software-based methods.
5. Interpret statistical results, prepare research reports, and critically appraise scientific literature.

Course Content – List of Practicals / Experiments (60 Hours):

- Exercise on framing research problems, objectives, and hypotheses.
- Conducting literature reviews using PubMed, Google Scholar, and other databases.
- Preparation of research proposal outlines.
- Designing research tools: questionnaires, checklists, and case report forms.
- Sampling exercises: random, stratified, and systematic sampling demonstrations.
- Data collection practice through surveys and interviews.
- Data entry and management in Excel/SPSS.
- Calculation of descriptive statistics (mean, median, mode, standard deviation).
- Application of probability concepts in healthcare examples.
- Hypothesis testing exercises (t-test, chi-square, ANOVA).

- Correlation and regression analysis with sample healthcare datasets.
- Preparation of graphs, charts, and tables for data presentation.
- Interpretation of statistical output from SPSS/R.
- Critical appraisal of published research articles.
- Preparation of a mini research project report with results and discussion.

Suggested Readings:

- *Kumar R. Research Methodology: A Step-by-Step Guide for Beginners. 5th Edition, Sage Publications, 2019.*
- *Gordis L. Epidemiology. 6th Edition, Elsevier, 2019.*
- *Altman D.G. Practical Statistics for Medical Research. Chapman & Hall/CRC, 2019.*
- *Suresh K.P., Chandrashekara S. Sample Size Estimation and Statistical Methods in Health Research. Springer, 2020.*
- *Bailey R.A. Design of Comparative Experiments. Cambridge University Press, 2020.*

Semester 6th

Course Title: Internship	L	T	P	Cr
Course Code: BVP601	0	0	40	20

Total Hours 600

Learning Outcomes: After Completion of this course, the learner will be able to:

1. Demonstrate essential patient care skills including monitoring, hygiene, and mobility assistance.
2. Apply infection control measures, safety practices, and biomedical waste management effectively.
3. Communicate empathetically with patients, families, and healthcare professionals.
4. Maintain accurate patient records, reports, and documentation as per hospital standards.
5. Integrate theoretical knowledge with clinical practice to function as a competent patient care professional.

Course Contents

List of Practical's / Experiments:

600 Hours

The internship in Patient Care Management is aimed at providing students with in-depth practical exposure to hospital and healthcare settings. Students will undergo supervised training in wards, ICUs, emergency units, and outpatient departments to strengthen their patient care skills. The focus will be on assisting nurses and doctors in routine patient care activities such as monitoring vital signs, maintaining hygiene, assisting in mobility, providing nutritional support, and observing treatment procedures. Emphasis will also be placed on infection control, biomedical waste management, patient safety protocols, and communication with patients and their families. Students will learn documentation, record-keeping, and reporting of patient status while gaining an understanding of ethical and medico-legal responsibilities in patient care. Additionally, participation in community health programs and hospital-based projects will enable students to apply theoretical knowledge in

real-life healthcare scenarios. Each student is required to maintain a logbook, prepare case reports, and submit a final internship report for evaluation.