

## 1. PROGRAM STRUCTURE

B.Sc. Nursing Program Structure			
<p><b>I Semester</b></p> <ol style="list-style-type: none"> <li>1. Communicative English</li> <li>2. Applied Anatomy</li> <li>3. Applied Physiology</li> <li>4. Applied Sociology</li> <li>5. Applied Psychology</li> <li>6. *Nursing Foundations I</li> </ol> <p><b>Mandatory Module</b> *First Aid as part of Nursing Foundation I Course</p>	<p><b>III Semester</b></p> <ol style="list-style-type: none"> <li>1. Applied Microbiology and Infection Control including Safety</li> <li>2. Pharmacology I</li> <li>3. Pathology I</li> <li>4. *Adult Health (Medical Surgical) Nursing I with integrated pathophysiology</li> </ol> <p><b>Mandatory Module</b> *BCLS as part of Adult Health Nursing I</p>	<p><b>V Semester</b></p> <ol style="list-style-type: none"> <li>1. *Child Health Nursing I</li> <li>2. Mental Health Nursing I</li> <li>3. Community Health Nursing I (including Environmental Science &amp; Epidemiology)</li> <li>4. Educational Technology/Nursing Education</li> <li>5. Introduction to Forensic Nursing and Indian Laws</li> </ol> <p><b>Mandatory Modules</b> *Essential Newborn Care (ENBC), Facility Based Newborn Care (FBNBC), IMNCI and PLS as part of Child Health Nursing</p>	<p><b>VII Semester</b></p> <ol style="list-style-type: none"> <li>1. Community Health Nursing II</li> <li>2. Nursing Research &amp; Statistics</li> <li>3. Midwifery/Obstetrics and Gynecology (OBG) Nursing II</li> </ol> <p><b>Mandatory Modules</b> *Safe delivery app under OBG Nursing I/II (VI/VII Semester)</p>
<p><b>II Semester</b></p> <ol style="list-style-type: none"> <li>1. Applied Biochemistry</li> <li>2. Applied Nutrition and Dietetics</li> <li>3. *Nursing Foundations II</li> <li>4. Health/Nursing Informatics &amp; Technology</li> </ol> <p><b>Mandatory Module</b> *Health Assessment as part of Nursing Foundation II Course</p>	<p><b>IV Semester</b></p> <ol style="list-style-type: none"> <li>1. *Pharmacology II</li> <li>2. Pathology II &amp; Genetics</li> <li>3. Adult Health Nursing II with integrated pathophysiology including Geriatric Nursing</li> <li>4. Professionalism, Professional Values &amp; Ethics including Bioethics</li> </ol> <p><b>Mandatory Module</b> *Fundamentals of Prescribing under Pharmacology II *Palliative care module under Adult Health Nursing II</p>	<p><b>VI Semester</b></p> <ol style="list-style-type: none"> <li>1. Child Health Nursing II</li> <li>2. Mental Health Nursing II</li> <li>3. Nursing Management &amp; Leadership</li> <li>4. *Midwifery/Obstetrics and Gynecology (OBG) Nursing I</li> </ol> <p><b>Mandatory Module</b> * SBA Module under OBG Nursing I/II (VI/VII Semester)</p>	<p><b>VIII Semester</b></p> <p>Internship (Intensive Practicum/Residency Posting)</p>

**Note:** No institute/University will modify the curriculum. However they can add units/subject in the syllabus as deemed necessary.

#Modules both mandatory and elective shall be certified by the institution/external agency.

**MANDATORY MODULES**

The prepared modules/modules outlined by the Council such as Health Assessment & Fundamentals of Prescribing and available modules as National Guidelines (First Aid – NDMA, IMNCI, ENBC, FBNBC), Palliative Care, Safe Delivery App and SBA module will be provided in separate learning resource package.

For BCLS, PLS – Standard national/international modules can be used.

**ELECTIVE MODULES**

**Number of electives to be completed: 3 (Every module = 1 credit = 20 hours)**

**III & IV Semesters:** To complete any **one** elective by end of 4<sup>th</sup> semester across 1<sup>st</sup> to 4<sup>th</sup> semesters

- Human values
- Diabetes care
- Soft skills

**V & VI Semesters:** To complete any **one** of the following before end of 6<sup>th</sup> semester

- CBT
- Personality development
- Addiction psychiatry
- Adolescent health
- Sports health
- Accreditation and practice standards
- Developmental psychology
- Menopausal health
- Health Economics

**VII & VIII Semesters:** To complete any **one** of the following before end of 8<sup>th</sup> semester

- Scientific writing skills
- Lactation management
- Sexuality & Health
- Stress management
- Job readiness and employability in health care setting

**2. CURRICULUM IMPLEMENTATION: OVERALL PLAN**

**Duration of the program: 8 semesters**

**1-7 Semesters****One Semester Plan for the first 7 Semesters**

Total Weeks per Semester: 26 weeks per semester

Number of Weeks per Semester for instruction: 20 weeks (40 hours per week × 20 weeks = 800 hours)

Number of Working Days: Minimum of 100 working days (5 days per week × 20 weeks)

Vacation, Holidays, Examination and Preparatory Holidays: 6 weeks

Vacation: 3 weeks

Holidays: 1 week

Examination and Preparatory Holidays: 2 weeks

**8<sup>th</sup> Semester**

One semester: 22 weeks

Vacation: 1 week

Holidays: 1 week

Examination and Preparatory Holidays: 2 weeks

## 3. COURSES OF INSTRUCTION WITH CREDIT STRUCTURE

S.No	Semester	Course Code	Course/Subject Title	Theor y credits	Theor y Conta ct hours	Lab/ Skill Lab credits	Lab/ Skill Lab Conta ct hours	Clinical credits	Clinic al Conta ct hours	Total credits	Total (hours)
1	First	ENGL 101	Communicative English	2	40						40
		ANAT 105	Applied Anatomy	3	60						60
		PHYS 110	Applied Physiology	3	60						60
		SOCI 115	Applied Sociology	3	60						60
		PSYC 120	Applied Psychology	3	60						60
		N-NF (I) 125	Nursing Foundation I including First Aid module	6	120	2	80	2	160	10	360
		SSCC (I) 130	Self-study/Co-curricular								40+40
	<b>TOTAL</b>	<b>20</b>	<b>400</b>	<b>2</b>	<b>80</b>	<b>2</b>	<b>160</b>	<b>20+2+ 2=24</b>	<b>640+80 =720</b>		
2	Second	BIOC 135	Applied Biochemistry	2	40						40
		NUTR 140	Applied Nutrition and Dietetics	3	60						60
		N-NF (II) 125	Nursing Foundation II including Health Assessment module	6	120	3	120	4	320		560
		HNIT 145	Health/Nursing Informatics & Technology	2	40	1	40				80
		SSCC(II) 130	Self-study/Co-curricular								40+20
			<b>TOTAL</b>	<b>13</b>	<b>260</b>	<b>4</b>	<b>160</b>	<b>4</b>	<b>320</b>	<b>13+4+ 4=21</b>	<b>740+60 =800</b>
3	Third	MICR 201	Applied Microbiology and Infection Control including Safety	2	40	1	40				80
		PHAR (I) 205	Pharmacology I	1	20						20
		PATH (I) 210	Pathology I	1	20						20
		N-AHN (I) 215	Adult Health Nursing I with integrated pathophysiology including BCLS module	7	140	1	40	6	480		660
		SSCC (I) 220	Self-study/Co-curricular								20
			<b>TOTAL</b>	<b>11</b>	<b>220</b>	<b>2</b>	<b>80</b>	<b>6</b>	<b>480</b>	<b>11+2+ 6=19</b>	<b>780+20 =800</b>
4	Fourth	PHAR (II) 205	Pharmacology II including Fundamentals of prescribing module	3	60						60
		PATH (II) 210	Pathology II and Genetics	1	20						20
		N-AHN (II) 225	Adult Health Nursing II with integrated pathophysiology including Geriatric Nursing + Palliative care module	7	140	1	40	6	480		660

S.No	Semester	Course Code	Course/Subject Title	Theor y credits	Theor y Conta ct hours	Lab/ Skill Lab credits	Lab/ Skill Lab Conta ct hours	Clinical credits	Clinic al Conta ct hours	Total credits	Total (hours)
		PROF 230	Professionalism, Professional Values and Ethics including bioethics	1	20						20
		SSCC(II) 220	Self-study/Co-curricular								40
			<b>TOTAL</b>	<b>12</b>	<b>240</b>	<b>1</b>	<b>40</b>	<b>6</b>	<b>480</b>	<b>12+1+ 6=19</b>	<b>760+40 =800</b>
5	<b>Fifth</b>	N-CHN(I) 301	Child Health Nursing I including Essential Newborn Care (ENBC), FBNC, IMNCI and PLS, modules	3	60	1	40	2	160		260
		N-MHN(I) 305	Mental Health Nursing I	3	60			1	80		140
		N-COMH(I) 310	Community Health Nursing I including Environmental Science & Epidemiology	5	100			2	160		260
		EDUC 315	Educational Technology/Nursing Education	2	40	1	40				80
		N-FORN 320	Introduction to Forensic Nursing and Indian laws	1	20						20
		SSCC(I) 325	Self-study/Co-curricular								20+20
			<b>TOTAL</b>	<b>14</b>	<b>280</b>	<b>2</b>	<b>80</b>	<b>5</b>	<b>400</b>	<b>14+2+ 5=21</b>	<b>760+40 =800</b>
6	<b>Sixth</b>	N-CHN(II) 301	Child Health Nursing II	2	40			1	80		120
		N-MHN(II) 305	Mental Health Nursing II	2	40			2	160		200
		NMLE 330	Nursing Management & Leadership	3	60			1	80		140
		N-MIDW(I) / OBGN 335	Midwifery/Obstetrics and Gynaecology (OBG) Nursing I including SBA module	3	60	1	40	3	240		340
		SSCC(II) 325	Self-study/Co-curricular								-
			<b>TOTAL</b>	<b>10</b>	<b>200</b>	<b>1</b>	<b>40</b>	<b>7</b>	<b>560</b>	<b>10+1+ 7=18</b>	<b>800</b>
7	<b>Seventh</b>	N-COMH(II) 401	Community Health Nursing II	5	100			2	160		260
		NRST 405	Nursing Research & Statistics	2	40	2	80 (Project- 40)				120
		N-MIDW(II)/ OBGN 410	Midwifery/Obstetrics and Gynaecology (OBG) Nursing II including Safe delivery app module	3	60	1	40	4	320		420

S.No	Semester	Course Code	Course/Subject Title	Theory credits	Theory Contact hours	Lab/Skill Lab credits	Lab/Skill Lab Contact hours	Clinical credits	Clinical Contact hours	Total credits	Total (hours)
			Self-study/Co-curricular								-
			<b>TOTAL</b>	<b>10</b>	<b>200</b>	<b>3</b>	<b>120</b>	<b>6</b>	<b>480</b>	<b>10+3+6=19</b>	<b>800</b>
8	<b>Eight (Internship)</b>	INTE 415	Community Health Nursing – 4 weeks								
		INTE 420	Adult Health Nursing – 6 weeks								
		INTE 425	Child Health Nursing – 4 weeks								
		INTE 430	Mental Health Nursing – 4 weeks								
		INTE 435	Midwifery – 4 weeks								
				<b>TOTAL = 22 weeks</b>					<b>12</b> (1 credit = 4 hours per week per semester)		

1 credit theory – 1 hour per week per semester

1 credit practical/lab/skill lab/simulation lab – 2 hours per week per semester

1 credit clinical – 4 hours per week per semester

1 credit elective course – 1 hour per week per semester

**Total Semesters = 8**

(Seven semesters: One semester = 20 weeks × 40 hours per week = 800 hours)

(Eighth semester – Internship: One semester = 22 weeks × 48 hours per week = 1056 hours)

**Total number of course credits including internship and electives – 156 (141+12+3)**

**Distribution of credits and hours by courses, internship and electives**

S.No.	Credits	Theory (Cr/Hrs)	Lab (Cr/Hrs)	Clinical (Cr/Hrs)	Total credits	Hours
1	Course credits	90 credit per 1800 hours	15/600	36/2880	141	5280
2	Internship				12	1056

3	Electives				3	60
	<b>TOTAL</b>				156	6396
4	Self-study and Co-curricular	Saturdays (one semester = 5 hours per week × 20 weeks × 7 semesters = 700 hours)			12	240
					35	700
					47	940

**Distribution of credits, hours and percentage for theory and practicum (Skill Lab & Clinical) across eight semesters**

S.No.	Theory & Practicum (Skill Lab & Clinical)	Credits	Hours	Percentage
1	Theory	90	1800	28
2	Lab/Skill Lab	15	600	10
3	Clinical	36	3936	62
	<b>Total</b>	<b>141</b>	<b>6336 hours</b>	<b>100</b>

#### Practicum (7 semesters) excluding internship

Lab/skill lab/simulation lab – 600 (17%)

Clinical – 2880 (83%)

Total – 3480

Lab/skill lab/simulation lab = 17% of the total practicum planned

**Note:** Besides the stipulated lab and clinical hours, a maximum of 13% (400-450 hours) from the clinical hours can be used in simulation lab/skill lab for skill lab/simulation learning and not to exceed 30% of total hours.

#### 4. SCHEME OF EXAMINATION

The distribution of marks in internal assessment, End Semester College Exam, and End Semester University Exam for each course is shown below.

##### I SEMESTER

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College Exam	End Semester University Exam	Hours	Total Marks
	<b>Theory</b>					
1	Communicative English	25	25		2	50
2	Applied Anatomy & Applied Physiology	25		75	3	100
3	Applied Sociology & Applied Psychology	25		75	3	100
4	Nursing Foundations I	*25				
	<b>Practical</b>					
5	Nursing Foundations I	*25				

\*Will be added to the internal marks of Nursing Foundations II Theory and Practical respectively in the next semester (Total weightage remains the same)

#### Example:

**Nursing Foundations Theory:** Nursing Foundations I Theory Internal marks in 1<sup>st</sup> semester will be added to Nursing Foundations II Theory Internal in the 2<sup>nd</sup> semester and average of the two semesters will be taken.

**II SEMESTER**

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College Exam	End Semester University Exam	Hours	Total Marks
<b>Theory</b>						
1	Applied Biochemistry and Applied Nutrition & Dietetics	25		75	3	100
2	Nursing Foundations (I & II)	25 I Sem-25 & II Sem-25 (with average of both)		75	3	100
3	Health/Nursing Informatics & Technology	25	25		2	50
<b>Practical</b>						
4	Nursing Foundations (I & II)	50 I Sem-25 & II Sem-25		50		100

**III SEMESTER**

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College exam	End Semester University Exam	Hours	Total marks
<b>Theory</b>						
1	Applied Microbiology and Infection Control including Safety	25		75	3	100
2	Pharmacology I and Pathology I	*25				
3	Adult Health Nursing I	25		75	3	100
<b>Practical</b>						
4	Adult Health Nursing I	50		50		100

\*Will be added to the internal marks of Pharmacology II and Pathology II & Genetics in the next semester (Total weightage remains the same).

**IV SEMESTER**

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College exam	End Semester University Exam	Hours	Total marks
<b>Theory</b>						
1	Pharmacology & Pathology (I & II) and Genetics	25 III Sem-25 & IV Sem-25 (with average of		75	3	100

		both)				
2	Adult Health Nursing II	25		75	3	100
3	Professionalism, Ethics and Professional Values	25	25		2	50
<b>Practical</b>						
4	Adult Health Nursing II	50		50		100

**V SEMESTER**

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College exam	End Semester University Exam	Hours	Total marks
<b>Theory</b>						
1	Child Health Nursing I	*25				
2	Mental Health Nursing I	*25				
3	Community Health Nursing I including Environmental Science & Epidemiology	25		75	3	100
4	Educational Technology/Nursing Education	25		75	3	100
5	Introduction to Forensic Nursing and Indian Laws	25	25		2	50
<b>Practical</b>						
6	Child Health Nursing I	*25				
7	Mental Health Nursing I	*25				
8	Community Health Nursing I	50		50		100

\*Will be added to the internal marks of Child Health Nursing II and Mental Health Nursing II in both theory and practical respectively in the next semester (Total weightage remains same).

**VI SEMESTER**

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College exam	End Semester University Exam	Hours	Total marks
<b>Theory</b>						
1	Child Health Nursing (I & II)	25 Sem V-25 & Sem VI-25 (with average of both)		75	3	100
2	Mental Health Nursing (I & II)	25 Sem V-25 & Sem VI-25 (with average of both)		75	3	100

3	Nursing Management & Leadership	25		75	3	100
4	Midwifery/Obstetrics & Gynecology I	*25				
<b>Practical</b>						
5	Child Health Nursing (I & II)	50 (Sem V-25 & Sem VI-25)		50		100
6	Mental Health Nursing (I & II)	50 (Sem V-25 & Sem VI-25)		50		100
7	Midwifery/Obstetrics & Gynecology I	*25				

\*Will be added to Internal marks of Midwifery II theory and practical respectively in the next semester (Total weightage remains the same)

#### VII SEMESTER

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College Exam	End Semester University Exam	Hours	Total marks
<b>Theory</b>						
1	Community Health Nursing II	25		75	3	100
2	Nursing Research & Statistics	25		75	3	100
2	Midwifery/Obstetrics and Gynecology (OBG) Nursing (I & II)	25 Sem VI-25 & Sem VII-25 (with average of both)		75	3	100
<b>Practical</b>						
3	Community Health Nursing II	50		50		100
4	Midwifery/Obstetrics and Gynecology (OBG) Nursing (I & II)	50 (Sem VI-25 & Sem VII-25)		50		100

#### VIII SEMESTER

S.No.	Course	Assessment (Marks)				
		Internal	End Semester College Exam	End Semester University Exam	Hours	Total marks
<b>Practical</b>						
1	Competency Assessment	100		100		200

## 5. EXAMINATION REGULATIONS

### Note:

1. Applied Anatomy and Applied Physiology: Question paper will consist of Section-A Applied Anatomy of 37 marks and Section-B Applied Physiology of 38 marks.
2. Applied Sociology and Applied Psychology: Question paper will consist of Section-A Applied Sociology of 37 marks and Section-B Applied Psychology of 38 marks.
3. Applied Microbiology and Infection Control including Safety: Question paper will consist of Section-A Applied Microbiology of 37 marks and Section-B Infection Control including Safety of 38 marks.
4. Applied Nutrition and Dietetics and Applied Biochemistry: Question paper will consist of Section-A Applied Nutrition and Dietetics of 50 marks and Section-B Biochemistry of 25 marks.
5. Pharmacology, Genetics and Pathology: Question paper will consist of Section-A of Pharmacology with 38 marks, Section-B of Pathology with 25 marks and Genetics with 12 marks.
6. Nursing Research and Statistics: Nursing Research should be of 55 marks and Statistics of 20 marks.
7. A candidate must have minimum of 80% attendance (irrespective of the kind of absence) in theory and practical in each course/subject for appearing for examination.
8. A candidate must have 100% attendance in each of the practical areas before award of degree.
9. Following exams shall be conducted as College exam and minimum pass is 50% (C Grade) and to be sent to the University for inclusion in the marks sheet and shall be considered for calculating aggregate.
  - i. Communicative English
  - ii. Health/Nursing Informatics and Technology
  - iii. Professionalism, Professional Values and Ethics including Bioethics
  - iv. Introduction to Forensic Nursing & Indian Laws
10. Minimum pass marks shall be 40% (P grade/4 point) for English only and elective modules.
11. Minimum pass marks shall be 50% in each of the Theory and practical papers separately except in English.
12. The student has to pass in all **mandatory modules** placed within courses and the pass mark for each module is 50% (C Grade). The allotted percentage of marks will be included in the internal assessment of College/University Examination (Refer Appendix 2).
13. A candidate has to pass in theory and practical exam separately in each of the paper.
14. If a candidate fails in either theory or practical, he/she has to re-appear for both the papers (Theory and Practical).
15. If the student has failed in only one subject and has passed in all the other subjects of a particular semester and Grace marks of up to 5 marks to theory marks can be added for one course/subject only, provided that by such an addition the student passes the semester examination.
16. The candidate shall appear for exams in each semester:
  - i. The candidate shall have cleared all the previous examinations before appearing for fifth semester examination. However, the candidates shall be permitted to attend the consecutive semesters.
  - ii. The candidate shall have cleared all the previous examinations before appearing for seventh semester examination. However, the candidates shall be permitted to attend the consecutive semesters.
  - iii. The candidate shall have cleared all the previous examination before appearing for final year examination.
  - iv. The maximum period to complete the course successfully should not exceed 8 years.
17. The candidate has to pass separately in internal and external examination (shall be reflected in the marks sheet). No institution shall submit average internal marks of the students not more than 75% (i.e. if 40 students are admitted in a course the average score of the 40 students shall not exceed 75% of total internal marks).
18. At least 50% of the Non-nursing subjects like Applied Anatomy & Physiology, Applied Biochemistry, Applied Psychology & Sociology, Applied Microbiology, Pharmacology, Genetics, Nutrition & Dietetics, Communicative English and Health/Nursing Informatics & Technology should be taught by the Nursing teachers. Teachers who are involved in teaching non-nursing subjects can be the examiners for the program.
19. Maximum number of candidates for practical examination should not exceed 20 per day. Particular year and of same institution batch shall be examined by the same set of examiners.
20. All practical examinations must be held in the respective clinical areas.

21. One internal and one external examiner should jointly conduct practical examination for each student.
22. An examiner for theory and practical/OSCE examination should be an Assistant Professor or above in a College of Nursing with M.Sc. (Nursing) in concerned subject and minimum 3 years of teaching experience. To be an examiner for Nursing Foundations course, the faculty having M.Sc. (Nursing) with any specialty shall be considered.

## VII. ASSESSMENT GUIDELINES

### 1. Grading of Performance

Based on the performance, each student shall be awarded a final grade at the end of the semester for each course. Absolute grading is used by converting the marks to grade, based on predetermined class intervals.

UGC 10 point grading system is used with pass grade modified.

Letter grade	Grade point	Percentage of marks
O (Outstanding)	10	100%
A+ (Excellent)	9	90-99.99%
A (Very Good)	8	80-89.99%
B+ (Good)	7	70-79.99%
B (Above Average)	6	60-69.99%
C (Average)	5	50-59.99%
P (Pass)	4	40-49.99%
F (Fail)	0	

For Nursing Courses and all other courses – Pass is at C Grade (5 grade point) 50% and above

For English and electives – Pass is at P Grade (4 grade point) 40% and above

### Computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

SPGA is the weighted average of the grade points obtained in all courses by the student during the semester (All courses excluding English and electives)

#### Ex. SGPA Computation

Course Number	Credit/s	Letter grade	Grade point	Credit point (Credit × grade)
1	3 (C1)	A	8 (G1)	3 × 8 = 24
2	4 (C2)	B+	7 (G2)	4 × 7 = 28
3	3 (C3)	B	6 (G3)	3 × 6 = 18

$$SGPA = \frac{C1G1 + C2G2 + C3G3}{C1 + C2 + C3}$$

$$= \frac{70}{10} = 7 \text{ (rounded off to two decimal points)}$$

**Computation of CGPA**

CGPA is calculated with SGPA of all semesters to two decimal points and is indicated in final grade in mark card/transcript showing grades of all 8 semesters and their courses/subjects.

CGPA reflects the failed status in case of fail till the course/s are passed.

Semester 1	Semester 2	Semester 3	Semester 4
Credit – Cr Cr: 20	Cr: 22	Cr: 25	Cr: 26
SGPA: 6.5	SGPA: 7.0	SGPA: 5.5	SGPA: 6.0
Cr × SGPA = 20 × 6.5			

$$\text{CGPA} = \frac{20 \times 6.5 + 22 \times 7 + 25 \times 5.5 + 26 \times 6}{93}$$

$$= \frac{577.5}{93} = 6.2$$

**Transcript Format**

Based on the above recommendation on letter grades, grade points, SPGA and CGPA, the transcript shall be issued for each semester with a consolidated transcript indicating the performance in all semesters.

**Declaration of Pass**

First Class with Distinction – CGPA of 7.5 and above

First Class – CGPA of 6.00-7.49

Second Class – CGPA of 5.00-5.99

**2. Internal Assessment and Guidelines**

The marks distribution of internal assessment is shown in Appendix 1 and the specific guidelines in Appendix 2.

**3. University Theory and Practical Examination Pattern**

The theory question paper pattern and practical exam pattern are shown in Appendix 3.

**SYLLABUS****COMMUNICATIVE ENGLISH****PLACEMENT: I SEMESTER****THEORY: 2 Credits (40 hours)**

**DESCRIPTION:** The course is designed to enable students to enhance their ability to speak and write the language (and use English) required for effective communication in their professional work. Students will practice their skills in verbal and written English during clinical and classroom experience.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Identify the significance of Communicative English for healthcare professionals.

2. Apply the concepts and principles of English Language use in professional development such as pronunciation, vocabulary, grammar, paraphrasing, voice modulation, Spelling, pause and silence.
3. Demonstrate attentive listening in different hypothetical situations.
4. Converse effectively, appropriately and timely within the given context and the individual or team they are communicating with either face to face or by other means.
5. Read, interpret and comprehend content in text, flow sheet, framework, figures, tables, reports, anecdotes etc.
6. Analyse the situation and apply critical thinking strategies.
7. Enhance expressions through writing skills.
8. Apply LSRW (Listening, Speaking, Reading and Writing) Skill in combination to learn, teach, educate and share information, ideas and results.

### COURSE OUTLINE

#### T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	3 (T)	Identify the significance of communicative English	<b>Communication</b> <ul style="list-style-type: none"> <li>• What is communication?</li> <li>• What are communication roles of listeners, speakers, readers and writers as healthcare professionals?</li> </ul>	<ul style="list-style-type: none"> <li>• Definitions with examples, illustrations and explanations</li> <li>• Identifying competencies/ communicative strategies in LSRW</li> <li>• Reading excerpts on the above and interpreting them through tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Checking for understanding through tasks</li> </ul>
II	5 (T)	Describe concepts and principles of Language (English) use in professional development such as pronunciation, vocabulary, grammar, paraphrasing, voice modulation, spelling, pause and silence	<b>Introduction to LSRGW</b> <ul style="list-style-type: none"> <li>• L – Listening: Different types of listening</li> <li>• S – Speaking: Understanding Consonants, Vowels, Word and Sentence Stress, Intonation</li> <li>• R – Reading: Medical vocabulary,</li> <li>• Gr – Grammar: Understanding tenses, linkers</li> <li>• W – Writing simple sentences and short paragraphs – emphasis on correct grammar</li> </ul>	<ul style="list-style-type: none"> <li>• Exercises on listening to news, announcements, telephone conversations and instructions from others</li> <li>• Information on fundamentals of Speech – Consonant, Vowel, Stress and Intonation with tasks based on these through audio/video and texts</li> <li>• Reading a medical dictionary/ glossary of medical terms with matching exercises</li> <li>• Information on tenses and basic concepts of correct grammar through fill in the blanks, true/false questions</li> </ul>	<ul style="list-style-type: none"> <li>• Through 'check your understanding' exercises</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
III	5 (T)	Demonstrate attentive listening in different hypothetical situations	<b>Attentive Listening</b> <ul style="list-style-type: none"> <li>Focusing on listening in different situations – announcements, descriptions, narratives, instructions, discussions, demonstrations</li> <li>Reproducing Verbatim</li> <li>Listening to academic talks/ lectures</li> <li>Listening to presentation</li> </ul>	<ul style="list-style-type: none"> <li>Listening to announcements, news, documentaries with tasks based on listening</li> <li>With multiple choice, Yes/No and fill in the blank activities</li> </ul>	<ul style="list-style-type: none"> <li>Checking individually against correct answers</li> <li>Listening for specific information</li> <li>Listening for overall meaning and instructions</li> <li>Listening to attitudes and opinions</li> <li>Listening to audio, video and identify key points</li> </ul>
IV	9 (T)	Converse effectively, appropriately and timely within the given context and the individual or team they are communicating with either face to face or other means	<b>Speaking – Effective Conversation</b> <ul style="list-style-type: none"> <li>Conversation situations – informal, formal and neutral</li> <li>Factors influencing way of speaking – setting, topic, social relationship, attitude and language</li> <li>Greetings, introductions, requesting, asking for and giving permission, speaking personally and casual conversations</li> <li>Asking for information, giving instructions and directions</li> <li>Agreeing and disagreeing, giving opinions</li> <li>Describing people, places, events and things, narrating, reporting &amp; reaching conclusions</li> <li>Evaluating and comparing</li> <li>Complaints and suggestions</li> <li>Telephone conversations</li> <li>Delivering presentations</li> </ul>	<ul style="list-style-type: none"> <li>Different types of speaking activities related to the content</li> <li>Guided with prompts and free discussions</li> <li>Presentation techniques</li> <li>Talking to peers and other adults.</li> <li>Talking to patients and Patient attenders</li> <li>Talking to other healthcare professionals</li> <li>Classroom conversation</li> <li>Scenario based learning tasks</li> </ul>	<ul style="list-style-type: none"> <li>Individual and group/peer assessment through live speaking tests</li> <li>Presentation of situation in emergency and routine</li> <li>Handoff</li> <li>Reporting in doctors/nurses' rounds</li> <li>Case presentation</li> <li>Face to face oral communication</li> <li>Speaking individually (Nurse to nurse/patient/doctor) and to others in the group</li> <li>Telephonic talking</li> </ul>
V	5 (T)	Read, interpret and comprehend content in text, flow sheet, framework, figures, tables, reports, anecdotes	<b>Reading</b> <ul style="list-style-type: none"> <li>Reading strategies, reading notes and messages</li> <li>Reading relevant articles and news items</li> <li>Vocabulary for everyday activities, abbreviations and medical vocabulary</li> <li>Understanding visuals, graphs, figures and notes on instructions</li> </ul>	<ul style="list-style-type: none"> <li>Detailed tasks and exercises on reading for information, inference and evaluation</li> <li>Vocabulary games and puzzles for medical lexis</li> </ul>	<ul style="list-style-type: none"> <li>Reading/ summarizing/ justifying answers orally</li> <li>Patient document</li> <li>Doctor's prescription of care</li> <li>Journal/news</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Reading reports and interpreting them</li> <li>• Using idioms and phrases, spotting errors, vocabulary for presentations</li> <li>• Remedial Grammar</li> </ul>	<ul style="list-style-type: none"> <li>• Grammar activities</li> </ul>	<ul style="list-style-type: none"> <li>• reading and interpretation</li> <li>• Notes/Reports</li> </ul>
<b>VI</b>	5 (T)	Enhance expressions through writing skills	<b>Writing Skills</b> <ul style="list-style-type: none"> <li>• Writing patient history</li> <li>• Note taking</li> <li>• Summarising</li> <li>• Anecdotal records</li> <li>• Letter writing</li> <li>• Diary/Journal writing</li> <li>• Report writing</li> <li>• Paper writing skills</li> <li>• Abstract writing</li> </ul>	<ul style="list-style-type: none"> <li>• Writing tasks with focus on task fulfilment, coherence and cohesion, appropriate vocabulary and correct grammar</li> <li>• Guided and free tasks</li> <li>• Different kinds of letter writing tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Paper based assessment by the teacher/ trainer against set band descriptors</li> <li>• Presentation of situation</li> <li>• Documentation</li> <li>• Report writing</li> <li>• Paper writing skills</li> <li>• Verbatim reproducing</li> <li>• Letter writing</li> <li>• Resume/CV</li> </ul>
<b>VII</b>	8 (T)	Apply LSRW Skill in combination to learn, teach, educate and share information, ideas and results	<b>LSRW Skills</b> <ul style="list-style-type: none"> <li>• Critical thinking strategies for listening and reading</li> <li>• Oral reports, presentations</li> <li>• Writing instructions, letters and reports</li> <li>• Error analysis regarding LSRW</li> </ul>	<ul style="list-style-type: none"> <li>• Valuating different options/multiple answers and interpreting decisions through situational activities</li> <li>• Demonstration – individually and in groups</li> <li>• Group Discussion</li> <li>• Presentation</li> <li>• Role Play</li> <li>• Writing reports</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidated assessment orally and through written tasks/exercises</li> </ul>

### APPLIED ANATOMY

**PLACEMENT:** I SEMESTER

**THEORY:** 3 Credits (60 hours)

**DESCRIPTION:** The course is designed to assist student to recall and further acquire the knowledge of the normal structure of human body, identify alteration in anatomical structure with emphasis on clinical application to practice nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Describe anatomical terms.
2. Explain the general and microscopic structure of each system of the body.
3. Identify relative positions of the major body organs as well as their general anatomic locations.
4. Explore the effect of alterations in structure.
5. Apply knowledge of anatomic structures to analyze clinical situations and therapeutic applications.

## COURSE OUTLINE

## T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	8 (T)	<p>Define the terms relative to the anatomical position</p> <p>Describe the anatomical planes</p> <p>Define and describe the terms used to describe movements</p> <p>Organization of human body and structure of cell, tissues membranes and glands</p> <p>Describe the types of cartilage</p> <p>Compare and contrast the features of skeletal, smooth and cardiac muscle</p>	<p><b>Introduction to anatomical terms and organization of the human body</b></p> <ul style="list-style-type: none"> <li>• Introduction to anatomical terms relative to position – anterior, ventral, posterior dorsal, superior, inferior, median, lateral, proximal, distal, superficial, deep, prone, supine, palmar and plantar</li> <li>• Anatomical planes (axial/ transverse/ horizontal, sagittal/vertical plane and coronal/frontal/oblique plane)</li> <li>• Movements (flexion, extension, abduction, adduction, medial rotation, lateral rotation, inversion, eversion, supination, pronation, plantar flexion, dorsal flexion and circumduction)</li> <li>• Cell structure, Cell division</li> <li>• Tissue – definition, types, characteristics, classification, location</li> <li>• Membrane, glands – classification and structure</li> <li>• Identify major surface and bony landmarks in each body region, Organization of human body</li> <li>• Hyaline, fibro cartilage, elastic cartilage</li> <li>• Features of skeletal, smooth and cardiac muscle</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Use of models</li> <li>• Video demonstration</li> <li>• Use of microscopic slides</li> <li>• Lecture cum Discussion</li> <li>• Video/Slides</li> <li>• Anatomical Torso</li> </ul>	<ul style="list-style-type: none"> <li>• Quiz</li> <li>• MCQ</li> <li>• Short answer</li> </ul>
II	6 (T)	<p>Describe the structure of respiratory system</p> <p>Identify the muscles of respiration and examine their contribution to the mechanism of breathing</p>	<p><b>The Respiratory system</b></p> <ul style="list-style-type: none"> <li>• Structure of the organs of respiration</li> <li>• Muscles of respiration</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Models</li> <li>• Video/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
III	6 (T)	Describe the structure of digestive system	<b>The Digestive system</b> <ul style="list-style-type: none"> <li>• Structure of alimentary canal and accessory organs of digestion</li> <li>• Application and implications in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Video/Slides</li> <li>• Anatomical Torso</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
IV	6 (T)	Describe the structure of circulatory and lymphatic system.	<b>The Circulatory and Lymphatic system</b> <ul style="list-style-type: none"> <li>• Structure of blood components, blood vessels – Arterial and Venous system</li> <li>• Position of heart relative to the associated structures</li> <li>• Chambers of heart, layers of heart</li> <li>• Heart valves, coronary arteries</li> <li>• Nerve and blood supply to heart</li> <li>• Lymphatic tissue</li> <li>• Veins used for IV injections</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Models</li> <li>• Video/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
V	4 (T)	Identify the major endocrine glands and describe the structure of endocrine Glands	<b>The Endocrine system</b> <ul style="list-style-type: none"> <li>• Structure of Hypothalamus, Pineal Gland, Pituitary gland, Thyroid, Parathyroid, Thymus, Pancreas and Adrenal glands</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Models/charts</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
VI	4 (T)	Describe the structure of various sensory organs	<b>The Sensory organs</b> <ul style="list-style-type: none"> <li>• Structure of skin, eye, ear, nose and tongue</li> <li>• Application and implications in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Explain with Video/ models/charts</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
VII	10 (T)	Describe anatomical position and structure of bones and joints  Identify major bones that make up the axial and appendicular skeleton  Classify the joints  Identify the application and implications in nursing  Describe the structure of muscle	<b>The Musculoskeletal system:</b>  <b>The Skeletal system</b> <ul style="list-style-type: none"> <li>• Anatomical positions</li> <li>• Bones – types, structure, growth and ossification</li> <li>• Axial and appendicular skeleton</li> <li>• Joints – classification, major joints and structure</li> <li>• Application and implications in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Review – discussion</li> <li>• Lecture</li> <li>• Discussions</li> <li>• Explain using charts, skeleton and loose bones and torso</li> <li>• Identifying muscles involved in nursing procedures in lab</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Apply the knowledge in performing nursing procedures/skills	<b>The Muscular system</b> <ul style="list-style-type: none"> <li>• Types and structure of muscles</li> <li>• Muscle groups – muscles of the head, neck, thorax, abdomen, pelvis, upper limb and lower limbs</li> <li>• Principal muscles – deltoid, biceps, triceps, respiratory, abdominal, pelvic floor, pelvic floor muscles, gluteal muscles and vastus lateralis</li> <li>• Major muscles involved in nursing procedures</li> </ul>		
VIII	5 (T)	Describe the structure of renal system	<b>The Renal system</b> <ul style="list-style-type: none"> <li>• Structure of kidney, ureters, bladder, urethra</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Models/charts</li> </ul>	<ul style="list-style-type: none"> <li>• MCQ</li> <li>• Short answer</li> </ul>
IX	5 (T)	Describe the structure of reproductive system	<b>The Reproductive system</b> <ul style="list-style-type: none"> <li>• Structure of male reproductive organs</li> <li>• Structure of female reproductive organs</li> <li>• Structure of breast</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Models/charts</li> </ul>	<ul style="list-style-type: none"> <li>• MCQ</li> <li>• Short answer</li> </ul>
X	6 (T)	Describe the structure of nervous system including the distribution of the nerves, nerve plexuses  Describe the ventricular system	<b>The Nervous system</b> <ul style="list-style-type: none"> <li>• Review Structure of neurons</li> <li>• CNS, ANS and PNS (Central, autonomic and peripheral)</li> <li>• Structure of brain, spinal cord, cranial nerves, spinal nerves, peripheral nerves, functional areas of cerebral cortex</li> <li>• Ventricular system – formation, circulation, and drainage</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Explain with models</li> <li>• Video slides</li> </ul>	<ul style="list-style-type: none"> <li>• MCQ</li> <li>• Short answer</li> </ul>

**Note:** Few lab hours can be planned for visits, observation and handling

(less than 1 credit lab hours are not specified separately)

### APPLIED PHYSIOLOGY

**PLACEMENT:** I SEMESTER

**THEORY:** 3 Credits (60 hours)

**DESCRIPTION:** The course is designed to assist student to acquire comprehensive knowledge of the normal functions of the organ systems of the human body to facilitate understanding of physiological basis of health, identify alteration in functions and provide the student with the necessary physiological knowledge to practice nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Develop understanding of the normal functioning of various organ systems of the body.
2. Identify the relative contribution of each organ system towards maintenance of homeostasis.
3. Describe the effect of alterations in functions.
4. Apply knowledge of physiological basis to analyze clinical situations and therapeutic applications.

## COURSE OUTLINE

## T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	4 (T)	Describe the physiology of cell, tissues, membranes and glands	<b>General Physiology – Basic concepts</b> <ul style="list-style-type: none"> <li>• Cell physiology including transportation across cell membrane</li> <li>• Body fluid compartments, Distribution of total body fluid, intracellular and extracellular compartments, major electrolytes and maintenance of homeostasis</li> <li>• Cell cycle</li> <li>• Tissue – formation, repair</li> <li>• Membranes and glands – functions</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Review – discussion</li> <li>• Lecture cum Discussion</li> <li>• Video demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>• Quiz</li> <li>• MCQ</li> <li>• Short answer</li> </ul>
II	6 (T)	Describe the physiology and mechanism of respiration  Identify the muscles of respiration and examine their contribution to the mechanism of breathing	<b>Respiratory system</b> <ul style="list-style-type: none"> <li>• Functions of respiratory organs</li> <li>• Physiology of respiration</li> <li>• Pulmonary circulation – functional features</li> <li>• Pulmonary ventilation, exchange of gases</li> <li>• Carriage of oxygen and carbon-dioxide, Exchange of gases in tissue</li> <li>• Regulation of respiration</li> <li>• Hypoxia, cyanosis, dyspnea, periodic breathing</li> <li>• Respiratory changes during exercise</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Video slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• MCQ</li> </ul>
III	8 (T)	Describe the functions of digestive system	<b>Digestive system</b> <ul style="list-style-type: none"> <li>• Functions of the organs of digestive tract</li> <li>• Saliva – composition, regulation of secretion and functions of saliva</li> <li>• Composition and function of gastric juice, mechanism and regulation of gastric secretion</li> <li>• Composition of pancreatic juice, function, regulation of pancreatic secretion</li> <li>• Functions of liver, gall bladder and pancreas</li> <li>• Composition of bile and function</li> <li>• Secretion and function of small and large intestine</li> <li>• Movements of alimentary tract</li> <li>• Digestion in mouth, stomach, small intestine, large intestine, absorption of food</li> <li>• Application and implications in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Video slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• MCQ</li> </ul>
IV	6 (T)	Explain the functions of the	<b>Circulatory and Lymphatic system</b> <ul style="list-style-type: none"> <li>• Functions of heart, conduction system,</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		heart, and physiology of circulation	<p>cardiac cycle, Stroke volume and cardiac output</p> <ul style="list-style-type: none"> <li>• Blood pressure and Pulse</li> <li>• Circulation – principles, factors influencing blood pressure, pulse</li> <li>• Coronary circulation, Pulmonary and systemic circulation</li> <li>• Heart rate – regulation of heart rate</li> <li>• Normal value and variations</li> <li>• Cardiovascular homeostasis in exercise and posture</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Video/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• MCQ</li> </ul>
V	5 (T)	Describe the composition and functions of blood	<p><b>Blood</b></p> <ul style="list-style-type: none"> <li>• Blood – Functions, Physical characteristics</li> <li>• Formation of blood cells</li> <li>• Erythropoiesis – Functions of RBC, RBC life cycle</li> <li>• WBC – types, functions</li> <li>• Platelets – Function and production of platelets</li> <li>• Clotting mechanism of blood, clotting time, bleeding time, PTT</li> <li>• Hemostasis – role of vasoconstriction, platelet plug formation in hemostasis, coagulation factors, intrinsic and extrinsic pathways of coagulation</li> <li>• Blood groups and types</li> <li>• Functions of reticuloendothelial system, immunity</li> <li>• Application in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Videos</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• MCQ</li> </ul>
VI	5 (T)	Identify the major endocrine glands and describe their functions	<p><b>The Endocrine system</b></p> <ul style="list-style-type: none"> <li>• Functions and hormones of Pineal Gland, Pituitary gland, Thyroid, Parathyroid, Thymus, Pancreas and Adrenal glands.</li> <li>• Other hormones</li> <li>• Alterations in disease</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Explain using charts</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
VII	4 (T)	Describe the structure of various sensory organs	<p><b>The Sensory Organs</b></p> <ul style="list-style-type: none"> <li>• Functions of skin</li> <li>• Vision, hearing, taste and smell</li> <li>• Errors of refraction, aging changes</li> <li>• Application and implications in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Video</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
VIII	6 (T)	Describe the functions of	<p><b>Musculoskeletal system</b></p>	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Structured essay</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		bones, joints, various types of muscles, its special properties and nerves supplying them	<ul style="list-style-type: none"> <li>• Bones – Functions, movements of bones of axial and appendicular skeleton, Bone healing</li> <li>• Joints and joint movements</li> <li>• Alteration of joint disease</li> <li>• Properties and Functions of skeletal muscles – mechanism of muscle contraction</li> <li>• Structure and properties of cardiac muscles and smooth muscles</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Video presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
IX	4 (T)	Describe the physiology of renal system	<b>Renal system</b> <ul style="list-style-type: none"> <li>• Functions of kidney in maintaining homeostasis</li> <li>• GFR</li> <li>• Functions of ureters, bladder and urethra</li> <li>• Micturition</li> <li>• Regulation of renal function</li> <li>• Application and implication in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Charts and models</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
X	4 (T)	Describe the structure of reproductive system	<b>The Reproductive system</b> <ul style="list-style-type: none"> <li>• Female reproductive system – Menstrual cycle, function and hormones of ovary, oogenesis, fertilization, implantation, Functions of breast</li> <li>• Male reproductive system – Spermatogenesis, hormones and its functions, semen</li> <li>• Application and implication in providing nursing care</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Explain using charts, models, specimens</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> </ul>
XI	8 (T)	Describe the functions of brain, physiology of nerve stimulus, reflexes, cranial and spinal nerves	<ul style="list-style-type: none"> <li>• <b>Nervous system</b></li> <li>• Overview of nervous system</li> <li>• Review of types, structure and functions of neurons</li> <li>• Nerve impulse</li> <li>• Review functions of Brain-Medulla, Pons, Cerebrum, Cerebellum</li> <li>• Sensory and Motor Nervous system</li> <li>• Peripheral Nervous system</li> <li>• Autonomic Nervous system</li> <li>• Limbic system and higher mental Functions- Hippocampus, Thalamus, Hypothalamus</li> <li>• Vestibular apparatus</li> <li>• Functions of cranial nerves</li> <li>• Autonomic functions</li> <li>• Physiology of Pain-somatic, visceral and referred</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Video slides</li> </ul>	<ul style="list-style-type: none"> <li>• Brief structured essays</li> <li>• Short answer</li> <li>• MCQ</li> <li>• Critical reflection</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Reflexes</li> <li>• CSF formation, composition, circulation of CSF, blood brain barrier and blood CSF barrier</li> <li>• Application and implication in nursing</li> </ul>		

**Note:** Few lab hours can be planned for visits, observation and handling

(less than 1 credit lab hours are not specified separately)

### APPLIED SOCIOLOGY

**PLACEMENT:** I SEMESTER

**THEORY:** 3 Credits (60 hours)

**DESCRIPTION:** This course is designed to enable the students to develop understanding about basic concepts of sociology and its application in personal and community life, health, illness and nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Identify the scope and significance of sociology in nursing.
2. Apply the knowledge of social structure and different culture in a society in identifying social needs of sick clients.
3. Identify the impact of culture on health and illness.
4. Develop understanding about types of family, marriage and its legislation.
5. Identify different types of caste, class, social change and its influence on health and health practices.
6. Develop understanding about social organization and disorganization and social problems in India.
7. Integrate the knowledge of clinical sociology and its uses in crisis intervention.

### COURSE OUTLINE

#### T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
<b>I</b>	1 (T)	Describe the scope and significance of sociology in nursing	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Definition, nature and scope of sociology</li> <li>• Significance of sociology in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> </ul>
<b>II</b>	15 (T)	Describe the individualization, Groups, processes of Socialization, social change and its importance	<b>Social structure</b> <ul style="list-style-type: none"> <li>• Basic concept of society, community, association and institution</li> <li>• Individual and society</li> <li>• Personal disorganization</li> <li>• Social group – meaning, characteristics, and classification.</li> <li>• Social processes – definition and forms, Co-operation, competition, conflict, accommodation, assimilation, isolation</li> <li>• Socialization – characteristics, process, agencies of socialization</li> <li>• Social change – nature, process, and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Structure and characteristics of urban, rural and tribal community.</li> <li>• Major health problems in urban, rural and tribal communities</li> <li>• Importance of social structure in nursing profession</li> </ul>		
III	8 (T)	Describe culture and its impact on health and disease	<b>Culture</b> <ul style="list-style-type: none"> <li>• Nature, characteristic and evolution of culture</li> <li>• Diversity and uniformity of culture</li> <li>• Difference between culture and civilization</li> <li>• Culture and socialization</li> <li>• Transcultural society</li> <li>• Culture, Modernization and its impact on health and disease</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Panel discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> </ul>
IV	8 (T)	Explain family, marriage and legislation related to marriage	<b>Family and Marriage</b> <ul style="list-style-type: none"> <li>• Family – characteristics, basic need, types and functions of family</li> <li>• Marriage – forms of marriage, social custom relating to marriage and importance of marriage</li> <li>• Legislation on Indian marriage and family.</li> <li>• Influence of marriage and family on health and health practices</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Case study report</li> </ul>
V	8 (T)	Explain different types of caste and classes in society and its influence on health	<b>Social stratification</b> <ul style="list-style-type: none"> <li>• Introduction – Characteristics &amp; forms of stratification</li> <li>• Function of stratification</li> <li>• Indian caste system – origin and characteristics</li> <li>• Positive and negative impact of caste in society.</li> <li>• Class system and status</li> <li>• Social mobility-meaning and types</li> <li>• Race – concept, criteria of racial classification</li> <li>• Influence of class, caste and race system on health.</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Panel discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
VI	15 (T)	Explain social organization, disorganization, social problems and role of nurse in reducing social problems	<b>Social organization and disorganization</b> <ul style="list-style-type: none"> <li>• Social organization – meaning, elements and types</li> <li>• Voluntary associations</li> <li>• Social system – definition, types, role and status as structural element of social system.</li> <li>• Interrelationship of institutions</li> <li>• Social control – meaning, aims and process of social control</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> <li>• Observational visit</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• Visit report</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Social norms, moral and values</li> <li>• Social disorganization – definition, causes, Control and planning</li> <li>• Major social problems – poverty, housing, food supplies, illiteracy, prostitution, dowry, Child labour, child abuse, delinquency, crime, substance abuse, HIV/AIDS, COVID-19</li> <li>• Vulnerable group – elderly, handicapped, minority and other marginal group.</li> <li>• Fundamental rights of individual, women and children</li> <li>• Role of nurse in reducing social problem and enhance coping</li> <li>• Social welfare programs in India</li> </ul>		
<b>VII</b>	5 (T)	Explain clinical sociology and its application in the hospital and community	<b>Clinical sociology</b> <ul style="list-style-type: none"> <li>• Introduction to clinical sociology</li> <li>• Sociological strategies for developing services for the abused</li> <li>• Use of clinical sociology in crisis intervention</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture,</li> <li>• Group discussion</li> <li>• Role play</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> </ul>

### APPLIED PSYCHOLOGY

#### PLACEMENT: I SEMESTER

**THEORY:** 3 Credits (60 Hours)

**DESCRIPTION:** This course is designed to enable the students to develop understanding about basic concepts of psychology and its application in personal and community life, health, illness and nursing. It further provides students opportunity to recognize the significance and application of soft skills and self-empowerment in the practice of nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Identify the importance of psychology in individual and professional life.
2. Develop understanding of the biological and psychological basis of human behaviour.
3. Identify the role of nurse in promoting mental health and dealing with altered personality.
4. Perform the role of nurses applicable to the psychology of different age groups.
5. Identify the cognitive and affective needs of clients.
6. Integrate the principles of motivation and emotion in performing the role of nurse in caring for emotionally sick client.
7. Demonstrate basic understanding of psychological assessment and nurse's role.
8. Apply the knowledge of soft skills in workplace and society.
9. Apply the knowledge of self-empowerment in workplace, society and personal life.

## COURSE OUTLINE

## T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	2 (T)	Describe scope, branches and significance of psychology in nursing	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Meaning of Psychology</li> <li>• Development of psychology – Scope, branches and methods of psychology</li> <li>• Relationship with other subjects</li> <li>• Significance of psychology in nursing</li> <li>• Applied psychology to solve everyday issues</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> </ul>
II	4 (T)	Describe biology of human behaviour	<b>Biological basis of behavior –Introduction</b> <ul style="list-style-type: none"> <li>• Body mind relationship</li> <li>• Genetics and behaviour</li> <li>• Inheritance of behaviour</li> <li>• Brain and behaviour.</li> <li>• Psychology and sensation – sensory process – normal and abnormal</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> </ul>
III	5 (T)	Describe mentally healthy person and defense mechanisms	<b>Mental health and mental hygiene</b> <ul style="list-style-type: none"> <li>• Concept of mental health and mental hygiene</li> <li>• Characteristic of mentally healthy person</li> <li>• Warning signs of poor mental health</li> <li>• Promotive and preventive mental health strategies and services</li> <li>• Defense mechanism and its implication</li> <li>• Frustration and conflict – types of conflicts and measurements to overcome</li> <li>• Role of nurse in reducing frustration and conflict and enhancing coping</li> <li>• Dealing with ego</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Case discussion</li> <li>• Role play</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
IV	7 (T)	Describe psychology of people in different age groups and role of nurse	<b>Developmental psychology</b> <ul style="list-style-type: none"> <li>• Physical, psychosocial and cognitive development across life span – Prenatal through early childhood, middle to late childhood through adolescence, early and mid-adulthood, late adulthood, death and dying</li> <li>• Role of nurse in supporting normal growth and development across the life span</li> <li>• Psychological needs of various groups in health and sickness – Infancy, childhood, adolescence, adulthood and older adult</li> <li>• Introduction to child psychology and role of nurse in meeting the psychological needs of</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group</li> <li>• discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			children <ul style="list-style-type: none"> <li>• Psychology of vulnerable individuals – challenged, women, sick etc.</li> <li>• Role of nurse with vulnerable groups</li> </ul>		
V	4 (T)	Explain personality and role of nurse in identification and improvement in altered personality	<b>Personality</b> <ul style="list-style-type: none"> <li>• Meaning, definition of personality</li> <li>• Classification of personality</li> <li>• Measurement and evaluation of personality – Introduction</li> <li>• Alteration in personality</li> <li>• Role of nurse in identification of individual personality and improvement in altered personality</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay and short answer</li> <li>• Objective type</li> </ul>
VI	16 (T)	Explain cognitive process and their applications	<b>Cognitive process</b> <ul style="list-style-type: none"> <li>• <b>Attention</b> – definition, types, determinants, duration, degree and alteration in attention</li> <li>• <b>Perception</b> – Meaning of Perception, principles, factor affecting perception,</li> <li>• <b>Intelligence</b> – Meaning of intelligence – Effect of heredity and environment in intelligence, classification, Introduction to measurement of intelligence tests – Mental deficiencies</li> <li>• <b>Learning</b> – Definition of learning, types of learning, Factors influencing learning – Learning process, Habit formation</li> <li>• <b>Memory</b>-meaning and nature of memory, factors influencing memory, methods to improve memory, forgetting</li> <li>• <b>Thinking</b> – types, level, reasoning and problem solving.</li> <li>• <b>Aptitude</b> – concept, types, individual differences and variability</li> <li>• Psychometric assessment of cognitive processes – Introduction</li> <li>• Alteration in cognitive processes</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay and short answer</li> <li>• Objective type</li> </ul>
VII	6 (T)	Describe motivation, emotion, attitude and role of nurse in emotionally sick client	<b>Motivation and emotional processes</b> <ul style="list-style-type: none"> <li>• <b>Motivation</b> – meaning, concept, types, theories of motivation, motivation cycle, biological and special motives</li> <li>• <b>Emotions</b> – Meaning of emotions, development of emotions, alteration of emotion, emotions in sickness – handling emotions in self and other</li> <li>• Stress and adaptation – stress, stressor, cycle, effect, adaptation and coping</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay and short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• <b>Attitudes</b> – Meaning of attitudes, nature, factor affecting attitude, attitudinal change, Role of attitude in health and sickness</li> <li>• Psychometric assessment of emotions and attitude – Introduction</li> <li>• Role of nurse in caring for emotionally sick client</li> </ul>		
VIII	4 (T)	Explain psychological assessment and tests and role of nurse	<b>Psychological assessment and tests – introduction</b> <ul style="list-style-type: none"> <li>• Types, development, characteristics, principles, uses, interpretation</li> <li>• Role of nurse in psychological assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Assessment of practice</li> </ul>
IX	10 (T)	Explain concept of soft skill and its application in work place and society	<b>Application of soft skill</b> <ul style="list-style-type: none"> <li>• Concept of soft skill</li> <li>• Types of soft skill – visual, aural and communication skill</li> <li>• The way of communication</li> <li>• Building relationship with client and society</li> <li>• <b>Interpersonal Relationships (IPR):</b> Definition, Types, and Purposes, Interpersonal skills, Barriers, Strategies to overcome barriers</li> <li>• Survival strategies – managing time, coping stress, resilience, work – life balance</li> <li>• Applying soft skill to workplace and society – Presentation skills, social etiquette, telephone etiquette, motivational skills, teamwork etc.</li> <li>• Use of soft skill in nursing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> <li>• Role play</li> <li>• Refer/Complete Soft skills module</li> </ul>	<ul style="list-style-type: none"> <li>• Essay and short answer</li> </ul>
X	2 (T)	Explain self-empowerment	<b>Self-empowerment</b> <ul style="list-style-type: none"> <li>• Dimensions of self-empowerment</li> <li>• Self-empowerment development</li> <li>• Importance of women’s empowerment in society</li> <li>• Professional etiquette and personal grooming</li> <li>• Role of nurse in empowering others</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>

### NURSING FOUNDATION - I (including First Aid module)

**PLACEMENT:** I SEMESTER

**THEORY:** 6 Credits (120 hours)

**PRACTICUM:** Skill Lab: 2 Credits (80 hours) and Clinical: 2 Credits (160 hours)

**DESCRIPTION:** This course is designed to help novice nursing students develop knowledge and competencies required to provide evidence-based, comprehensive basic nursing care for adult patients, using nursing process approach.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Develop understanding about the concept of health, illness and scope of nursing within health care services.
2. Apply values, code of ethics and professional conduct in professional life.
3. Apply the principles and methods of effective communication in establishing communication links with patients, families and other health team members.
4. Develop skill in recording and reporting.
5. Demonstrate competency in monitoring and documenting vital signs.
6. Describe the fundamental principles and techniques of infection control and biomedical waste management.
7. Identify and meet the comfort needs of the patients.
8. Perform admission, transfer, and discharge of a patient under supervision applying the knowledge.
9. Demonstrate understanding and application of knowledge in caring for patients with restricted mobility.
10. Perform first aid measures during emergencies.
11. Identify the educational needs of patients and demonstrate basic skills of patient education.

**\*Mandatory Module used in Teaching/Learning:**

First Aid: 40 Hours (including Basic CPR)

**COURSE OUTLINE**

**T – Theory, SL – Skill Lab**

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	5 (T)	Describe the concept of health and illness	<b>Introduction to health and illness</b> <ul style="list-style-type: none"> <li>• Concept of Health – Definitions (WHO), Dimensions</li> <li>• Maslow’s hierarchy of needs</li> <li>• Health – Illness continuum</li> <li>• Factors influencing health</li> <li>• Causes and risk factors for developing illnesses</li> <li>• Illness – Types, illness behavior</li> <li>• Impact of illness on patient and family</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
II	5 (T)	Describe the levels of illness prevention and care, health care services	<b>Health Care Delivery Systems – Introduction of Basic Concepts &amp; Meanings</b> <ul style="list-style-type: none"> <li>• Levels of Illness Prevention – Primary (Health Promotion), Secondary and Tertiary</li> <li>• Levels of Care – Primary, Secondary and Tertiary</li> <li>• Types of health care agencies/ services – Hospitals, clinics, Hospice, rehabilitation centres, extended care facilities</li> <li>• Hospitals – Types, Organization and</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<p>Functions</p> <ul style="list-style-type: none"> <li>• Health care teams in hospitals – members and their role</li> </ul>		
III	12 (T)	<p>Trace the history of Nursing</p> <p>Explain the concept, nature and scope of nursing</p> <p>Describe values, code of ethics and professional conduct for nurses in India</p>	<p><b>History of Nursing and Nursing as a profession</b></p> <ul style="list-style-type: none"> <li>• History of Nursing, History of Nursing in India</li> <li>• Contributions of Florence Nightingale</li> <li>• Nursing – Definition – Nurse, Nursing, Concepts, philosophy, objectives, Characteristics, nature and Scope of Nursing/ Nursing practice, Functions of nurse, Qualities of a nurse, Categories of nursing personnel</li> <li>• Nursing as a profession – definition and characteristics/criteria of profession</li> <li>• Values – Introduction – meaning and importance</li> <li>• Code of ethics and professional conduct for nurses – Introduction</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Case discussion</li> <li>• Role plays</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answers</li> <li>• Objective type</li> </ul>
IV	8 (T) 3 (SL)	<p>Describe the process, principles, and types of communication</p> <p>Explain therapeutic, non-therapeutic and professional communication</p> <p>Communicate effectively with patients, their families and team members</p>	<p><b>Communication and Nurse Patient Relationship</b></p> <ul style="list-style-type: none"> <li>• Communication – Levels, Elements and Process, Types, Modes, Factors influencing communication</li> <li>• Methods of effective communication/therapeutic communication techniques</li> <li>• Barriers to effective communication/non-therapeutic communication techniques</li> <li>• Professional communication</li> <li>• Helping Relationships (Nurse Patient Relationship) – Purposes and Phases</li> <li>• Communicating effectively with patient, families and team members</li> <li>• Maintaining effective human relations and communication with vulnerable groups (children, women, physically and mentally challenged and elderly)</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Role play and video film on Therapeutic Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
V	4 (T) 2 (SL)	<p>Describe the purposes, types and techniques of recording and reporting</p> <p>Maintain records and reports accurately</p>	<p><b>Documentation and Reporting</b></p> <ul style="list-style-type: none"> <li>• Documentation – Purposes of Reports and Records</li> <li>• Confidentiality</li> <li>• Types of Client records/Common Record-keeping forms</li> <li>• Methods/Systems of documentation/Recording</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>Guidelines for documentation</li> <li>Do's and Don'ts of documentation/Legal guidelines for Documentation/Recording</li> <li>Reporting – Change of shift reports, Transfer reports, Incident reports</li> </ul>		
VI	15 (T) 20 (SL)	Describe principles and techniques of monitoring and maintaining vital signs  Assess and record vital signs accurately	<b>Vital signs</b> <ul style="list-style-type: none"> <li>Guidelines for taking vital signs</li> <li><i>Body temperature</i> – <ul style="list-style-type: none"> <li>Definition, Physiology, Regulation, Factors affecting body temperature</li> <li>Assessment of body temperature – sites, equipment and technique</li> <li>Temperature alterations – Hyperthermia, Heat Cramps, Heat Exhaustion, Heatstroke, Hypothermia</li> <li>Fever/Pyrexia – Definition, Causes, Stages, Types</li> </ul> </li> <li>Nursing Management <ul style="list-style-type: none"> <li>Hot and Cold applications</li> </ul> </li> <li><i>Pulse:</i> <ul style="list-style-type: none"> <li>Definition, Physiology and Regulation, Characteristics, Factors affecting pulse</li> <li>Assessment of pulse – sites, equipment and technique</li> <li>Alterations in pulse</li> </ul> </li> <li><i>Respiration:</i> <ul style="list-style-type: none"> <li>Definition, Physiology and Regulation, Mechanics of breathing, Characteristics, Factors affecting respiration</li> <li>Assessment of respirations – technique</li> <li>Arterial Oxygen saturation</li> <li>Alterations in respiration</li> </ul> </li> <li><i>Blood pressure:</i> <ul style="list-style-type: none"> <li>Definition, Physiology and Regulation, Characteristics, Factors affecting BP</li> <li>Assessment of BP – sites, equipment and technique, Common Errors in BP Assessment</li> <li>Alterations in Blood Pressure</li> </ul> </li> <li>Documenting Vital Signs</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Demonstration &amp; Re-demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> <li>Document the given values of temperature, pulse, and respiration in the graphic sheet</li> <li>OSCE</li> </ul>
VII	3 (T)	Maintain equipment and linen	<b>Equipment and Linen</b> <ul style="list-style-type: none"> <li>Types – Disposables and reusable <ul style="list-style-type: none"> <li>Linen, rubber goods, glassware, metal, plastics, furniture</li> </ul> </li> <li>Introduction – Indent, maintenance, Inventory</li> </ul>		

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
VIII	10 (T) 3 (SL)	Describe the basic principles and techniques of infection control and biomedical waste management	<p><b>Introduction to Infection Control in Clinical setting Infection</b></p> <ul style="list-style-type: none"> <li>• Nature of infection</li> <li>• Chain of infection</li> <li>• Types of infection</li> <li>• Stages of infection</li> <li>• Factors increasing susceptibility to infection</li> <li>• Body defenses against infection – Inflammatory response &amp; Immune response</li> <li>• Health care associated infection (Nosocomial infection)</li> </ul> <p><b>Introductory concept of Asepsis – Medical &amp; Surgical asepsis</b></p> <p><i>Precautions</i></p> <ul style="list-style-type: none"> <li>• Hand Hygiene</li> <li>• (Hand washing and use of hand Rub)</li> <li>• Use of Personal Protective Equipment (PPE)</li> <li>• Standard precautions</li> </ul> <p><i>Biomedical Waste management</i></p> <ul style="list-style-type: none"> <li>• Types of hospital waste, waste segregation and hazards – Introduction</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Observation of autoclaving and other sterilization techniques</li> <li>• Video presentation on medical &amp; surgical asepsis</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
IX	15 (T) 15 (SL)	Identify and meet the comfort needs of the patients	<p><b>Comfort, Rest &amp; Sleep and Pain</b></p> <ul style="list-style-type: none"> <li>• Comfort <ul style="list-style-type: none"> <li>○ Factors Influencing Comfort</li> <li>○ Types of beds including latest beds, purposes &amp; bed making</li> <li>○ Therapeutic positions</li> <li>○ Comfort devices</li> </ul> </li> <li>• Sleep and Rest <ul style="list-style-type: none"> <li>○ Physiology of sleep</li> <li>○ Factors affecting sleep</li> <li>○ Promoting Rest and sleep</li> <li>○ Sleep Disorders</li> </ul> </li> <li>• Pain (Discomfort) <ul style="list-style-type: none"> <li>○ Physiology</li> <li>○ Common cause of pain</li> <li>○ Types</li> <li>○ Assessment – pain scales and narcotic scales</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration &amp; Re-demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• OSCE</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>○ Pharmacological and Non-pharmacological pain relieving measures – Use of narcotics, TENS devices, PCA</li> <li>○ Invasive techniques of pain management</li> <li>○ Any other newer measures</li> <li>○ CAM (Complementary &amp; Alternative healing Modalities)</li> </ul>		
<b>X</b>	5 (T) 3 (SL)	Describe the concept of patient environment	<p><b>Promoting Safety in Health Care Environment</b></p> <ul style="list-style-type: none"> <li>● Physical environment – Temperature, Humidity, Noise, Ventilation, Light, Odor, Pest control</li> <li>● Reduction of Physical hazards – fire, accidents</li> <li>● Fall Risk Assessment</li> <li>● Role of nurse in providing safe and clean environment</li> <li>● Safety devices – <ul style="list-style-type: none"> <li>○ Restraints – Types, Purposes, Indications, Legal Implications and Consent, Application of Restraints-Skill and Practice guidelines</li> <li>○ Other Safety Devices – Side rails, Grab bars, Ambu alarms, non-skid slippers etc.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Lecture</li> <li>● Discussion</li> <li>● Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>● Essay</li> <li>● Short answer</li> <li>● Objective type</li> </ul>
<b>XI</b>	6 (T) 2 (SL)	Explain and perform admission, transfer, and discharge of a patient	<p><b>Hospital Admission and discharge</b></p> <ul style="list-style-type: none"> <li>● Admission to the hospital Unit and preparation of unit <ul style="list-style-type: none"> <li>○ Admission bed</li> <li>○ Admission procedure</li> <li>○ Medico-legal issues</li> <li>○ Roles and Responsibilities of the nurse</li> </ul> </li> <li>● Discharge from the hospital <ul style="list-style-type: none"> <li>○ Types – Planned discharge, LAMA and Abscond, Referrals and transfers</li> <li>○ Discharge Planning</li> <li>○ Discharge procedure</li> <li>○ Medico-legal issues</li> <li>○ Roles and Responsibilities of the nurse</li> <li>○ Care of the unit after discharge</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Lecture</li> <li>● Discussion</li> <li>● Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>● Essay</li> <li>● Short answer</li> <li>● Objective type</li> </ul>
<b>XII</b>	8 (T) 10 (SL)	Demonstrate skill in caring for patients with restricted mobility	<p><b>Mobility and Immobility</b></p> <ul style="list-style-type: none"> <li>● Elements of Normal Movement, Alignment &amp; Posture, Joint Mobility, Balance, Coordinated Movement</li> </ul>	<ul style="list-style-type: none"> <li>● Lecture</li> <li>● Discussion</li> <li>● Demonstration &amp;</li> </ul>	<ul style="list-style-type: none"> <li>● Essay</li> <li>● Short answer</li> <li>● Objective</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Principles of body mechanics</li> <li>• Factors affecting Body Alignment and activity</li> <li>• Exercise – Types and benefits</li> <li>• Effects of Immobility</li> <li>• Maintenance of normal Body Alignment and Activity</li> <li>• Alteration in Body Alignment and mobility</li> <li>• Nursing interventions for impaired Body Alignment and Mobility – assessment, types, devices used, method               <ul style="list-style-type: none"> <li>○ Range of motion exercises</li> <li>○ Muscle strengthening exercises</li> <li>○ Maintaining body alignment – positions</li> <li>○ Moving</li> <li>○ Lifting</li> <li>○ Transferring</li> <li>○ Walking</li> </ul> </li> <li>• Assisting clients with ambulation</li> <li>• Care of patients with Immobility using Nursing process approach</li> <li>• Care of patients with casts and splints</li> </ul>	Re-demonstration	<ul style="list-style-type: none"> <li>type</li> <li>• OSCE</li> </ul>
<b>XIII</b>	4 (T) 2 (SL)	Describe the principles and practice of patient education	<b>Patient education</b> <ul style="list-style-type: none"> <li>• Patient Teaching – Importance, Purposes, Process</li> <li>• Integrating nursing process in patient teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Role plays</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>XIV</b>	20 (T) 20 (SL)	Explain and apply principles of First Aid during emergencies	<b>First Aid*</b> <ul style="list-style-type: none"> <li>• Definition, Basic Principles, Scope &amp; Rules</li> <li>• First Aid Management               <ul style="list-style-type: none"> <li>○ Wounds, Hemorrhage &amp; Shock</li> <li>○ Musculoskeletal Injuries – Fractures, Dislocation, Muscle injuries</li> <li>○ Transportation of Injured persons</li> <li>○ Respiratory Emergencies &amp; Basic CPR</li> <li>○ Unconsciousness</li> <li>○ Foreign Bodies – Skin, Eye, Ear, Nose, Throat &amp; Stomach</li> <li>○ Burns &amp; Scalds</li> <li>○ Poisoning, Bites &amp; Stings</li> <li>○ Frostbite &amp; Effects of Heat</li> <li>○ Community Emergencies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration &amp; Re-demonstration</li> <li>• Module completion</li> <li>• National Disaster Management Authority (NDMA) / Indian Red Cross Society (IRCS) First Aid module</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• OSCE</li> </ul>

\*Mandatory module

**CLINICAL PRACTICUM**

**Clinical Practicum:** 2 Credits (160 hours), 10 weeks × 16 hours per week

**PRACTICE COMPETENCIES:** On completion of the clinical practicum, the students will be able to

1. Maintain effective human relations (projecting professional image)
2. Communicate effectively with patient, families and team members
3. Demonstrate skills in techniques of recording and reporting
4. Demonstrate skill in monitoring vital signs
5. Care for patients with altered vital signs
6. Demonstrate skill in implementing standard precautions and use of PPE
7. Demonstrate skill in meeting the comfort needs of the patients
8. Provide safe and clean environment
9. Demonstrate skill in admission, transfer, and discharge of a patient
10. Demonstrate skill in caring for patients with restricted mobility
11. Plan and provide appropriate health teaching following the principles
12. Acquire skills in assessing and performing First Aid during emergencies.

**SKILL LAB****Use of Mannequins and Simulators**

<b>S.No.</b>	<b>Competencies</b>	<b>Mode of Teaching</b>
1.	Therapeutic Communication and Documentation	Role Play
2.	Vital signs	Simulator/Standardized patient
3.	Medical and Surgical Asepsis	Videos/Mannequin
4.	Pain Assessment	Standardized patient
5.	Comfort Devices	Mannequin
6.	Therapeutic Positions	Mannequin
7.	Physical Restraints and Side rails	Mannequin
8.	ROM Exercises	Standardized patient
9.	Ambulation	Standardized patient
10.	Moving and Turning patients in bed	Mannequin
11.	Changing position of helpless patients	Mannequin/Standardized patient
12.	Transferring patients bed to stretcher/wheel chair	Mannequin/Standardized patient
13.	Admission, Transfer, Discharge & Health Teaching	Role Play

## CLINICAL POSTINGS – General Medical/Surgical Wards

10 weeks × 16 hours/week = 160 Hours

Clinical Unit	Duration (in Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
General Medical/ Surgical wards	2	Maintain effective human relations (projecting professional image)  Communicate effectively with patient, families and team members  Demonstrate skills in techniques of recording and reporting	<b>Communication and Nurse patient relationship</b> <ul style="list-style-type: none"> <li>• Maintaining Communication with patient and family and interpersonal relationship</li> <li>• Documentation and Reporting <ul style="list-style-type: none"> <li>○ Documenting patient care and procedures</li> <li>○ Verbal report</li> <li>○ Written report</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• OSCE</li> </ul>
	2	Demonstrate skill in monitoring vital signs  Care for patients with altered vital signs  Demonstrate skill in implementing standard precautions and use of PPE	<i>Vital signs</i> <ul style="list-style-type: none"> <li>• Monitor/measure and document vital signs in a graphic sheet <ul style="list-style-type: none"> <li>○ Temperature (oral, tympanic, axillary)</li> <li>○ Pulse (Apical and peripheral pulses)</li> <li>○ Respiration</li> <li>○ Blood pressure</li> <li>○ Pulse oximetry</li> </ul> </li> <li>• Interpret and report alteration</li> <li>• Cold Applications – Cold Compress, Ice cap, Tepid Sponging</li> <li>• Care of equipment – thermometer, BP apparatus, Stethoscope, Pulse oximeter</li> </ul> <i>Infection control in Clinical settings</i> <ul style="list-style-type: none"> <li>• Hand hygiene</li> <li>• Use of PPE</li> </ul>	<ul style="list-style-type: none"> <li>• Care of patients with alterations in vital signs- 1</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of clinical skills using checklist</li> <li>• OSCE</li> </ul>
	3	Demonstrate skill in meeting the comfort needs of the patients	<b>Comfort, Rest &amp; Sleep, Pain and Promoting Safety in Health Care Environment</b> <i>Comfort, Rest &amp; Sleep</i> <ul style="list-style-type: none"> <li>• Bed making- <ul style="list-style-type: none"> <li>○ Open</li> <li>○ Closed</li> <li>○ Occupied</li> <li>○ Post-operative</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Assessment of clinical skills using checklist</li> <li>• OSCE</li> </ul>

Clinical Unit	Duration (in Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Provide safe and clean environment	<ul style="list-style-type: none"> <li>○ Cardiac bed</li> <li>○ Fracture bed</li> <li>● Comfort devices               <ul style="list-style-type: none"> <li>○ Pillows</li> <li>○ Over bed table/cardiac table</li> <li>○ Back rest</li> <li>○ Bed Cradle</li> </ul> </li> <li>● Therapeutic Positions               <ul style="list-style-type: none"> <li>○ Supine</li> <li>○ Fowlers (low, semi, high)</li> <li>○ Lateral</li> <li>○ Prone</li> <li>○ Sim's</li> <li>○ Trendelenburg</li> <li>○ Dorsal recumbent</li> <li>○ Lithotomy</li> <li>○ Knee chest</li> </ul> </li> </ul> <p><i>Pain</i></p> <ul style="list-style-type: none"> <li>● Pain assessment and provision for comfort</li> </ul> <p><i>Promoting Safety in Health Care Environment</i></p> <ul style="list-style-type: none"> <li>● Care of Patient's Unit</li> <li>● Use of Safety devices:               <ul style="list-style-type: none"> <li>○ Side Rails</li> </ul> </li> <li>● Restraints (Physical)</li> <li>● Fall risk assessment and Post Fall Assessment</li> </ul>	<ul style="list-style-type: none"> <li>● Fall risk assessment-1</li> </ul>	
	2	Demonstrate skill in admission, transfer, and discharge of a patient	<p><b>Hospital Admission and discharge, Mobility and Immobility and Patient education</b></p> <p><i>Hospital Admission and discharge</i></p> <p>Perform &amp; Document:</p> <ul style="list-style-type: none"> <li>● Admission</li> <li>● Transfer</li> <li>● Planned Discharge</li> </ul>		<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> </ul>
		Demonstrate skill in caring for patients with restricted mobility	<p><i>Mobility and Immobility</i></p> <ul style="list-style-type: none"> <li>● Range of Motion Exercises</li> <li>● Assist patient in:               <ul style="list-style-type: none"> <li>○ Moving</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Individual teaching-1</li> </ul>	<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> </ul>

Clinical Unit	Duration (in Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Plan and provide appropriate health teaching following the principles	<ul style="list-style-type: none"> <li>○ Turning</li> <li>○ Logrolling</li> <li>● Changing position of helpless patient</li> <li>● Transferring (Bed to and from chair/wheelchair/ stretcher)</li> </ul> <i>Patient education</i>		
	1	Demonstrate skills in assessing and performing First Aid during emergencies	<b>First aid and Emergencies</b> <ul style="list-style-type: none"> <li>● Bandaging Techniques               <ul style="list-style-type: none"> <li>○ Basic Bandages:                   <ul style="list-style-type: none"> <li>▪ Circular</li> <li>▪ Spiral</li> <li>▪ Reverse-Spiral</li> <li>▪ Recurrent</li> <li>▪ Figure of Eight</li> </ul> </li> <li>○ Special Bandages:                   <ul style="list-style-type: none"> <li>▪ Caplin</li> <li>▪ Eye/Ear Bandage</li> <li>▪ Jaw Bandage</li> <li>▪ Shoulder Spica</li> <li>▪ Thumb spica</li> <li>▪ Triangular Bandage/ Sling (Head &amp; limbs)</li> <li>▪ Binders</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Module completion National Disaster Management Authority (NDMA) First Aid module (To complete it in clinicals if not completed during lab)</li> </ul>	<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE (first aid competencies)</li> </ul>

### APPLIED BIOCHEMISTRY

**PLACEMENT:** II SEMESTER

**THEORY:** 2 credits (40 hours) (includes lab hours also)

**DESCRIPTION:** The course is designed to assist the students to acquire knowledge of the normal biochemical composition and functioning of human body, its alterations in disease conditions and to apply this knowledge in the practice of nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Describe the metabolism of carbohydrates and its alterations.
2. Explain the metabolism of lipids and its alterations.
3. Explain the metabolism of proteins and amino acids and its alterations.
4. Explain clinical enzymology in various disease conditions.
5. Explain acid base balance, imbalance and its clinical significance.
6. Describe the metabolism of hemoglobin and its clinical significance.
7. Explain different function tests and interpret the findings.
8. Illustrate the immunochemistry.

## COURSE OUTLINE

## T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	8 (T)	Describe the metabolism of carbohydrates and its alterations	<b>Carbohydrates</b> <ul style="list-style-type: none"> <li>• Digestion, absorption and metabolism of carbohydrates and related disorders</li> <li>• Regulation of blood glucose</li> <li>• Diabetes Mellitus – type 1 and type 2, symptoms, complications &amp; management in brief</li> <li>• Investigations of Diabetes Mellitus <ul style="list-style-type: none"> <li>○ OGTT – Indications, Procedure, Interpretation and types of GTT curve</li> <li>○ Mini GTT, extended GTT, GCT, IV GTT</li> <li>○ HbA1c (Only definition)</li> </ul> </li> <li>• Hypoglycemia – Definition &amp; causes</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts and slides</li> <li>• Demonstration of laboratory tests</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
II	8 (T)	Explain the metabolism of lipids and its alterations	<b>Lipids</b> <ul style="list-style-type: none"> <li>• Fatty acids – Definition, classification</li> <li>• Definition &amp; Clinical significance of MUFA &amp; PUFA, Essential fatty acids, Trans fatty acids</li> <li>• Digestion, absorption &amp; metabolism of lipids &amp; related disorders</li> <li>• Compounds formed from cholesterol</li> <li>• Ketone bodies (name, types &amp; significance only)</li> <li>• Lipoproteins – types &amp; functions (metabolism not required)</li> <li>• Lipid profile</li> <li>• Atherosclerosis (in brief)</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts and slides</li> <li>• Demonstration of laboratory tests</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
III	9 (T)	Explain the metabolism of amino acids and proteins  Identify alterations in disease conditions	<b>Proteins</b> <ul style="list-style-type: none"> <li>• Classification of amino acids based on nutrition, metabolic rate with examples</li> <li>• Digestion, absorption &amp; metabolism of protein &amp; related disorders</li> <li>• Biologically important compounds synthesized from various amino acids (only names)</li> <li>• In born errors of amino acid metabolism – only aromatic amino acids (in brief)</li> <li>• Plasma protein – types, function &amp; normal values</li> <li>• Causes of proteinuria, hypoproteinemia, hyper-gamma globulinemia</li> <li>• Principle of electrophoresis, normal &amp; abnormal electrophoretic patterns (in</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts, models and slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			brief)		
IV	4 (T)	Explain clinical enzymology in various disease conditions	<b>Clinical Enzymology</b> <ul style="list-style-type: none"> <li>• Isoenzymes – Definition &amp; properties</li> <li>• Enzymes of diagnostic importance in <ul style="list-style-type: none"> <li>○ Liver Diseases – ALT, AST, ALP, GGT</li> <li>○ Myocardial infarction – CK, cardiac troponins, AST, LDH</li> <li>○ Muscle diseases – CK, Aldolase</li> <li>○ Bone diseases – ALP</li> <li>○ Prostate cancer – PSA, ACP</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts and slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
V	3 (T)	Explain acid base balance, imbalance and its clinical significance	<b>Acid base maintenance</b> <ul style="list-style-type: none"> <li>• pH – definition, normal value</li> <li>• Regulation of blood pH – blood buffer, respiratory &amp; renal</li> <li>• ABG – normal values</li> <li>• Acid base disorders – types, definition &amp; causes</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts and slides</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>
VI	2 (T)	Describe the metabolism of hemoglobin and its clinical significance	<b>Heme catabolism</b> <ul style="list-style-type: none"> <li>• Heme degradation pathway</li> <li>• Jaundice – type, causes, urine &amp; blood investigations (van den berg test)</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts and slides</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>
VII	3 (T)	Explain different function tests and interpret the findings	<b>Organ function tests (biochemical parameters &amp; normal values only)</b> <ul style="list-style-type: none"> <li>• Renal</li> <li>• Liver</li> <li>• Thyroid</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Visit to Lab</li> <li>• Explain using charts and slides</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>
VIII	3 (T)	Illustrate the immunochemistry	<b>Immunochemistry</b> <ul style="list-style-type: none"> <li>• Structure &amp; functions of immunoglobulin</li> <li>• Investigations &amp; interpretation – ELISA</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Explain using charts and slides</li> <li>• Demonstration of laboratory tests</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>

**Note:** Few lab hours can be planned for observation and visits (Less than 1 credit, lab hours are not specified separately).

### APPLIED NUTRITION AND DIETETICS

**PLACEMENT:** II SEMESTER

**THEORY:** 3 credits (60 hours)

Theory : 45 hours

Lab : 15 hours

**DESCRIPTION:** The course is designed to assist the students to acquire basic knowledge and understanding of the principles of Nutrition and Dietetics and apply this knowledge in the practice of Nursing.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Identify the importance of nutrition in health and wellness.
2. Apply nutrient and dietary modifications in caring patients.
3. Explain the principles and practices of Nutrition and Dietetics.
4. Identify nutritional needs of different age groups and plan a balanced diet for them.
5. Identify the dietary principles for different diseases.
6. Plan therapeutic diet for patients suffering from various disease conditions.
7. Prepare meals using different methods and cookery rules.

### COURSE OUTLINE

#### T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	2 (T)	Define nutrition and its relationship to Health	<p><b>Introduction to Nutrition</b></p> <p><i>Concepts</i></p> <ul style="list-style-type: none"> <li>• Definition of Nutrition &amp; Health</li> <li>• Malnutrition – Under Nutrition &amp; Over Nutrition</li> <li>• Role of Nutrition in maintaining health</li> <li>• Factors affecting food and nutrition</li> </ul> <p><i>Nutrients</i></p> <ul style="list-style-type: none"> <li>• Classification</li> <li>• Macro &amp; Micronutrients</li> <li>• Organic &amp; Inorganic</li> <li>• Energy Yielding &amp; Non-Energy Yielding</li> </ul> <p><i>Food</i></p> <ul style="list-style-type: none"> <li>• Classification – Food groups</li> <li>• Origin</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
II	3 (T)	Describe the classification, functions, sources and recommended daily allowances (RDA) of carbohydrates  Explain BMR and factors affecting BMR	<p><b>Carbohydrates</b></p> <ul style="list-style-type: none"> <li>• Composition – Starches, sugar and cellulose</li> <li>• Recommended Daily Allowance (RDA)</li> <li>• Dietary sources</li> <li>• Functions</li> </ul> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>• Unit of energy – Kcal</li> <li>• Basal Metabolic Rate (BMR)</li> <li>• Factors affecting BMR</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
III	3 (T)	Describe the classification, Functions, sources	<p><b>Proteins</b></p> <ul style="list-style-type: none"> <li>• Composition</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		and RDA of proteins.	<ul style="list-style-type: none"> <li>• Eight essential amino acids</li> <li>• Functions</li> <li>• Dietary sources</li> <li>• Protein requirements – RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Models</li> <li>• Display of food items</li> </ul>	answer
IV	2 (T)	Describe the classification, Functions, sources and RDA of fats	<b>Fats</b> <ul style="list-style-type: none"> <li>• Classification – Saturated &amp; unsaturated</li> <li>• Calorie value</li> <li>• Functions</li> <li>• Dietary sources of fats and fatty acids</li> <li>• Fat requirements – RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
V	3 (T)	Describe the classification, functions, sources and RDA of vitamins	<b>Vitamins</b> <ul style="list-style-type: none"> <li>• Classification – fat soluble &amp; water soluble</li> <li>• Fat soluble – Vitamins A, D, E, and K</li> <li>• Water soluble – Thiamine (vitamin B1), Riboflavin (vitamin B2), Nicotinic acid, Pyridoxine (vitamin B6), Pantothenic acid, Folic acid, Vitamin B12, Ascorbic acid (vitamin C)</li> <li>• Functions, Dietary Sources &amp; Requirements – RDA of every vitamin</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
VI	3 (T)	Describe the classification, functions, sources and RDA of minerals	<b>Minerals</b> <ul style="list-style-type: none"> <li>• Classification – Major minerals (Calcium, phosphorus, sodium, potassium and magnesium) and Trace elements</li> <li>• Functions</li> <li>• Dietary Sources</li> <li>• Requirements – RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> <li>• Display of food items</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>
VII	7 (T) 8 (L)	Describe and plan balanced diet for different age groups, pregnancy, and lactation	<b>Balanced diet</b> <ul style="list-style-type: none"> <li>• Definition, principles, steps</li> <li>• Food guides – Basic Four Food Groups</li> <li>• RDA – Definition, limitations, uses</li> <li>• Food Exchange System</li> <li>• Calculation of nutritive value of foods</li> <li>• Dietary fibre</li> </ul> <b>Nutrition across life cycle</b> <ul style="list-style-type: none"> <li>• Meal planning/Menu planning – Definition, principles, steps</li> <li>• Infant and Young Child Feeding (IYCF) guidelines – breast feeding, infant foods</li> <li>• Diet plan for different age groups –</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Meal planning</li> <li>• Lab session on <ul style="list-style-type: none"> <li>○ Preparation of balanced diet for different categories</li> <li>○ Low cost nutritious dishes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Very short answer</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<p>Children, adolescents and elderly</p> <ul style="list-style-type: none"> <li>• Diet in pregnancy – nutritional requirements and balanced diet plan</li> <li>• Anemia in pregnancy – diagnosis, diet for anemic pregnant women, iron &amp; folic acid supplementation and counseling</li> <li>• Nutrition in lactation – nutritional requirements, diet for lactating mothers, complementary feeding/ weaning</li> </ul>		
<b>VIII</b>	6 (T)	Classify and describe the common nutritional deficiency disorders and identify nurses' role in assessment, management and prevention	<p><b>Nutritional deficiency disorders</b></p> <ul style="list-style-type: none"> <li>• Protein energy malnutrition – magnitude of the problem, causes, classification, signs &amp; symptoms, Severe acute malnutrition (SAM), management &amp; prevention and nurses' role</li> <li>• Childhood obesity – signs &amp; symptoms, assessment, management &amp; prevention and nurses' role</li> <li>• Vitamin deficiency disorders – vitamin A, B, C &amp; D deficiency disorders –causes, signs &amp; symptoms, management &amp; prevention and nurses' role</li> <li>• Mineral deficiency diseases – iron, iodine and calcium deficiencies –causes, signs &amp; symptoms, management &amp; prevention and nurses' role</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> <li>• Models</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
<b>IX</b>	4 (T) 7 (L)	Principles of diets in various diseases	<p><b>Therapeutic diets</b></p> <ul style="list-style-type: none"> <li>• Definition, Objectives, Principles</li> <li>• Modifications – Consistency, Nutrients,</li> <li>• Feeding techniques.</li> <li>• Diet in Diseases – Obesity, Diabetes Mellitus, CVD, Underweight, Renal diseases, Hepatic disorders Constipation, Diarrhea, Pre and Post-operative period</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Meal planning</li> <li>• Lab session on preparation of therapeutic diets</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>
<b>X</b>	3 (T)	Describe the rules and preservation of nutrients	<p><b>Cookery rules and preservation of nutrients</b></p> <ul style="list-style-type: none"> <li>• Cooking – Methods, Advantages and Disadvantages</li> <li>• Preservation of nutrients</li> <li>• Measures to prevent loss of nutrients during preparation</li> <li>• Safe food handling and Storage of foods</li> <li>• Food preservation</li> <li>• Food additives and food adulteration</li> <li>• Prevention of Food Adulteration Act (PFA)</li> <li>• Food standards</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Charts/Slides</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Very short answer</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
XI	4 (T)	Explain the methods of nutritional assessment and nutrition education	<b>Nutrition assessment and nutrition education</b> <ul style="list-style-type: none"> <li>Objectives of nutritional assessment</li> <li>Methods of assessment – clinical examination, anthropometry, laboratory &amp; biochemical assessment, assessment of dietary intake including Food frequency questionnaire (FFQ) method</li> <li>Nutrition education – purposes, principles and methods</li> </ul>	<ul style="list-style-type: none"> <li>Lecture cum Discussion</li> <li>Demonstration</li> <li>Writing nutritional assessment report</li> </ul>	<ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Evaluation of Nutritional assessment report</li> </ul>
XII	3 (T)	Describe nutritional problems in India and nutritional programs	<b>National Nutritional Programs and role of nurse</b> <ul style="list-style-type: none"> <li>Nutritional problems in India</li> <li>National nutritional policy</li> <li><i>National nutritional programs</i> – Vitamin A Supplementation, Anemia Mukht Bharat Program, Integrated Child Development Services (ICDS), Mid-day Meal Scheme (MDMS), National Iodine Deficiency Disorders Control Program (NIDDCP), Weekly Iron Folic Acid Supplementation (WIFS) and others as introduced</li> <li>Role of nurse in every program</li> </ul>	<ul style="list-style-type: none"> <li>Lecture cum Discussion</li> </ul>	<ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Very short answer</li> </ul>
XIII	2 (T)	Discuss the importance of food hygiene and food safety  Explain the Acts related to food safety	<b>Food safety</b> <ul style="list-style-type: none"> <li>Definition, Food safety considerations &amp; measures</li> <li>Food safety regulatory measures in India – Relevant Acts</li> <li>Five keys to safer food</li> <li>Food storage, food handling and cooking</li> <li>General principles of food storage of food items (ex. milk, meat)</li> <li>Role of food handlers in food borne diseases</li> <li>Essential steps in safe cooking practices</li> </ul>	<ul style="list-style-type: none"> <li>Guided reading on related acts</li> </ul>	<ul style="list-style-type: none"> <li>Quiz</li> <li>Short answer</li> </ul>

**Food born diseases and food poisoning are dealt in Community Health Nursing I.**

### NURSING FOUNDATION - II (including Health Assessment Module)

**PLACEMENT:** II SEMESTER

**THEORY:** 6 Credits (120 hours)

**PRACTICUM:** Skill Lab: 3 Credits (120 hours), Clinical: 4 Credits (320 hours)

**DESCRIPTION:** This course is designed to help novice nursing students develop knowledge and competencies required to provide evidence-based, comprehensive basic nursing care for adult patients, using nursing process approach.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Develop understanding about fundamentals of health assessment and perform health assessment in supervised clinical settings

2. Demonstrate fundamental skills of assessment, planning, implementation and evaluation of nursing care using Nursing process approach in supervised clinical settings
3. Assess the Nutritional needs of patients and provide relevant care under supervision
4. Identify and meet the hygienic needs of patients
5. Identify and meet the elimination needs of patient
6. Interpret findings of specimen testing applying the knowledge of normal values
7. Promote oxygenation based on identified oxygenation needs of patients under supervision
8. Review the concept of fluid, electrolyte balance integrating the knowledge of applied physiology
9. Apply the knowledge of the principles, routes, effects of administration of medications in administering medication
10. Calculate conversions of drugs and dosages within and between systems of measurements
11. Demonstrate knowledge and understanding in caring for patients with altered functioning of sense organs and unconsciousness
12. Explain loss, death and grief
13. Describe sexual development and sexuality
14. Identify stressors and stress adaptation modes
15. Integrate the knowledge of culture and cultural differences in meeting the spiritual needs
16. Explain the introductory concepts relevant to models of health and illness in patient care

**\*Mandatory Module used in Teaching/Learning:**

Health Assessment Module: 40 hours

**COURSE OUTLINE**

**T – Theory, SL – Skill Lab**

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
<b>I</b>	20 (T) 20 (SL)	Describe the purpose and process of health assessment and perform assessment under supervised clinical practice	<b>Health Assessment</b> <ul style="list-style-type: none"> <li>• Interview techniques</li> <li>• Observation techniques</li> <li>• Purposes of health assessment</li> <li>• Process of Health assessment               <ul style="list-style-type: none"> <li>○ Health history</li> <li>○ Physical examination:                   <ul style="list-style-type: none"> <li>▪ Methods: Inspection, Palpation, Percussion, Auscultation, Olfaction</li> <li>▪ Preparation for examination: patient and unit</li> <li>▪ General assessment</li> <li>▪ Assessment of each body system</li> <li>▪ Documenting health assessment findings</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Modular Learning</li> <li>• <b>*Health Assessment Module</b></li> <li>• Lecture cum Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• OSCE</li> </ul>
<b>II</b>	13 (T) 8 (SL)	Describe assessment, planning, implementation and evaluation of nursing care using Nursing process	<b>The Nursing Process</b> <ul style="list-style-type: none"> <li>• Critical Thinking Competencies, Attitudes for Critical Thinking, Levels of critical thinking in Nursing</li> <li>• Nursing Process Overview</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Supervised Clinical Practice</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• Evaluation of care plan</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		approach	<ul style="list-style-type: none"> <li>○ <b>Assessment</b> <ul style="list-style-type: none"> <li>▪ Collection of Data: Types, Sources, Methods</li> <li>▪ Organizing Data</li> <li>▪ Validating Data</li> <li>▪ Documenting Data</li> </ul> </li> <li>○ <b>Nursing Diagnosis</b> <ul style="list-style-type: none"> <li>▪ Identification of client problems, risks and strengths</li> <li>▪ Nursing diagnosis statement – parts, Types, Formulating, Guidelines for formulating Nursing Diagnosis</li> <li>▪ NANDA approved diagnoses</li> <li>▪ Difference between medical and nursing diagnosis</li> </ul> </li> <li>○ <b>Planning</b> <ul style="list-style-type: none"> <li>▪ Types of planning</li> <li>▪ Establishing Priorities</li> <li>▪ Establishing Goals and Expected Outcomes – Purposes, types, guidelines, Components of goals and outcome statements</li> <li>▪ Types of Nursing Interventions, Selecting interventions: Protocols and Standing Orders</li> <li>▪ Introduction to Nursing Intervention Classification and Nursing Outcome Classification</li> <li>▪ Guidelines for writing care plan</li> </ul> </li> <li>○ <b>Implementation</b> <ul style="list-style-type: none"> <li>▪ Process of Implementing the plan of care</li> <li>▪ Types of care – Direct and Indirect</li> </ul> </li> <li>○ <b>Evaluation</b> <ul style="list-style-type: none"> <li>▪ Evaluation Process, Documentation and Reporting</li> </ul> </li> </ul>		
<b>III</b>	5 (T) 5 (SL)	Identify and meet the Nutritional needs of patients	<p><b>Nutritional needs</b></p> <ul style="list-style-type: none"> <li>• Importance</li> <li>• Factors affecting nutritional needs</li> <li>• Assessment of nutritional status</li> <li>• <i>Review</i>: special diets – Solid, Liquid, Soft</li> <li>• <i>Review</i> on therapeutic diets</li> <li>• Care of patient with Dysphagia,</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Exercise</li> <li>• Supervised Clinical practice</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• Evaluation of nutritional assessment &amp; diet planning</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<p>Anorexia, Nausea, Vomiting</p> <ul style="list-style-type: none"> <li>• Meeting Nutritional needs: Principles, equipment, procedure, indications               <ul style="list-style-type: none"> <li>○ Oral</li> <li>○ Enteral: Nasogastric/ Orogastric</li> <li>○ Introduction to other enteral feeds – types, indications, Gastrostomy, Jejunostomy</li> <li>○ Parenteral – TPN (Total Parenteral Nutrition)</li> </ul> </li> </ul>		
<b>IV</b>	5 (T) 15 (SL)	Identify and meet the hygienic needs of patients	<p><b>Hygiene</b></p> <ul style="list-style-type: none"> <li>• Factors Influencing Hygienic Practice</li> <li>• Hygienic care: Indications and purposes, effects of neglected care               <ul style="list-style-type: none"> <li>○ Care of the Skin – (Bath, feet and nail, Hair Care)</li> <li>○ Care of pressure points</li> <li>○ Assessment of Pressure Ulcers using Braden Scale and Norton Scale</li> <li>○ Pressure ulcers – causes, stages and manifestations, care and prevention</li> <li>○ Perineal care/Meatal care</li> <li>○ Oral care, Care of Eyes, Ears and Nose including assistive devices (eye glasses, contact lens, dentures, hearing aid)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• OSCE</li> </ul>
<b>V</b>	10 (T) 10 (SL)	Identify and meet the elimination needs of patient	<p><b>Elimination needs</b></p> <ul style="list-style-type: none"> <li>• Urinary Elimination               <ul style="list-style-type: none"> <li>○ Review of Physiology of Urine Elimination, Composition and characteristics of urine</li> <li>○ Factors Influencing Urination</li> <li>○ Alteration in Urinary Elimination</li> <li>○ Facilitating urine elimination: assessment, types, equipment, procedures and special considerations</li> <li>○ Providing urinal/bed pan</li> <li>○ Care of patients with                   <ul style="list-style-type: none"> <li>▪ Condom drainage</li> <li>▪ Intermittent Catheterization</li> <li>▪ Indwelling Urinary catheter and urinary drainage</li> <li>▪ Urinary diversions</li> <li>▪ Bladder irrigation</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• OSCE</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Bowel Elimination               <ul style="list-style-type: none"> <li>○ Review of Physiology of Bowel Elimination, Composition and characteristics of feces</li> <li>○ Factors affecting Bowel elimination</li> <li>○ Alteration in Bowel Elimination</li> <li>○ Facilitating bowel elimination: Assessment, equipment, procedures                   <ul style="list-style-type: none"> <li>▪ Enemas</li> <li>▪ Suppository</li> <li>▪ Bowel wash</li> <li>▪ Digital Evacuation of impacted feces</li> <li>▪ Care of patients with Ostomies (Bowel Diversion Procedures)</li> </ul> </li> </ul> </li> </ul>		
<b>VI</b>	3 (T) 4 (SL)	<p>Explain various types of specimens and identify normal values of tests</p> <p>Develop skill in specimen collection, handling and transport</p>	<p><b>Diagnostic testing</b></p> <ul style="list-style-type: none"> <li>• Phases of diagnostic testing (pre-test, intra-test &amp; post-test) in Common investigations and clinical implications               <ul style="list-style-type: none"> <li>○ Complete Blood Count</li> <li>○ Serum Electrolytes</li> <li>○ LFT</li> <li>○ Lipid/Lipoprotein profile</li> <li>○ Serum Glucose – AC, PC, HbA1c</li> <li>○ Monitoring Capillary Blood Glucose (Glucometer Random Blood Sugar – GRBS)</li> <li>○ Stool Routine Examination</li> <li>○ Urine Testing – Albumin, Acetone, pH, Specific Gravity</li> <li>○ Urine Culture, Routine, Timed Urine Specimen</li> <li>○ Sputum culture</li> <li>○ Overview of Radiologic &amp; Endoscopic Procedures</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>VII</b>	11 (T) 10 (SL)	Assess patients for oxygenation needs, promote oxygenation and provide care during oxygen therapy	<p><b>Oxygenation needs</b></p> <ul style="list-style-type: none"> <li>• Review of Cardiovascular and Respiratory Physiology</li> <li>• Factors affecting respiratory functioning</li> <li>• Alterations in Respiratory Functioning               <ul style="list-style-type: none"> <li>• Conditions affecting                   <ul style="list-style-type: none"> <li>○ Airway</li> <li>○ Movement of air</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration &amp; Re-demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>○ Diffusion</li> <li>○ Oxygen transport</li> <li>● Alterations in oxygenation</li> <li>● Nursing interventions to promote oxygenation: assessment, types, equipment used &amp; procedure</li> <li>○ Maintenance of patent airway</li> <li>○ Oxygen administration</li> <li>○ Suctioning – oral, tracheal</li> <li>○ Chest physiotherapy – Percussion, Vibration &amp; Postural drainage</li> <li>○ Care of Chest drainage – principles &amp; purposes</li> <li>○ Pulse Oximetry – Factors affecting measurement of oxygen saturation using pulse oximeter, Interpretation</li> <li>● Restorative &amp; continuing care               <ul style="list-style-type: none"> <li>○ Hydration</li> <li>○ Humidification</li> <li>○ Coughing techniques</li> <li>○ Breathing exercises</li> <li>○ Incentive spirometry</li> </ul> </li> </ul>		
VIII	5 (T) 10 (SL)	Describe the concept of fluid, electrolyte balance	<p><b>Fluid, Electrolyte, and Acid –Base Balances</b></p> <ul style="list-style-type: none"> <li>● Review of Physiological Regulation of Fluid, Electrolyte and Acid-Base Balances</li> <li>● Factors Affecting Fluid, Electrolyte and Acid-Base Balances</li> <li>● Disturbances in fluid volume:               <ul style="list-style-type: none"> <li>○ Deficit                   <ul style="list-style-type: none"> <li>■ Hypovolemia</li> <li>■ Dehydration</li> </ul> </li> <li>○ Excess                   <ul style="list-style-type: none"> <li>■ Fluid overload</li> <li>■ Edema</li> </ul> </li> </ul> </li> <li>● Electrolyte imbalances (hypo and hyper)               <ul style="list-style-type: none"> <li>○ Acid-base imbalances                   <ul style="list-style-type: none"> <li>■ Metabolic – acidosis &amp; alkalosis</li> <li>■ Respiratory – acidosis &amp; alkalosis</li> </ul> </li> <li>○ Intravenous therapy</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Lecture</li> <li>● Discussion</li> <li>● Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>● Essay</li> <li>● Short answer</li> <li>● Objective type</li> <li>● Problem solving – calculations</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>▪ Peripheral venipuncture sites</li> <li>▪ Types of IV fluids</li> <li>▪ Calculation for making IV fluid plan</li> <li>▪ Complications of IV fluid therapy</li> <li>▪ Measuring fluid intake and output</li> <li>▪ Administering Blood and Blood components</li> <li>▪ Restricting fluid intake</li> <li>▪ Enhancing Fluid intake</li> </ul>		
<b>IX</b>	20 (T) 22 (SL)	<p>Explain the principles, routes, effects of administration of medications</p> <p>Calculate conversions of drugs and dosages within and between systems of measurements</p> <p>Administer oral and topical medication and document accurately under supervision</p>	<p><b>Administration of Medications</b></p> <ul style="list-style-type: none"> <li>• Introduction – Definition of Medication, Administration of Medication, Drug Nomenclature, Effects of Drugs, Forms of Medications, Purposes, Pharmacodynamics and Pharmacokinetics</li> <li>• Factors influencing Medication Action</li> <li>• Medication orders and Prescriptions</li> <li>• Systems of measurement</li> <li>• Medication dose calculation</li> <li>• Principles, 10 rights of Medication Administration</li> <li>• Errors in Medication administration</li> <li>• Routes of administration</li> <li>• Storage and maintenance of drugs and Nurses responsibility</li> <li>• Terminologies and abbreviations used in prescriptions and medications orders</li> <li>• Developmental considerations</li> <li>• Oral, Sublingual and Buccal routes: Equipment, procedure</li> <li>• Introduction to Parenteral Administration of Drugs – Intramuscular, Intravenous, Subcutaneous, Intradermal: Location of site, Advantages and disadvantages of the specific sites, Indication and contraindications for the different routes and sites.</li> <li>• Equipment – Syringes &amp; needles, cannulas, Infusion sets – parts, types, sizes</li> <li>• Types of vials and ampoules, Preparing Injectable medicines from vials and ampoules</li> <li>○ Care of equipment: decontamination and disposal of syringes, needles,</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration &amp; Re-demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> <li>• OSCE</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			infusion sets ○ Prevention of Needle-Stick Injuries ● Topical Administration: Types, purposes, site, equipment, procedure ○ Application to skin & mucous membrane ○ Direct application of liquids, Gargle and swabbing the throat ○ Insertion of Drug into body cavity: Suppository/ medicated packing in rectum/vagina ○ Instillations: Ear, Eye, Nasal, Bladder, and Rectal ○ Irrigations: Eye, Ear, Bladder, Vaginal and Rectal ○ Spraying: Nose and throat ● Inhalation: Nasal, oral, endotracheal/tracheal (steam, oxygen and medications) – purposes, types, equipment, procedure, recording and reporting of medications administered ● Other Parenteral Routes: Meaning of epidural, intrathecal, intraosseous, intraperitoneal, intra-pleural, intra-arterial		
X	5 (T) 6 (SL)	Provide care to patients with altered functioning of sense organs and unconsciousness in supervised clinical practice	<b>Sensory needs</b> ● Introduction ● Components of sensory experience – Reception, Perception & Reaction ● Arousal Mechanism ● Factors affecting sensory function ● Assessment of Sensory alterations – sensory deficit, deprivation, overload & sensory poverty ● Management ○ Promoting meaningful communication (patients with Aphasia, artificial airway & Visual and Hearing impairment) <b>Care of Unconscious Patients</b> ● Unconsciousness: Definition, causes & risk factors, pathophysiology, stages of Unconsciousness, Clinical Manifestations ● Assessment and nursing management of patient with unconsciousness, complications	● Lecture ● Discussion ● Demonstration	● Essay ● Short answer ● Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
XI	4 (T) 6 (SL)	Explain loss, death and grief	<b>Care of Terminally ill, death and dying</b> <ul style="list-style-type: none"> <li>• Loss – Types</li> <li>• Grief, Bereavement &amp; Mourning</li> <li>• Types of Grief responses</li> <li>• Manifestations of Grief</li> <li>• Factors influencing Loss &amp; Grief Responses</li> <li>• Theories of Grief &amp; Loss – Kubler Ross</li> <li>• 5 Stages of Dying</li> <li>• The R Process model (Rando's)</li> <li>• Death – Definition, Meaning, Types (Brain &amp; Circulatory Deaths)</li> <li>• Signs of Impending Death</li> <li>• Dying patient's Bill of Rights</li> <li>• Care of Dying Patient</li> <li>• Physiological changes occurring after Death</li> <li>• Death Declaration, Certification</li> <li>• Autopsy</li> <li>• Embalming</li> <li>• Last office/Death Care</li> <li>• Counseling &amp; supporting grieving relatives</li> <li>• Placing body in the Mortuary</li> <li>• Releasing body from Mortuary</li> <li>• Overview – Medico-legal Cases, Advance directives, DNI/DNR, Organ Donation, Euthanasia</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Case discussions</li> <li>• Death care/last office</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
			<b>PSYCHOSOCIAL NEEDS (A-D)</b>		
XII	3 (T)	Develop basic understanding of self-concept	<b>A. Self-concept</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Components (Personal Identity, Body Image, Role Performance, Self Esteem)</li> <li>• Factors affecting Self Concept</li> <li>• Nursing Management</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Case Discussion/ Role play</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
XIII	2 (T)	Describe sexual development and sexuality	<b>B. Sexuality</b> <ul style="list-style-type: none"> <li>• Sexual development throughout life</li> <li>• Sexual health</li> <li>• Sexual orientation</li> <li>• Factors affecting sexuality</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			<ul style="list-style-type: none"> <li>• Prevention of STIs, unwanted pregnancy, avoiding sexual harassment and abuse</li> <li>• Dealing with inappropriate sexual behavior</li> </ul>		
<b>XIV</b>	2 (T) 4 (SL)	Describe stress and adaptation	<p><b>C. Stress and Adaptation – Introductory concepts</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Sources, Effects, Indicators &amp; Types of Stress</li> <li>• Types of stressors</li> <li>• Stress Adaptation – General Adaptation Syndrome (GAS), Local Adaptation Syndrome (LAS)</li> <li>• Manifestation of stress – Physical &amp; psychological</li> <li>• Coping strategies/ Mechanisms</li> <li>• Stress Management <ul style="list-style-type: none"> <li>○ Assist with coping and adaptation</li> <li>○ Creating therapeutic environment</li> </ul> </li> <li>• Recreational and diversion therapies</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>XV</b>	6 (T)	Explain culture and cultural norms  Integrate cultural differences and spiritual needs in providing care to patients under supervision	<p><b>D. Concepts of Cultural Diversity and Spirituality</b></p> <ul style="list-style-type: none"> <li>• Cultural diversity <ul style="list-style-type: none"> <li>○ Cultural Concepts – Culture, Subculture, Multicultural, Diversity, Race, Acculturation, Assimilation</li> <li>○ Transcultural Nursing</li> <li>○ Cultural Competence</li> <li>○ Providing Culturally Responsive Care</li> </ul> </li> <li>• Spirituality <ul style="list-style-type: none"> <li>○ Concepts – Faith, Hope, Religion, Spirituality, Spiritual Wellbeing</li> <li>○ Factors affecting Spirituality</li> <li>○ Spiritual Problems in Acute, Chronic, Terminal illnesses &amp; Near-Death Experience</li> <li>○ Dealing with Spiritual Distress/Problems</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>XVI</b>	6 (T)	Explain the significance of nursing theories	<p><b>Nursing Theories: Introduction</b></p> <ul style="list-style-type: none"> <li>• Meaning &amp; Definition, Purposes, Types of theories with examples, Overview of selected nursing theories – Nightingale, Orem, Roy</li> <li>• Use of theories in nursing practice</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>

**CLINICAL PRACTICUM**

Clinical: 4 Credits (320 hours)

**PRACTICE COMPETENCIES:** On completion of the course, the student will be able to

1. Perform health assessment of each body system
2. Develop skills in assessment, planning, implementation and evaluation of nursing care using Nursing process approach
3. Identify and meet the Nutritional needs of patients
4. Implement basic nursing techniques in meeting hygienic needs of patients
5. Plan and Implement care to meet the elimination needs of patient
6. Develop skills in instructing and collecting samples for investigation.
7. Perform simple lab tests and analyze & interpret common diagnostic values
8. Identify patients with impaired oxygenation and demonstrate skill in caring for patients with impaired oxygenation
9. Identify and demonstrate skill in caring for patients with fluid, electrolyte and acid – base imbalances
10. Assess, plan, implement & evaluate the basic care needs of patients with altered functioning of sense organs and unconsciousness
11. Care for terminally ill and dying patients

**SKILL LAB****Use of Mannequins and Simulators**

S.No.	Competencies	Mode of Teaching
1.	Health Assessment	Standardized Patient
2.	Nutritional Assessment	Standardized Patient
3.	Sponge bath, oral hygiene, perineal care	Mannequin
4.	Nasogastric tube feeding	Trainer/ Simulator
5.	Providing bed pan & urinal	Mannequin
6.	Catheter care	Catheterization Trainer
7.	Bowel wash, enema, insertion of suppository	Simulator/ Mannequin
8.	Oxygen administration – face mask, venture mask, nasal prongs	Mannequin
9.	Administration of medication through Parenteral route – IM, SC, ID, IV	IM injection trainer, ID injection trainer, IV arm (Trainer)
10.	Last Office	Mannequin

**CLINICAL POSTINGS – General Medical/Surgical Wards**

(16 weeks × 20 hours per week = 320 hours)

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
General Medical/ Surgical wards	3	Perform health assessment of each body system	<b>Health Assessment</b> <ul style="list-style-type: none"> <li>• Nursing/Health history taking</li> <li>• Perform physical examination:               <ul style="list-style-type: none"> <li>○ General</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• History Taking – 2</li> <li>• Physical examination – 2</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of clinical skills using checklist</li> <li>• OSCE</li> </ul>

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
			<ul style="list-style-type: none"> <li>○ Body systems</li> <li>● Use various methods of physical examination – Inspection, Palpation, Percussion, Auscultation, Olfaction</li> <li>● Identification of system wise deviations</li> <li>● Documentation of findings</li> </ul>		
	1	Develop skills in assessment, planning, implementation and evaluation of nursing care using Nursing process approach	<b>The Nursing Process</b> <ul style="list-style-type: none"> <li>● Prepare Nursing care plan for the patient based on the given case scenario</li> </ul>	<ul style="list-style-type: none"> <li>● Nursing process – 1</li> </ul>	<ul style="list-style-type: none"> <li>● Evaluation of Nursing process with criteria</li> </ul>
	2	<p>Identify and meet the Nutritional needs of patients</p> <p>Implement basic nursing techniques in meeting hygienic needs of patients</p>	<b>Nutritional needs, Elimination needs &amp; Diagnostic testing</b> <i>Nutritional needs</i> <ul style="list-style-type: none"> <li>● Nutritional Assessment</li> <li>● Preparation of Nasogastric tube feed</li> <li>● Nasogastric tube feeding</li> </ul> <i>Hygiene</i> <ul style="list-style-type: none"> <li>● Care of Skin &amp; Hair: <ul style="list-style-type: none"> <li>– Sponge Bath/ Bed bath</li> <li>– Care of pressure points &amp; back massage</li> </ul> </li> <li>● Pressure sore risk assessment using Braden/Norton scale <ul style="list-style-type: none"> <li>– Hair wash</li> <li>– Pediculosis treatment</li> </ul> </li> <li>● Oral Hygiene</li> <li>● Perineal Hygiene</li> <li>● Catheter care</li> </ul>	<ul style="list-style-type: none"> <li>● Nutritional Assessment and Clinical Presentation – 1</li> <li>● Pressure sore assessment – 1</li> </ul>	<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> </ul>
	2	<p>Plan and Implement care to meet the elimination needs of patient</p> <p>Develop skills in instructing and collecting samples for investigation.</p>	<b>Elimination needs</b> <ul style="list-style-type: none"> <li>● Providing <ul style="list-style-type: none"> <li>– Urinal</li> <li>– Bedpan</li> </ul> </li> <li>● Insertion of Suppository</li> <li>● Enema</li> <li>● Urinary Catheter care</li> <li>● Care of urinary drainage</li> </ul> <b>Diagnostic testing</b>	<ul style="list-style-type: none"> <li>● Clinical Presentation on Care of patient with Constipation – 1</li> <li>● Lab values – inter-pretation</li> </ul>	<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> </ul>

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Perform simple lab tests and analyze & interpret common diagnostic values	<ul style="list-style-type: none"> <li>● Specimen Collection               <ul style="list-style-type: none"> <li>○ Urine routine and culture</li> <li>○ Stool routine</li> <li>○ Sputum Culture</li> </ul> </li> <li>● Perform simple Lab Tests using reagent strips               <ul style="list-style-type: none"> <li>○ Urine – Glucose, Albumin, Acetone, pH, Specific gravity</li> </ul> </li> <li>● Blood – GRBS Monitoring</li> </ul>		
	3	<p>Identify patients with impaired oxygenation and demonstrate skill in caring for patients with impaired oxygenation</p> <p>Identify and demonstrate skill in caring for patients with fluid, electrolyte and acid – base imbalances</p>	<p><b>Oxygenation needs, Fluid, Electrolyte, and Acid –Base Balances</b></p> <p><i>Oxygenation needs</i></p> <ul style="list-style-type: none"> <li>● Oxygen administration methods               <ul style="list-style-type: none"> <li>○ Nasal Prongs</li> <li>○ Face Mask/Venturi Mask</li> </ul> </li> <li>● Steam inhalation</li> <li>● Chest Physiotherapy</li> <li>● Deep Breathing &amp; Coughing Exercises</li> <li>● Oral Suctioning</li> </ul> <p><i>Fluid, Electrolyte, and Acid – Base Balances</i></p> <ul style="list-style-type: none"> <li>● Maintaining intake output chart</li> <li>● Identify &amp; report complications of IV therapy</li> <li>● Observe Blood &amp; Blood Component therapy</li> <li>● Identify &amp; Report Complications of Blood &amp; Blood Component therapy</li> </ul>		<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> </ul>
	3	<p>Explain the principles, routes, effects of administration of medications</p> <p>Calculate conversions of drugs and dosages within and between systems of Measurements</p> <p>Administer drugs by the following routes- Oral, Intradermal,</p>	<p><b>Administration of Medications</b></p> <ul style="list-style-type: none"> <li>● Calculate Drug Dosages</li> <li>● Preparation of lotions &amp; solutions</li> <li>● Administer Medications               <ul style="list-style-type: none"> <li>○ Oral</li> <li>○ Topical</li> <li>○ Inhalations</li> <li>○ Parenteral                   <ul style="list-style-type: none"> <li>▪ Intradermal</li> <li>▪ Subcutaneous</li> </ul> </li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>● Assessment of clinical skills using checklist</li> <li>● OSCE</li> </ul>

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Subcutaneous, Intramuscular, Intra Venous Topical, inhalation	<ul style="list-style-type: none"> <li>▪ -Intramuscular</li> <li>▪ Instillations</li> <li>○ Eye, Ear, Nose –instillation of medicated drops, nasal sprays, irrigations</li> </ul>		
	2	Assess, plan, implement & evaluate the basic care needs of patients with altered functioning of sense organs and unconsciousness  Care for terminally ill and dying patients	<b>Sensory Needs and Care of Unconscious patients, Care of Terminally ill, death and dying</b>  <i>Sensory Needs and Care of Unconscious patients</i> <ul style="list-style-type: none"> <li>• Assessment of Level of Consciousness using Glasgow Coma Scale</li> </ul> <i>Terminally ill, death and dying</i> <ul style="list-style-type: none"> <li>• Death Care</li> </ul>	<ul style="list-style-type: none"> <li>• Nursing rounds on care of patient with altered sensorium</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of clinical skills using checklist</li> <li>• OSCE</li> <li>• Assessment of clinical skills using checklist</li> </ul>

### HEALTH/NURSING INFORMATICS AND TECHNOLOGY

**PLACEMENT:** II SEMESTER

**THEORY:** 2 Credits (40 hours)

**PRACTICAL/LAB:** 1 Credit (40 hours)

**DESCRIPTION:** This course is designed to equip novice nursing students with knowledge and skills necessary to deliver efficient informatics-led health care services.

**COMPETENCIES:** On completion of the course, the students will be able to

1. Develop a basic understanding of computer application in patient care and nursing practice.
2. Apply the knowledge of computer and information technology in patient care and nursing education, practice, administration and research.
3. Describe the principles of health informatics and its use in developing efficient healthcare.
4. Demonstrate the use of information system in healthcare for patient care and utilization of nursing data.
5. Demonstrate the knowledge of using Electronic Health Records (EHR) system in clinical practice.
6. Apply the knowledge of interoperability standards in clinical setting.
7. Apply the knowledge of information and communication technology in public health promotion.
8. Utilize the functionalities of Nursing Information System (NIS) system in nursing.
9. Demonstrate the skills of using data in management of health care.
10. Apply the knowledge of the principles of digital ethical and legal issues in clinical practice.
11. Utilize evidence-based practices in informatics and technology for providing quality patient care.
12. Update and utilize evidence-based practices in nursing education, administration, and practice.

## COURSE OUTLINE

## T – Theory, P/L – Lab

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P/L				
I	10	15	Describe the importance of computer and technology in patient care and nursing practice	<b>Introduction to computer applications for patient care delivery system and nursing practice</b> <ul style="list-style-type: none"> <li>• Use of computers in teaching, learning, research and nursing practice</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Practice session</li> <li>• Supervised clinical practice on EHR use</li> <li>• Participate in data analysis using statistical package with statistician</li> </ul>	(T) <ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> <li>• Visit reports</li> <li>• Assessment of assignments</li> </ul>
			Demonstrate the use of computer and technology in patient care, nursing education, practice, administration and research.	<ul style="list-style-type: none"> <li>• Windows, MS office: Word, Excel, Power Point</li> <li>• Internet</li> <li>• Literature search</li> <li>• Statistical packages</li> <li>• Hospital management information system</li> </ul>	<ul style="list-style-type: none"> <li>• Visit to hospitals with different hospital management systems</li> </ul>	(P) <ul style="list-style-type: none"> <li>• Assessment of skills using checklist</li> </ul>
II	4	5	Describe the principles of health informatics  Explain the ways data, knowledge and information can be used for effective healthcare	<b>Principles of Health Informatics</b> <ul style="list-style-type: none"> <li>• Health informatics – needs, objectives and limitations</li> <li>• Use of data, information and knowledge for more effective healthcare and better health</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Practical session</li> <li>• Work in groups with health informatics team in a hospital to extract nursing data and prepare a report</li> </ul>	(T) <ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type questions</li> <li>• Assessment of report</li> </ul>
III	3	5	Describe the concepts of information system in health  Demonstrate the use of health information system in hospital setting	<b>Information Systems in Healthcare</b> <ul style="list-style-type: none"> <li>• Introduction to the role and architecture of information systems in modern healthcare environments</li> <li>• Clinical Information System (CIS)/Hospital information System (HIS)</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Practical session</li> <li>• Work in groups with nurse leaders to understand the hospital information system</li> </ul>	(T) <ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul>
IV	4	4	Explain the use of electronic health records in nursing practice  Describe the latest trend in electronic health records standards and interoperability	<b>Shared Care &amp; Electronic Health Records</b> <ul style="list-style-type: none"> <li>• Challenges of capturing rich patient histories in a computable form</li> <li>• Latest global developments and standards to enable lifelong electronic health records to be integrated from disparate systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Practice on Simulated EHR system</li> <li>• Practical session</li> <li>• Visit to health informatics department of a hospital to understand the use of EHR in nursing practice</li> </ul>	(T) <ul style="list-style-type: none"> <li>• Essay</li> <li>• Short answer</li> <li>• Objective type</li> </ul> (P) <ul style="list-style-type: none"> <li>• Assessment of skills using checklist</li> </ul>

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P/L				
					<ul style="list-style-type: none"> <li>Prepare a report on current EHR standards in Indian setting</li> </ul>	
V	3		Describe the advantages and limitations of health informatics in maintaining patient safety and risk management	<p><b><u>Patient Safety &amp; Clinical Risk</u></b></p> <ul style="list-style-type: none"> <li>Relationship between patient safety and informatics</li> <li>Function and application of the risk management process</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> </ul>	(T) <ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> </ul>
VI	3	6	<p>Explain the importance of knowledge management</p> <p>Describe the standardized languages used in health informatics</p>	<p><b><u>Clinical Knowledge &amp; Decision Making</u></b></p> <ul style="list-style-type: none"> <li>Role of knowledge management in improving decision-making in both the clinical and policy contexts</li> <li>Systematized Nomenclature of Medicine, Clinical Terms, SNOMED CT to ICD-10-CM Map, standardized nursing terminologies (NANDA, NOC), Omaha system.</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Demonstration</li> <li>Practical session</li> <li>Work in groups to prepare a report on standardized languages used in health informatics.</li> <li>Visit health informatics department to understand the standardized languages used in hospital setting</li> </ul>	(T) <ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> </ul>
VII	3		<p>Explain the use of information and communication technology in patient care</p> <p>Explain the application of public health informatics</p>	<p><b><u>eHealth: Patients and the Internet</u></b></p> <ul style="list-style-type: none"> <li>Use of information and communication technology to improve or enable personal and public healthcare</li> <li>Introduction to public health informatics and role of nurses</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> <li>Practical exam</li> </ul>
VIII	3	5	<p>Describe the functions of nursing information system</p> <p>Explain the use of healthcare data in management of health care organization</p>	<p><b><u>Using Information in Healthcare Management</u></b></p> <ul style="list-style-type: none"> <li>Components of Nursing Information system(NIS)</li> <li>Evaluation, analysis and presentation of healthcare data to inform decisions in the management of health-care organizations</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Demonstration on simulated NIS software</li> <li>Visit to health informatics department of the hospital to understand use of healthcare data in decision making</li> </ul>	(T) <ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> </ul>
IX	4		<p>Describe the ethical and legal issues in healthcare informatics</p> <p>Explains the ethical and legal issues</p>	<p><b><u>Information Law &amp; Governance in Clinical Practice</u></b></p> <ul style="list-style-type: none"> <li>Ethical-legal issues pertaining to healthcare information in contemporary clinical practice</li> <li>Ethical-legal issues related to</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Case discussion</li> <li>Role play</li> </ul>	(T) <ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> </ul>

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P/L				
			related to nursing informatics	digital health applied to nursing		
X	3		Explain the relevance of evidence-based practices in providing quality healthcare	<b>Healthcare Quality &amp; Evidence Based Practice</b> <ul style="list-style-type: none"> <li>Use of scientific evidence in improving the quality of healthcare and technical and professional informatics standards</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Case study</li> </ul>	(T) <ul style="list-style-type: none"> <li>Essay</li> <li>Short answer</li> <li>Objective type</li> </ul>

### SKILLS

- Utilize computer in improving various aspects of nursing practice.
- Use technology in patient care and professional advancement.
- Use data in professional development and efficient patient care.
- Use information system in providing quality patient care.
- Use the information system to extract nursing data.
- Develop skill in conducting literature review.

### APPLIED MICROBIOLOGY AND INFECTION CONTROL INCLUDING SAFETY

**PLACEMENT:** III SEMESTER

**THEORY:** 2 Credits (40 hours)

**PRACTICAL:** 1 Credit (40 hours) (Lab/Experiential Learning – L/E)

### SECTION A: APPLIED MICROBIOLOGY

**THEORY:** 20 hours

**PRACTICAL:** 20 hours (Lab/Experiential Learning – L/E)

**DESCRIPTION:** This course is designed to enable students to acquire understanding of fundamentals of Microbiology, compare and contrast different microbes and comprehend the means of transmission and control of spread by various microorganisms. It also provides opportunities for practicing infection control measures in hospital and community settings.

**COMPETENCIES:** On completion of the course, the students will be able to:

- Identify the ubiquity and diversity of microorganisms in the human body and the environment.
- Classify and explain the morphology and growth of microbes.
- Identify various types of microorganisms.
- Explore mechanisms by which microorganisms cause disease.
- Develop understanding of how the human immune system counteracts infection by specific and non-specific mechanisms.
- Apply the principles of preparation and use of vaccines in immunization.
- Identify the contribution of the microbiologist and the microbiology laboratory to the diagnosis of infection.